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PATENTS LEGISLATION

FULL TEXT VERSION

HEARINGS
BEFORE THE
SUBCOMMITTEE ON
COURTS AND INTELLECTUAL PROPERTY
OF THE
COMMITTEE ON THE JUDICIARY
HOUSE OF REPRESENTATIVES
ONE HUNDRED FOURTH CONGRESS
FIRST SESSION
ON
H.R. 359, H.R. 632, H.R. 1732, and H.R. 1733

JUNE 8 AND NOVEMBER 1, 1995

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PATENTS LEGISLATION

THURSDAY, JUNE 8, 1995

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON COURTS AND
INTELLECTUAL PROPERTY,
COMMITTEE ON THE JUDICIARY,
WASHINGTON, DC.

The subcommittee met, pursuant to notice, at 10:02 a.m., in room 2226, Rayburn House Office Building, Hon. Carlos J. MOORHEAD (chairman of the subcommittee) presiding.

Present: Representatives Carlos J. MOORHEAD, F. James Sensenbrenner, Jr., Howard Coble, Bob Goodlatte, Sonny Bono, John Conyers, Jr., and Patricia Schroeder.

Also present: Thomas E. Mooney, chief counsel; Mitch Glazier, assistant counsel; Veronica L. Eligan, secretary; and Betty Wheeler, minority counsel.

OPENING STATEMENT OF CHAIRMAN MOORHEAD

Mr. MOORHEAD. The Subcommittee on Courts and Intellectual Property will come to order.

Today the subcommittee is conducting a hearing on three bills: H.R. 1732, which provides third parties with a greater opportunity to participate in reexamination proceedings; H.R. 1733, which provides for early publications of U.S. patent applications; and H.R. 632, which provides for attorneys' fees in suits brought to compensate owners of patents used by the United States.

The first bill, H.R. 1732, would address current reexamination procedures which have been criticized as being biased against third-party requesters. A third-party requester cannot participate in the reexamination proceedings beyond filing an initial request for reexamination if the patent owner files a statement in response to the order for reexamination, a reply to that statement. Also, some have claimed that the ex parte nature of prosecution following a reexamination order, while reducing the time and costs involved, provides the patent owner with an unfair advantage. The purpose of H.R. 1732 is to increase third-party use of the reexamination system and provide a meaningful, inexpensive and expeditious alternative to patent litigation.

Our second bill for consideration this morning is H.R. 1733, which provides for early publication of U.S. patent applications, 18 months from the earliest filing date. Currently, all applications for

patents in the United States are kept in confidence by the Patent and Trademark Office until a patent is granted. Upon grant, the application is published as a patent. All the major patent systems

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throughout the world, with the exception of the United States, publish applications 18 months from the earliest effective filing date. H.R. 1733 would bring the U.S. system in conformity with that of all the major patent systems throughout the world.

Our last bill for consideration this morning is H.R. 632, introduced by Congressman Martin Frost of Texas. The bill would provide for reasonable fees for expert witnesses and attorneys' fees in suits brought to compensate owners of patents used by the United States.

[The bills, relative to these hearings, H.R. 359, H.R. 632, H.R. 1732, and H.R. 1733, follow:

104TH CONGRESS

1ST SESSION

H. R. 359

To restore the term of patents, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JANUARY 4, 1995

Mr. ROHRABACHER (for himself, Ms. Kaptur, Mr. Bbown of California, Mr. Walkek, Mr. Sensenbrenner, Mr. Qalleolt, Mr. Bono, Mr. Kennedy of Massachusetts, Mr. Boehner, Mr. DeLay, Mr. Solomon, Mr. Paxon, Mr. Cox, Mr. Stearns, Mr. Calvert, Mr. Sam Johnson of Texas, Mr. Herger, Mr. DOOLTTTLE, Mr. Baker of California, Mr. POMBO, Mr. ISTOOK, Mr. ROTH, Mr. FUNDERBURK, Mr. Bunning of Kentucky, Mr. Packard, Mrs. Vucanovich, Mr. Bilbray, Mr. McKeon, Mr. McIntosh, Mr. Metcalp, Mr. Cunningham, Mr. Christenson, Mr. Duncan, Mr. Rogers, Mr. Walsh, Mr. Km, Mr. Blute, Mr. Radanovich, Mr. Royce, Mr. Prank of Massachusetts, Mr. Brewster, Mr. Fmsa, Mr. Dornan, Mr. Traficant, Mrs. Morella, Mr. Kldck, Mr. ScmFP, Mr. Hunter, Mr. Ehruch, Mr. Brown of Ohio, Mr. DeFazio, Mr. Forbes, Mr. Nadler, Mr. Ftt.NER, Mr. Lucas, and Mr. Moran) introduced the following bill; which was referred to the Committee on the Judiciary

A BILL

To restore the term of patents, and for other purposes.

- 1 Be it enacted by the Senate and House of Representa-
- 2 tives of the United States of America in Congress assembled,
- 3 SECTION 1. PATENT TERMS.
- 4 (a) Amendment. — Effective on the date of the en-
- 5 actment of this Act, section 154 of title 5, United States

1 Code, as amended by the Uruguay Round Agreements

2 Act, is amended —

3 (1) in paragraph (2) of subsection (a), by strik-
4 ing "and ending" and all that follows in that para-
5 graph and inserting "and ending —

6 "(A) 17 years from the date of the grant
7 of the patent, or

8 "(B) 20 years from the date on which the
9 application for the patent was filed in the Unit-
10 ed States, except that if the application con-
11 tains a specific reference to an earlier filed ap-
12 plication or applications under section 120,
13 121, or 365(c) of this title, 20 years fix)m the
14 date on which the earliest such patent applica-
15 tion was filed,
16 whichever is later.";

17 (2) by amending subsection (b) to read as fol-

18 lows:

19 "(b) Patent Disclosure. — In the event that a con-
20 tinuing patent application is filed that claims the benefit
21 of the filing date of a prior application that was filed more
22 than 60 months earlier, notices of the original patent ap-
23 plication and of the continuing patent application shall be
24 published and the public shall be permitted to inspect and

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1 copy the original patent application and the continuing
2 patent application."; and

3 (3) in subsection (c)(1), by striking "shall be
4 the greater of the 20-year term as provided in sub-
5 section (a), or 17 years from grant" and inserting
6 "shall be the term provided in subsection (a)".

7 (b) Technical Amendment. — Section 534(b) of the

8 Uruguay Round Agreements Act is amended by striking

9 paragraph (3).

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104TH CONGRESS

1ST SESSION

H. R. 632

To enhance fairness in compensating owners of patents used by the United States.

IN THE HOUSE OF REPRESENTATIVES

JANUARY 23, 1995

Mr. Frost introduced the following bill; which was referred to the Committee on the Judiciary

A BILL

To enhance fairness in compensating owners of patents used by the United States.

1 Be it enacted by the Senate and House of Representa-
2 tives of the United States of America in Congress assembled,
3 SECTION 1. JUST COMPENSATION.
4 (a) Amendment. — Section 1498(a) of title 28,
5 United States Code, is amended by adding at the end of
6 the first paragraph the following: "Reasonable and entire

7 compensation shall include the owner's reasonable costs,
8 including reasonable fees for expert witnesses and attor-
9 neys, in pursuing the action if the owner is an independent
10 inventor, a nonprofit organization, or an entity that had

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1 no more than 500 employees at any time during the 5-
2 year period preceding the use or manufacture of the pat-
3 ented invention by or for the United States."

4 (b) Effective Date. — The amendment made by
5 subsection (a) shall apply to actions under section 1498(a)
6 of title 28, United States Code, that are pending on, or
7 brought on or after, January 1, 1995.

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104TH CONGRESS

1ST SESSION

H. R. 1732

To amend chapter 30 of title 35, United States Code, to afford third parties an opportunity for greater participation in reexamination proceedings before the Patent and Trademark Office, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

MAY 25, 1995

Mr. MOORHEAD (for himself and Mrs. SCHROEDER) introduced the following:
bill; which was referred to the Committee on the Judiciary

A BILL

To amend chapter 30 of title 35, United States Code, to afford third parties an opportunity for greater participation in reexamination proceedings before the Patent and Trademark Office, and for other purposes.

1 Be it enacted by the Senate and House of Representa-
2 tives of the United States of America in Congress assembled,

3 SECTION 1. SHORT TITLE.

4 This Act may be cited as the "Patent Reexamination

5 Reform Act of 1995".

1 SEC. 2. DEFINITIONS.

2 Section 100 of title 35, United States Code, is

3 amended by adding at the end the following new sub-

4 section:

5 "(e) The term 'third-party requester' means a person

6 requesting reexamination under section 302 of this title

7 who is not the patent owner."

8 SEC. 3. REEXAMINATION PROCEDURES.

9 (a) Request for Reexamination. — Section 302 of

10 title 35, United States Code, is amended to read as fol-

11 lows:

12 **§ 302. Request for reexamination

13 "Any person at any time may file a request for reex-

14 amination by the Office of a patent on the basis of any

15 prior art cited under the provisions of section 301 of this

16 title or on the basis of the requirements of section 112

17 of this title except for the best mode requirement. The
18 request must be in writing and must be accompanied by
19 payment of a reexamination fee established by the Com-
20 missioner of Patents and Trademarks pursuant to the pro-
21 visions of section 41 of this title. The request must set
22 forth the pertinency and manner of applying cited prior
23 art to every claim for which reexamination is requested
24 or the manner in which the patent specification or claims
25 fail to comply with the requirements of section 112 of this
26 title. Unless the requesting person is the owner of the pat-

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1 ent, the Commissioner promptly will send a copy of the
2 request to the owner of record of the patent."

3 (b) Determination of Issue by Commissioner. —

4 Section 303 of title 35, United States Code, is amended

5 to read as follows:

6 **§ 303. Determination of issue by Commissioner

7 "(a) Within 3 months following the filing of a request
8 for reexamination under the provisions of section 302 of
9 this title, the Commissioner shall determine whether a
10 substantial new question of patentability affecting any
11 claim of the patent concerned is raised by the request,
12 with or without consideration of other patents or printed
13 publications. On his own initiative, and any time, the Com-
14 missioner may determine whether a substantial new ques-
15 tion of patentability is raised by patents and publications
16 or by the failure of the patent specification or claims to
17 comply with the requirements of section 112 of this title
18 except for the best mode requirement.

19 "(b) A record of the Commissioner's determination
20 under subsection (a) of this section will be placed in the
21 official file of the patent, and a copy promptly will be given
22 or mailed to the owner of record of the patent and to the
23 third-party requester, if any.

24 "(c) A determination by the Commissioner pursuant

25 to subsection (a) of this section will be final and

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1 nonappealable. Upon a determination that no substantial
2 new question of patentability has been raised, the Com-
3 missioner may refund a portion of the reexamination fee
4 required under section 302 of this title."

5 (c) Reexamination Order by Commissioner. —

6 Section 304 of title 35, United States Code, is amended

7 to read as follows:

8 **§ 304. Reexamination order by Commissioner

9 "If, in a determination made under the provisions of

10 section 303(a) of this title, the Commissioner finds that

11 a substantial new question of patentability affecting any

12 claim of a patent is raised, the determination will include

1 3 an order for reexamination of the patent for resolution of

14 the question. The order may be accompanied by the initial
15 Office action on the merits of the reexamination conducted
16 in accordance with section 305 of this title."

17 (d) Conduct of Reexamination Proceedings. —

18 Section 305 of title 35, United States Code, is amended
19 to read as follows:

20 **§ 305. Conduct of reexamination proceedings

21 "(a) Subject to subsection (b) of this section, reexam-
22 ination will be conducted according to the procedures es-
23 tablished for initial examination under the provisions of
24 sections 132 and 133 of this title. In any reexamination
25 proceeding under this chapter, the patent owner will be

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1 permitted to propose any amendment to the patent and
2 a new claim or claims thereto. No proposed amended or

3 new claim enlarging the scope of the claims of the patent
4 will be permitted in a reexamination proceeding under this
5 chapter.

6 "(b)(1) This subsection shall apply to any reexamina-
7 tion proceeding in which the order for reexamination is
8 based upon a request by a third-party requester.

9 "(2) With the exception of the reexamination request,
10 any document filed by either the patent owner or the
11 third-party requester shall be served on the other party.

12 "(3) If the patent owner files a response to any Office
13 action on the merits, the third-party requester may once
14 file written comments within a reasonable period not less
15 than 1 month from the date of service of the patent owii-
16 er's response. Written comments provided under this para-
17 graph shall be limited to issues covered by the Office ac-
18 tion or the patent owner's response.

19 "(c) Unless otherwise provided by the Commissioner
20 for good cause, all reexamination proceedings under this

21 section, including any appeal to the Board of Patent Ap-
22 peals and Interferences, will be conducted with special dis-
23 patch within the Office."

24 (e) Appeal.— Section 306 of title 35, United States
25 Code, is amended to read as follows:

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1 "§306. Appeal

2 "(a) The patent owner involved in a reexamination
3 proceeding under this chapter may —

4 "(1) appeal under the provisions of section 134
5 of this title, and may appeal under the provisions of
6 sections 141 to 144 of this title, with respect to any
7 decision adverse to the patentability of any original
8 or proposed amended or new claim of the patent, or

9 "(2) be a party to any appeal taken by a third-

10 party requester pursuant to subsection (b) of this

11 section.

12 "(b) A third-party requester may —

13 "(1) appeal under the provisions of section 134

14 of this title, and may appeal under the provisions of

15 sections 141 to 144 of this title, with respect to any

16 final decision favorable to the patentability of any

17 original or proposed amended or new claim of the

18 patent, or

19 "(2) be a party to any appeal taken by the pat-

20 ent owner, subject to subsection (c) of this section.

21 "(c) A third-party requester who, under the pro\i-

22 sions of sections 141 to 144 of this title, files a notice

23 of appeal or who participates as a party to an appeal by

24 the patent owner is estopped ft-om later asserting, in any

25 forum, the invalidity of any claim determined to be patent-

26 able on appeal on any ground which the third-party re-

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1 requester raised or could have raised during the reexamiua-
2 tion proceedings. A third-party requester is deemed not
3 to have participated as a party to an appeal by the patent
4 owner unless, within 20 days after the patent owner has
5 filed notice of appeal, the third-party requester files notice
6 with the Commissioner electing to participate."

7 (f) REEXAMINATION PROHIBITED. — (1) Chapter 30
8 of title 35, United States Code, is amended by adding the
9 following section at the end thereof:

10 **§ 308. Reexamination prohibited

11 "(a) Notwithstanding any provision of this chapter,
12 once an order for reexamination of a patent has been is-
13 sued under section 304 of this title, neither the patent
14 owner nor the third-party requester, if any, nor privies of
15 either, may file a subsequent request for reexamination
16 of the patent until a reexamination certificate is issued

17 and published under section 307 of this title, unless au-
1 8 thorized by the Commissioner.

19 "(b) Once a final decision has been entered against
20 a party in a civil action arising in whole or in part under
21 section 1338 of title 28 that the party has not sustained
22 its burden of proving the invalidity of any patent claim
23 in suit, then neither that party nor its privies may there-
24 after request reexamination of any .such patent claim on
25 the basis of issues which that party or its privies raised

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1 or could have raised in such civil action, and a reexamina-
2 tion requested by that party or its privies on the basis
3 of such issues may not thereafter be maintained by the
4 Office, notwithstanding any provision of this chapter."

5 (2) The table of sections for chapter 30 of title 35,
6 United States Code, is amended by adding the following

7 at the end thereof:

"308. Reexamination prohibited."

8 SEC. 4. CONFORMING AMENDMENTS.

9 (a) Board of Patent Appeals and Inter-

10 FEREXCES. — The first sentence of section 7(b) of title 35,

11 United States Code, is amended to read as follows: "The

12 Board of Patent Appeals and Interferences shall, on writ-

13 ten appeal of an applicant, or a patent owner or a third-

14 party requester in a reexamination proceeding, review ad-

15 verse decisions of examiners upon applications for patents

16 and decisions of examiners in reexamination proceedings,

17 and shall determine priority and patentability of invention

18 in interferences declared under section 135(a) of this

19 title."

20 (b) Patent Fees; Patent and Trademark

21 Search Systems. — Section 41(a)(7) of title 35, United

22 States Code, is amended to read as follows:

23 "(7) On filing each petition for the revival of an

24 unintentionally abandoned application for a patent,

25 for the unintentionally delayed payment of the fee

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1 for issuing each patent, or for an unintentionally de-

2 layed response by the patent owner in a reexamina-

3 tion proceeding, \$1,210 unless the petition is filed

4 under sections 133 or 151 of this title, in which case

5 the fee shall be \$110."

6 (c) Appeal to the Board of Patent Appeals

7 AND Interferences. — Section 134 of title 35, United

8 States Code, is amended to read as follows:

9 "§ 134. Appeal to the Board of Patent Appeals and

10 Interferences

11 "(a) An applicant for a patent, any of whose claims

12 has been twice rejected, may appeal from the decision of

13 the primary examiner to the Board of Patent Appeals and

14 Interferences, having once paid the fee for such appeal.

15 "(b) A patent owner in a reexamination proceeding

16 may appeal from the final rejection of any claim by the

17 primary examiner to the Board of Patent Appeals and

18 Interferences, having once paid the fee for such appeal.

19 "(c) A third-party requester may appeal to the Board

20 of Patent Appeals and Interferences from the final deci-

21 sion of the primary examiner favorable to the patentability

22 of any original or proposed amended or new claim of a

23 patent, having once paid the fee for such appeal."

24 (d) Appeals to Court of Appeals for the Fed-

25 ERAL Circuit. — Section 141 of title 35, United States

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1 Code, is amended by amending the first sentence to read

2 as follows: "An applicant, a patent owner, or a third-party

3 requester, dissatisfied with the final decision in an appeal

4 to the Board of Patent Appeals and Interferences under
5 section 134 of this title, may appeal the decision to the
6 United States Court of Appeals for the Federal Circuit."

7 (e) Proceedings on Appeal. — Section 143 of title
8 35, United States Code, is amended by amending the third
9 sentence to read as follows: "In ex parte and reexamina-
10 tion cases, the Commissioner shall submit to the court in
11 writing the grounds for the decision of the Patent and
1 2 Trademark Office, addressing all the issues involved in the
13 appeal."

14 (f) Civil Action To Obtain Patent. — Section 145
15 of title 35, United States Code, is amended in the first
16 sentence by inserting "(a)" after "section 134".

1 7 SEC. 5. EFFECTIVE DATE.

18 This Act shall take effect on the date that is 6
19 months after the date of the enactment of this Act and
20 shall apply to all reexamination requests filed on or after
21 that effective date.

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104TH CONGRESS

1ST SESSION

H. R. 1733

To amend title 35, United States Code, to provide for early publication of patent applications, to provide provisional rights for the period of time between early publication and patent grant, and to provide a prior art effect for published applications

IN THE HOUSE OF REPRESENTATIVES

MAY 25, 1995

Mr. MOORHEAD (for himself and Mrs. Schroeder) introduced the following bill; which was referred to the Committee on the Judiciary

A BILL

To amend title 35, United States Code, to provide for early publication of patent applications, to provide provisional rights for the period of time between early publication and patent grant, and to provide a prior art effect for published applications.

1 Be it enacted by the Senate and House of Representa-
2 tives of the United States of America in Congress assembled,

3 SECTION 1. SHORT TITLE.

4 This Act may be cited as the "Patent Application
5 Publication Act of 1995".

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1 SEC. 2. EARLY PUBLICATION.

2 Section 122 of title 35, United States Code, is

3 amended to read as follows: •

4 "§122. Confidential status of applications; publica-

5 tion of patent applications

6 "(a) Except as provided in subsection (b), applica-

7 tions for patents shall be kept in confidence by the Patent

8 and Trademark Office and no information concerning the

9 same given without authority of the applicant or owner

10 unless necessary to carry out the provisions of any Act

11 of Congress or in such special circumstances as may be

12 determined by the Commissioner,

13 "(b)(1) Subject to paragraph (2), each application for

14 patent, except applications for design patents under chap-

15 ter 16 of this title and provisional applications filed under

16 section 111(b) of this title, shall be published, in accord-
17 ance with procedures as determined by the Commissioner,
18 as soon as possible after the expiration of a period of 18
19 months from the earliest filing date for which a benefit
20 is sought under this title, except that an application that
21 is no longer pending shall not be published and an applica-
22 tion that is subject to a secrecy order pursuant to section
23 181 of this title shall not be published. An application may
24 be published earlier than the above date at the request
25 of the applicant. No information concerning published pat-
26 ent applications shall be made available to the public ex-

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1 cept as the Commissioner shall determine. Notwithstand-
2 ing any other provision of law, a determination by the
3 Commissioner to release or not to release information con-
4 cerning a published patent application shall be final and

5 nonreviewable.

6 "(2) Upon request, an application will not be pub-
7 lished in accordance with paragraph (1) until 3 months
8 after the Commissioner makes a notification to the appli-
9 cant under section 132 of this title. Applications filed pur-
10 suant to section 363 of this title, applications asserting
11 priority under section 119 or 365(a) of this title, and ap-
12 plications asserting the benefit of an earlier application
13 under section 120, 121, or 365(e) of this title shall not
14 be eligible for a request pursuant to this paragraph. Fhir-
15 thermore, the applicant shall certify that the invention dis-
16 closed in the application was not or will not be the subject
17 of an application filed in a foreign country. A request
18 under this paragraph shall only be available to an inde-
19 pendent inventor who has been accorded status under see-
20 tion 41(h) of this title. The Commissioner may establish
21 appropriate procedures and fees for a request in accord-
22 ance with this paragraph."

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1 SEC. 3. TIME FOR CLAIMING BENEFIT OF EARLIER FILING

2 DATE.

3 (a) In a Foreign Country. — Section 119(b) of title

4 35, United States Code, is amended to read as follows:

5 "(b) No application for patent shall be entitled to this

6 right of priority unless a claim therefor and a certified

7 copy of the original foreign application, specification and

8 drawings upon which it is based are filed in the Patent

9 and Trademark Office at such time during the pendency

10 of the application as required by the Commissioner. The

11 Commissioner may consider the failure of the applicant

12 to file a timely claim for priority as a waiver of any such

13 claim. The certification of the original foreign application,

14 specification and drawings shall be made by the patent

15 office of the foreign country in which filed and show the
16 date of the application and of the filing of the specification
17 and other papers. The Commissioner may require a trans-
18 lation of the papers filed if not in the English language
19 and such other information as he deems necessary."

20 (b) In THE United States. — Section 120 of title
21 35, United States Code, is amended by adding at the end
22 thereof the following:

23 "The Commissioner may determine the time period during
24 the pendency of the application within which an amend-
25 ment containing the specific reference to the earlier filed
26 application shall be submitted. The Commissioner may

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1 consider the failure to timely submit such an amendment
2 as a waiver of any benefit under this section."

3 SEC. 4. PROVISIONAL RIGHTS.

4 Section 154 of title 35, United States Code, is

5 amended by adding the following new subsection:

6 "(d) Provisional Rights. — In addition to other

7 rights provided by this section, a patent shall include the

8 right to obtain a reasonable royalty from any person who,

9 during the period from publication of the application for

10 such patent pursuant to section 122(b) of this title or from

11 international publication of an international application

12 designating the United States until issue of that patent —

13 "(1)(A) makes, uses, offers for sale, or sells in

14 the United States the invention as claimed in the

15 published patent application or imports such an in-

16 vention into the United States; or

17 "(B) if the invention as claimed in the pub-

18 lished patent application is a process, uses, offers for

19 sale, or sells in the United States or imports into the

20 United States products made by that process as

21 claimed in the published patent application; and

22 "(2) had actual notice or knowledge of the pub-
23 lished patent application.

24 The right to obtain a reasonable royalty shall not be avail-
25 able under this subsection unless the invention claimed in

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1 the patent is identical to the invention as claimed in the
2 published patent application. The right to obtain a reason-
3 able royalty based upon the international publication of
4 an international application designating the United States
5 shall commence from the date that the Patent and Trade-
6 mark Office receives a copy of the international publica-
7 tion of the international application, unless already com-
8 municated by the International Bureau, or, if the inter-
9 national publication of the international application is in
10 a language other than English, from the date that the Pat-
11 ent and Trademark Office makes a translation thereof

12 available to the public. The Commissioner may require the
13 applicant to provide a copy of the international publication
14 of the international application and a translation there-
15 of."

16 SEC. 5. PRIOR ART EFFECT OF PUBLISHED APPLICATIONS.

17 Section 102(e) of title 35, United States Code, is
18 amended to read as follows:

19 "(e) the invention was described in —

20 " (1)(A) an application for patent, published
21 pursuant to section 122(b) of this title, by another
22 filed in the United States before the invention there-
23 of by the applicant for patent, or

24 "(B) an international application, published
25 pursuant to section 122(b) of this title, by another

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1 who has fulfilled the requirements of paragraphs (1),

2 (2), and (4) of section 371(e) of this title before the
3 invention thereof by apphcant for patent, or
4 "(2) a patent granted on an application for pat-
5 ent by another filed in the United States before the
6 invention thereof by the apphcant for patent, or on
7 an international apphcation by another who has ful-
8 filled the requirements of paragraphs (1), (2), and
9 (4) of section 371(c) of this title before the invention
10 thereof by the applicant for patent, or".

11 SEC. 6. COST RECOVERY FOR PUBLICATION.

12 The Commissioner shall recover the cost of early pub-
13 lication required by the amendment made by section 2 by
14 adjusting the filing, issue, and maintenance fees, by charg-
15 ing a separate publication fee, or by any combination of
16 these methods.

17 SEC. 7. CONFORMING CHANGES.

18 The following provisions of title 35, United States
19 Code, are amended:

20 (1) Section 11 is amended in subsection (a)(1)

21 by inserting "and published applications" after

22 "Patents".

23 (2) Section 12 is amended by inserting "pub-

24 lished applications and" before "patents".

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1 (3) Section 13 is amended by inserting "pub-

2 lished applications and" before "patents".

3 (4) The item relating to section 122 in the table

4 of sections for chapter 11 is amended by inserting

5 "; publication of patent applications" after "applica-

6 tions".

7 (5) The item relating to section 154 in the table

8 of sections for chapter 14 is amended by inserting

9 "; provisional rights" after "patent".

10 (6) Section 181 is amended —

11 (A) in the first paragraph by inserting "by
12 the publication of an application or" after "dis-
13 closure", and "the publication of an application
14 or" after "withhold";

15 (B) in the second paragraph by inserting
16 "by the publication of an application or" after
17 "disclosure of an invention";

18 (C) in the third paragraph by inserting
19 "by the publication of the application or" after
20 "disclosure of the invention", and "the publica-
21 tion of the application or" after "withhold";
22 and

23 (D) in the fourth paragraph by inserting
24 "the publication of an application oi" after
25 "and" in the first sentence.

1 SEC. 8. PATENT TERM EXTENSION AUTHORITY.

2 Section 154(b) of title 35, United States Code, is

3 amended to read as follows:

4 "(b) Term Extension. —

5 "(1) Basis for patent term extension. —

6 Subject to the limitations of paragraph (2) of this

7 subsection, if the issue of an original patent is de-

8 layed due to —

9 "(A) a proceeding under section 135(a) of

10 this title,

11 "(B) the imposition of an order pursuant

12 to section 181 of this title,

13 "(C) appellate review by the Board of Pat-

14 ent Appeals and Interferences or by a Federal

15 court where the patent was issued pursuant to

16 a decision in the review reversing an adverse

17 determination of patentability, or

18 "(D) an unusual administrative delay by
19 the Office in issuing the patent,
20 the term of the patent shall be extended for the pe-
21 riod of delay. The Commissioner shall prescribe reg-
22 ulations to govern the determination of the period of
23 delay and the particular circumstances deemed to be
24 an unusual administrative delay.

25 "(2) Limitations. —

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1 "(A) Maximum period of extension. —
2 The total duration of all extensions of a patent
3 under this subsection shall not exceed 10 years.
4 To the extent that periods of delay attributable
5 to grounds specified in paragraph (1) overlap,
6 the period of any extension granted under this
7 subsection shall not exceed the actual number

8 of days the issuance of the patent was delayed.

9 "(B) Minimum pendency before ex-

10 tension available. — No patent shall be ex-

11 tended under this section that has been issued

12 before the expiration of 3 years after the filing

13 date of the application leading to the patent or

14 the commencement of the national stage under

15 section 371 of this title, whichever is later, not

16 taking into account the benefit of any earlier

17 filed application or applications under section

18 120, 121, or 365(c) of this title.

19 "(C) Reasonable efforts. — The period

20 of extension of the term of a patent under this

21 subsection shall be reduced by a period equal to

22 the time during the processing or examination

23 of the application leading to the patent in which

24 the applicant failed to engage in reasonable ef-

25 forts to conclude processing or examination of

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1 the application. The Commissioner shall pre-

2 scribe regulations establishing the cir-

3 cumstances that constitute a failure of an appli-

4 cant to engage in reasonable efforts to conclude

5 processing or examination of an application.

6 "(D) Terminal disclaimer. — No patent

7 whose term has been disclaimed beyond a speci-

8 fied date may be extended under this section

9 beyond the expiration date specified in the dis-

10 claimer."

1 1 SEC. 9. LAST DAY OF PENDENCY OF PROVISIONAL APPLI-

12 CATION.

13 Section 119(e) of title 35, United States Code, is

14 amended by adding the following at the end: "If the day

15 that is 12 months after the filing date of a provisional

16 application falls on a Saturday, Sunday, or Federal holi-
17 day within the District of Columbia, the period of pend-
18 ency of the provisional application shall be extended to the
19 next succeeding secular or business day."

20 SEC. 10. EFFECTIVE DATE.

21 (a) Sections 2 Through 7. — Sections 2 through 7,
22 and the amendments made by such sections, shall take ef-
23 fect on January 1, 1996, and shall apply to all applica-
24 tions filed under section 111 of title 35, United States
25 Code, on or after that date, and all applications complying

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1 with section 371 of title 35, United States Code, that re-
2 suited from international applications filed on or after that
3 date. The amendment made by section 4 shall also apply
4 to international applications designating the United States

5 that are filed on or after January 1, 1996.

6 (b) Sections 8 and 9. — The amendments made by

7 sections 8 and 9 shall take effect on the date of the enact-

8 ment of this Act and shall apply to any application filed

9 on or after June 8, 1995.

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Mr. MOORHEAD. Our first witness this morning is Congressman Frost. A hearing on this issue was held last year, October 5, by our former Subcommittee on Administrative Law. I'd like to incorporate by reference the statements made at that hearing and welcome Congressman Frost.

You may proceed.

STATEMENT OF HON. MARTIN FROST, A REPRESENTATIVE IN
CONGRESS FROM THE STATE OF TEXAS

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Mr. Frost. Mr. Chairman, thank you very much. I really appreciate the opportunity to appear before you today.

What we have in this situation is the ultimate catch-22. Under statutory law, a company that has its patent infringed by the U.S. Government may sue the Government for the loss of use of the patent, but may not recover attorneys' fees and expert witness fees, which are often very substantial in this type litigation.

Mr. Chairman, I would like to proceed with my formal statement. I appreciate the opportunity to testify this morning in support of H.R. 632, a bill I've introduced to help small patent holders recover

litigation costs when the Federal Government is found to have infringed their patents. As some of you may know, I introduced this bill last fall and testified before this subcommittee. At the time of the hearing, there was interest and support from Members. However, due to the timing, there was no action.

Under current law, a patent holder cannot recover any of his costs in securing payment when a patent is used by the Government. The patent holder must initiate a lawsuit under 28 U.S.C. 1498 in order to obtain any compensation at all. Although section 1498 provides for "reasonable and entire compensation," what the patent holder actually receives is the amount which a court determines is reasonable compensation for the use of the patent. The patent holder cannot receive any reimbursement for the cost of litigation.

I became aware of this situation because of the problems encountered by Standard Manufacturing of Dallas, TX. Standard has a 55-year history of producing high-quality military equipment. They designed and patented the trailer used for loading bombs onto B-52 bombers in the 1950's. They also submitted the design to the Air Force for a trailer that could be used for both B-52 and B-1B bombers. When it appeared that the Federal Government stole this design and shared it with a competitor. Standard went to the U.S. Court of Claims to have its interests protected. The Court of Claims agreed with Standard's claim of patent infringement and will soon determine the appropriate damages.

Mr. Chairman, it's wrong for the Federal Government to take and use patents from small businesses like Standard without just compensation. Standard is now entitled to some compensation, but it has incurred enormous legal fees to recover damages, and, ultimately, these legal fees, incurred because of what the Federal Government has done to Standard, cannot be recovered. Thus, as the law now stands. Standard cannot receive just compensation for the taking of its property.

Last fall the Department of Justice recommended against enactment of the legislation for three reasons. I would like to take a few

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minutes to explain why I believe the Justice Department is mistaken.

In the first place, the Department claimed that this bill would single out suits brought under 28 U.S.C. 1498 for more expansive awards than are available in other actions against the Government. That is not the case. The heart of this bill is simply to assure that the patent holder actually gets what current law says he is entitled to, reasonable and entire compensation for the use of his patent. Usually, when the Government exercises its right to take property by eminent domain, a property owner does not have to bring a suit to recover compensation. However, when a patent is used by the Government, the patent holder must initiate a lawsuit under 28 U.S.C. 1498 in order to obtain any recovery at all. Section 1498 provides for reasonable and entire compensation. However, what the patent holder actually receives is what a court determines is reasonable compensation for the use less whatever it has cost to obtain recovery.

Second, the Justice Department suggested that there are other remedies available to the patent owners to recover their litigation costs, such as the Equal Access to Justice Act, 28 U.S.C. 2412. However, as a practical matter, that is simply not the case. Under judicial interpretation of that statute, 28 U.S.C. 2412, patent owners have been forced to bear all the cost of the lawsuits even when they win. When a patent owner attempted to recover litigation costs under the Equal Access to Justice Act in the case of *De Graffenreid v. United States*, 29 Fed. Claims 394, the Government opposed his action. The court held that he could not recover any of the expenses he had incurred in finally obtaining compensation for the use of his patent some 15 years after he first filed a claim alleging infringement of his patent. Although a variety of arguments have been made to the courts under current law, the fact remains that no patent owner has been able to recover litigation costs of his suit against the Government.

Finally, the Justice Department suggested that this bill would prolong litigation by removing a plaintiff's incentive to settle the suit once liability has been determined. However, the bill provides

only for the award of those litigation costs determined by the courts to be reasonable. It is the Government that has no incentive to settle this type of suit. They take, use, and enjoy the benefits of the patent owner's invention, pay him nothing, and the patent holder is unable to seek injunctive relief to stop them. During any settlement negotiation the Government is secure in knowing the vast resources available at its disposal and that the paycheck will go on whether or not a particular case is settled fairly and expeditiously.

On the other hand, the patent owner must derive the funds to cover past and ongoing litigation costs. It is the Government who, in taking advantage of the above situation by its paltry offer, makes settlement negotiations impossible and, thus, prolongs litigation. A small business is at a severe disadvantage in establishing its rights because of the enormous cost of litigation. This problem should have been corrected long ago, and I urge speedy passage of this legislation to prevent further injustice.

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The damage trial for Standard will be held this summer, which will determine what the Government owes Standard for the use of its patent. Unless this litigation — unless this legislation is speedily passed, Standard's recovery will be substantially diminished by the cost it has incurred to obtain it. I urge this committee to act quickly on this bill to avoid that injustice.

Again, thank you for letting me appear here this morning.

[The prepared statement of Mr. Frost follows:]

Prepared Statement of Hon. Martin Frost, a Representative in Congress
From the State of Texas

Mr. Chairman, I appreciate having the opportunity to testify this morning in support of H.R. 632, a bill I introduced to help small patent holders recover litigation costs when the Federal Government is found to have infringed their patents. As some of you may know, I introduced this bill last fall and testified before the Subcommittee on Administrative Law and Governmental Relations. At the time of the hearing, there was interest and support from Members; however, due to the tim-

ing, there was no action.

Under current law, a patent holder cannot cover any of his costs in securing payment when a patent is used by the Government. The patent holder must initiate a lawsuit under 28 USC 1498 in order to obtain any compensation at all. Although section 1498 provides for "reasonable and entire compensation," what the patent holder actually receives is the amount which a court determines is reasonable compensation for the use of the patent. The patent holder cannot receive any reimbursement for the costs of litigation.

I became aware of this situation because of the problems encountered by Standard Manufacturing of Dallas, Texas. Standard has a 55-year history of producing high-quality military equipment. They designed and patented the "trailer" used for loading bombs onto B-52 bombers in the 1950s. They also submitted a design to the Air Force for a "trailer" that could be used for both the B-52 and B-1B bombers. When it appeared that the Federal Government stole this design and shared it with a competitor, Standard went to the U.S. Court of Claims to have its interest protected. The Court of Claims agreed with Standard's claim of patent infringement, and will soon determine the appropriate damages.

Mr. Chairman, it's wrong for the Federal Government to take and use patents from small businesses like Standard without just compensation. Standard is now entitled to some compensation, but it has incurred enormous legal fees to recover damages. And, unfortunately, these legal fees, incurred because of what the Federal Government has done to Standard, cannot be recovered. Thus, as the law now stands, Standard cannot receive just compensation for the taking of their property. Last fall, the Department of Justice recommended against enactment of the legislation for three reasons. I would like to take a few minutes to explain why I believe the Justice Department is mistaken.

In the first place, the Department claimed that this bill would single out suits brought under 28 USC 1498 for more expansive awards than are available in other actions against the government. This is not the case. The heart of this bill is simply to assure that the patent owner actually gets what current law says he is entitled to — "reasonable and entire compensation" for the use of his patent. Usually, when the government exercises its right to take property by eminent domain, a property owner does not have to bring a suit to recover compensation. However, when a patent is used by the government, the patent holder must initiate a lawsuit under 28 USC 1498 in order to obtain any recovery at all. Section 1498 provides for "reasonable and entire compensation." However, what the patent owner actually receives

is what a court determines is reasonable compensation for the uses of his patent, less whatever it has cost to obtain recovery.

Secondly, the Justice Department suggested that there are other remedies available to patent owners to recover their litigation costs, such as the Equal Access to Justice Act, 28 USC 2412. However, as a practical matter that is simply not the case. Under judicial interpretation of existing law, patent owners have been forced to bear all the costs of the lawsuits even when they win. When a patent owner attempted to recover litigation costs under the Equal Access to Justice Act, in the case of *De Graffenreid v. United States*, 29 Fed Claims 394 (1993), the government opposed his action. The court held that he could not recover any of the expenses he had incurred in finally obtaining compensation for the use of his patent some fifteen years after he first filed a claim alleging infringement of his patent. Although a va-

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riety of arguments have been made to the courts under current law, the fact remains that no patent owner has been able to recover litigation costs of his suit against the government.

Finally, the Justice Department suggested that this bill would prolong litigation by removing a plaintiff's incentive to settle the suit once liability has been determined. However, the bill provides only for the award of those litigation costs determined by the court to be reasonable. It is the Government that has no incentive to settle this type of suit. They take, use and enjoy the benefits of the patent owner's invention, pay him nothing and the patent holder is unable to seek injunctive relief to stop them. During any settlement negotiation, the Government is secure knowing of the vast resources available at its disposal and that the pay check will go on whether or not a particular case is settled fairly and expeditiously. On the other hand, the patent owner must derive the funds to cover past and on-going litigation costs. It is the Government who, in taking advantage of this above situation by a paltry offer, makes settlement negotiations impossible and thus prolongs litigation. A small business is at severe disadvantage in establishing its rights because of the enormous cost of litigation.

This problem should have been corrected long ago, and I urge speedy passage of this legislation to prevent further injustice. The damages trial for Standard will be held this summer, which will determine what the government owes Standard for the use of its patent. Unless this legislation is speedily passed, Standard's recovery will be substantially diminished by the costs it has incurred to obtain it. I urge this committee to act quickly on this bill to avoid that injustice.

Again, thank you for letting me appear here this morning.

Mr. MOORHEAD. Thank you.

Our ranking minority member will now have time for her opening statement and to ask any questions that she desires to ask.

Mrs. SCHROEDER. Well, thank you, Mr. Chairman, and I want to join you in welcoming all of the witnesses that we have today.

I particularly wanted to thank you for adding my colleague, Mr. Frost's, bill to this list, and I am sympathetic to what he is talking about here, this difficult issue of how we make sure people really are getting reasonable and entire compensation.

One of the things I wanted to ask is, would it be possible to keep the record open for a few days

Mr. MOORHEAD. Sure.

Mrs. SCHROEDER [continuing]. In case other people have comments about the gentleman's bill, and maybe some of our other witnesses who listened to the gentleman's testimony might want to comment on it, too, because this is an interesting issue, and we need, I think, all the advice we can get as we proceed.

Since I joined you in introducing the Patent Reexamination Act, obviously, I'm very sympathetic to that and am pleased that you put the other one there, too.

I will put the rest of my statement in the record, and I know you want to get on with it.

[The prepared statement of Mrs. Schroeder follows:]

Prepared Statement of Hon. Patricia Schroeder, a Representative in Congress From the State of Colorado

I join our Chairman in welcoming all of you to today's hearing.

I first want to thank the Chairman for including H.R. 632, the bill sponsored by my colleague, Mr. Frost, in this hearing. I have some sympathy for the view that

the intended result of 28 U.S.C. section 1498, providing for "reasonable and entire compensation," may in fact be seriously eroded if litigation costs are high and the patent holder does not receive reimbursement for those costs. If it is true that no patent owner has been able to recover litigation costs of his or her suit against the government under the Equal Justice to Access Act, I think it is incumbent upon this subcommittee to give this issue serious and expeditious consideration. I would be interested in hearing from any of our other witnesses today, therefore, about this question, and would also encourage the submission of written materials to the sub-

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committee after today's hearing, to assist us with this matter. Mr. Chairman, I hope we can keep the record open for a short period of time to accommodate submissions of this nature.

I joined our Chairman in introducing H.R. 1732, the Patent Reexamination Reform Act. I think the evidence is pretty clear that the current examination process does not fully meet our goal of providing an equitable, expedited, inexpensive alternative to litigation to resolve patent validity disputes. I hope that the reforms set out in H.R. 1732 will move us closer to meeting that goal by improving the process and expanding the scope of reexamination, so that reexamination will be seen more frequently as a fair alternative to litigation.

I also joined our Chairman in introducing the Patent Application Publication Act, H.R. 1733. I want to particularly thank the Chairman for including the provision for patent term extension authority in cases involving an unusual administrative delay by the Patent Office in issuing the patent. I believe this provision fully answers the concerns about the potential loss of patent term under the Uruguay Round Agreements Act.

I look forward to the testimony of our witnesses, and to a dialogue in which we can explore your ideas for improving the legislation that is before us today.

Mrs. SCHROEDER. And I thank Mr. Frost for coming forward and presenting his bill.

Mr. MOORHEAD. I want to thank him also, and, obviously, you've pointed out a serious problem. We hope in our debate back and forth we can do something about the issue.

Mr. Frost. Mr. Chairman, I appreciate that, and, of course, it

came to my attention because of one particular company that I'm personally familiar with. There are hundreds of companies perhaps in this country that could be similarly affected, and it's particularly burdensome on small business because when you have the Government on one hand with vast resources and deep pockets and a small business owner simply trying to seek justice, this current law really makes it very, very difficult for

Mr. MOORHEAD. It's pretty powerful opposition, isn't it?

Mr. Frost [continuing]. A small business to be made whole.

Mr. MOORHEAD. Mr. Gekas.

Mr. Gekas. I waive my right to be here. [Laughter.]

Mr. MOORHEAD. Well, thank you very much, Mr. Frost, for coming this morning, and we'll be discussing this along the line with you and see how we can work it out.

Mr. Frost. Well, thank you, Mr. Chairman.

And I would only urge that you give this as prompt consideration as possible because this really is an injustice.

Mr. MOORHEAD. Thank you.

Mr. Frost. Thank you.

Mr. MOORHEAD. Our second witness this morning is the Commissioner of the Patent and Trademark Office, Mr. Bruce Lehman. Mr. Lehman is no stranger to this subcommittee. He served as counsel to this subcommittee for 9 years and its chief counsel for a number of those years. Mr. Lehman has been a key player on intellectual property issues between the United States and Japan and the European Union. He has also headed numerous delegations to meetings, considered intellectual property issues at the World Intellectual Property Organization. His work and accomplishments have won international praise. Last year he was named lawyer of the year by the National Law Journal, the largest selling publication

for lawyers in the United States.

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Welcome, Mr. Lehman. We have your written statement, which I ask unanimous consent be made a part of the hearing record and ask that you summarize your statement. You may proceed.

STATEMENT OF BRUCE A. LEHMAN, ASSISTANT SECRETARY
OF COMMERCE AND COMMISSIONER OF PATENTS AND
TRADEMARKS, PATENT AND TRADEMARK OFFICE, U.S. DE-
PARTMENT OF COMMERCE

Mr. Lehman. Thank you very much, Mr. Chairman, members of the committee.

First, I want to thank you for having timely hearings on these very important pieces of legislation. Sometimes I think people in Congress think that intellectual property law issues are green eye-shade issues and should not be on the front burner of congressional activity, but I think you're leading the way to show that that's not the case.

And I'd like to take this opportunity, Mr. Chairman, in discussing the two bills before you today, H.R. 1732, dealing with reexamination, and H.R. 1733, dealing with early publication, to explain how these at first blush technical changes in U.S. law really will help to improve the competitiveness of U.S. industry and provide a much more attractive intellectual property environment, for probably the most important people in the United States, our creative and inventive community that's served by the intellectual property system.

First, let me put this in a philosophical context. I would suggest to the committee that the best kind of a patent system in the United States is one that involves the least mystery. The patent system historically has provided for a bargain that's made between the patentee and the rest of the public. In return for getting the exclusive rights that are a part of a patent, the right to exclude others from making, using, and selling your innovation, you make the innovation known to the public by publishing exactly how the inven-

tion is constructed and how it's going to work and, in fact, how you even reduce it to practice. This has two purposes. The exclusivity of the patent grant enables the innovators to go out and get the financing and the support that they need to put the invention into practice, get it to the public as a product, and help grow the economy. The disclosure of the invention tells other competitors what direction to go in to come up with their own innovations which moves the whole economy forward.

One of the great pleasures of working in my job for the last 2 years is to be able to have this perch where you get an international perspective of how successful that system has generally been. I'm happy to report to you that, of the three leading patent offices in the world, the only one where there's a big increase in the filing of applications is our Office, not the European office or the Japanese office. Our increase in filings is coming from domestic U.S. applicants. In fact, the only two patent offices in the world where nationals of that country file a majority of the applications are the United States and Japan.

Now how does all that relate to these specific pieces of legislation? Well, first of all, let me just address the early publication bill. As I mentioned it has always been a part of the patent system

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that you disclose the technology. Keep in mind that the best kind of a patent system is one that gets the patent applicant into and out of the Patent Office as quickly as possible, makes that technology available to the world, and moves that innovative process forward. You don't want these crown jewels to be sitting in the Patent Office for 20 years, nobody knowing about them and nobody being able to use them. You don't want to delay the investment community from being able to move an application forward.

Our term legislation, which was already passed in the Uruguay Round amendments bill, is designed to push that process forward, get people in and out of the Patent Office and get them operating on a global basis. But, early publication is also another very important part of that process. One of the problems that we find in the Patent Office is that there is a lot of concern out in industry which generates a lot of inefficiency because people don't know what is

going on in the Patent Office. This has a chilling effect. If there is a lot of mystery about it, there's a chilling effect. If you think there might be something in a patent application that somebody else might have filed, you're going to be less inclined to make an investment in something else in that area.

You want to have certainty about what's really going on in the Patent Office, and that's what 18-month publication does. It makes absolutely certain that 18 months after a patent application is filed in the Patent Office, it is disclosed to the public. That really doesn't do any disincentive, in my view, to the patent applicant, and, in fact, ultimately helps them out. One way that it helps them out is that it doesn't do the patentee much good to get a patent that is later on going to be held invalid in litigation.

And one of the primary ways in which patents are held invalid in litigation, is where the Patent Office missed some piece of prior art in its examination. They issued a patent thinking that that innovation met the test of novelty and nonobviousness, but, in fact, lurking out there in the technical literature somewhere was something that showed that it wasn't. There was a piece of prior art that should have stopped the patent from issuing. And that, under the present system, leads in many ways to the kind of horror stories that you just heard from Congressman Frost; that's obviously a somewhat different case because it was Government infringement. It leads to a patentee being in the situation where the only way they and their investors can really make certain that they've got something worthwhile is to submit to extremely expensive litigation. Patent litigation is very hard to get in and out of court for less than a half a million dollars, and that figure may be conservative.

One of the things that 18-month publication does is that it makes absolutely certain we will disclose all of the latest technology at 18 months. That not only means that everyone out there in the public who may be thinking of filing their own patent applications and who may be thinking of future consequences of litigation, will have the mist cleared, but it also means that our patent examiners will have this prior art available 18 months after submission of the patent application. It will enable the patent examiners

ers to provide much, much more effective patent examinations.

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That is particularly important in an era where we have just an explosion of technology.

Today, most patents probably are outdated even before their 20-year term is over. In fact, we see that in the decline of filings of the final renewal fee to keep the patent in force. Most people don't even keep their patent in force during the full term simply because technology is moving so fast that it really doesn't have any value anymore, and that puts a lot of pressure on the examination process. We need to have disclosure at an earlier stage.

It is virtually the universal practice in all other countries of the world that there is disclosure at 18 months and thus, when we don't have that in our system, we end up disadvantaging the U.S. innovative community. A Japanese engineer can have available to him a plethora of technical literature from his patent office 18 months after the patent applications are filed, but the U.S. engineer working in Detroit, in Silicon Valley, or in some other part of the country doesn't have that capability. The same thing is true of the Germans and our other basic competitors who have early publication. This legislation will enable the U.S. technical community to have access to this technology in a timely manner, and that's why it's good for the U.S. system. The entire U.S. patent system is based on the need to have effective disclosure of the technology to drive the whole innovative process forward. The administration believes the chairman's bill has done this in a way that provides very adequate protections for patentees who may be concerned about premature disclosure of their technology. Keep in mind that the average patent is issued 19.5 months after filing, so we're only talking, for the average patent, about a 6 weeks' window or so between the patent disclosure and the patent issuance. The chairman's bill provides for the right to receive royalties if your invention is exploited during this period of time, so-called prior user rights, and, very importantly, it also provides a failsafe mechanism for inde-

pendent inventors, those who have the hardest time dealing with the formalities of the system, because they don't have the capacity to hire lawyers and sophisticated patent agents. The chairman's bill provides them with the opportunity to come into the Patent Office and say, "Wait. I'm not quite ready yet. Don't disclose my patent application."

Reexamination really deals with the problem of patent litigation. Most people in the technology business in America feel that the only way that they can really test a patent is through very costly infringement litigation. Obviously, that has a chilling effect on investment, the exploitation of technology, and competition in the technology arena because these people think not only once or twice, but about 20, 30, 40, or 50 times before they put themselves in a position where major corporate decisions and business decisions are based on having to go through very costly multimillion-dollar litigation.

So Congress, this very committee in fact, tried to address this problem in about 1981, by providing for an alternative to litigation to test the validity of a patent, and that alternative was a system called reexamination. Congress gave, for the first time, patent applicants the right to come in and have the Patent Office take a second look at their patent application after it was originally issued

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to make certain that they caught all of the prior art, and, in fact, permit the patent applicant or a third party to actually submit some new prior art that they thought might not have been considered by the Patent Office in making the original novelty and nonobviousness determination so that the new prior art could be considered. Reexamination is a much simpler and less expensive procedure than going through a complicated patent infringement litigation.

What we have found out in the last decade or so is that the reexamination procedures really didn't provide enough real opportunity to reexamine patents. The main flaw in reexamination procedures is the way it deals with third parties. If you knew that the Patent Office had issued a patent to your competitor and you thought we'd

made a mistake because you had in your possession some prior art that showed perhaps that the patent was invalid, the only thing you could do is kind of throw it over the transom of the Patent Office and say, "Here's some prior art. Patent Office. Take a look at this," and that was the most you could do. At the Patent Office, the prior art went to the patent examiner, and then, of course, it went to the patentee and the patentee could respond and say it wasn't valuable, but, basically, the hands of the requester of the reexamination, if they were a third party, were tied.

As lawyers, you're all well aware of the fact that people do make calculations, and when they're involved in something like this, they're just not going to throw their most important piece of evidence over the transom in that way without having the opportunity for at least some of the basic due process that we normally associate with litigation, the opportunity to at least see what the other party has to say about it and respond to it and, also, possibly to appeal a decision on reexamination by an administrative officer like a patent examiner.

This legislation has been supported by the administration largely because this is something we heard from the users of the patent community, after we had extensive public hearings, that they wanted. This reexamination legislation permits a third party to file a reexamination application, to submit his prior art, and then to still be able to participate in that process with the examiner, to find out what the patentee has to say about it, to respond, and then, very importantly, also, if they don't agree with what the patent examiner's final conclusion is, they have the ability to appeal to the Board of Patent Appeals and Interferences, which is our administrative law tribunal in the Patent and Trademark Office. That whole procedure is just vastly less expensive, more efficient, and less time consuming than trying to wait for patent infringement litigation. You're certainly going to find this isn't going to be the panacea. There will be many cases in which people will decide to wait and go to the full-blown judicial proceeding to have an infringement lawsuit to test the validity of these patent claims, but this will certainly strengthen the alternative. This committee, across the board, is trying to make our judicial system more user friendly for the American public, and I can't think of a group that deserves a more

user-friendly judicial system than the people that really make our wonderful way of life in America possible, and that is America's creators that are served by our Patent Office.

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So, Mr. Chairman, that's my summary of the administration's position on these two matters.

[The prepared statement of Mr. Lehman follows:]

Prepared Statement of Bruce A. Lehman, Assistant Secretary of Commerce
AND Commissioner of Patents and Trademarks, Patent and Trademark Office, U.S. Department of Commerce

Thank you Mr. Chairman. I am pleased to testify today in support of two bills, H.R. 1732 and H.R. 1733, that will substantially improve our patent system. I am particularly grateful for the leadership expressed by the Chairman and the Ranking Minority member, Ms. Schroeder, in introducing these bills and for permitting the Administration to assist in their development.

The first bill, the Reexamination Reform Act of 1995, would change our reexamination system to make it a more effective, and thus more attractive, option for reviewing patent validity questions. It would do this by increasing third party participation throughout the reexamination proceeding and by allowing review of patent validity questions other than those based on prior art. These changes directly address the perceived shortcomings of our current system. We thank the Chairman and the Ranking Minority member for introducing this legislation on behalf of the Administration.

The bill would provide limited, yet meaningful, participation by a third-party requester throughout the reexamination proceeding. It would do this by allowing a third party to provide written comments during each round of prosecution in the reexamination proceeding. A third-party requester, for example, would be permitted to provide written comments on statements made by the patent owner in response to an Office action. The bill would also expand the grounds upon which reexamination of a patent could be initiated to include non-compliance with all aspects of § 112 of title 35, United States Code, except the best mode requirement. Finally, the bill would provide a third-party requester with a right of appeal from a final decision of the PTO in favor of the patent owner. Importantly, the bill includes safeguards to prevent third parties from using reexamination to harass patent owners. These

safeguards include limitations on whether and when a request for reexamination may be filed and creation of a statutory estoppel against further litigation of patent validity questions addressed in reexamination proceedings, when a third party seeks and obtains judicial review of an Office determination.

H.R. 1732 would make several fairly significant improvements to our patent reexamination procedure which are fully consistent with the original Congressional intent expressed in the creation of this procedure. When Congress created the reexamination procedure in 1980, it cast it as an expedited, low-cost alternative to patent litigation that could be used to obtain administrative review of certain patent validity questions. To meet this goal, reexamination was structured as an ex parte proceeding that excluded participation by third parties during a reexamination proceeding. Reexamination was also limited to the review of only certain issues affecting patent validity; namely, compliance with 35 U.S.C. § 102 and § 103 in view of patents or printed publications. Substantial new questions of patentability in view of other statutory requirements of patentability could not serve as a basis for initiating or conducting reexamination.

Thus, in our current system, a third party may cite prior art consisting of patents or printed publications, and request reexamination on that basis. If the Office finds that a substantial new question of patentability exists in view of the cited prior art, the Commissioner will issue an order granting the reexamination. The patent owner is then given the option of responding to the reexamination order. If the patent owner so responds, the third party may file a subsequent reply. This ends the substantive participation in the reexamination by the third-party requester.

These restrictions have helped make prevent reexamination an orderly, expedited procedure. However, by the same token, these restrictions are why our reexamination system has not lived up to its potential. As I mentioned earlier, many have expressed concerns over the effectiveness and usability of our current reexamination system. For example, many people who testified at our software patent hearings last year expressed concerns over the lack of cost-effective means for challenging patent validity. For example, William Neukom, General Counsel of the Microsoft; Corporation testified that:

"The threat of litigation involving a patent of questionable validity can be particularly damaging to a smaller company, which may not have the financial or the human resources to effectively challenge the patent's validity in the federal court process. Although the existing re-examination process affords a potential defendant

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an alternative venue in which to contest a patent's validity, the utility of the current re-examination process is limited by its ex parte nature and the limited scope of prior art that can be considered."

Others were more direct in their criticism of the current reexamination system and their calls for reform. Diane Callen, representing the Lotus Development Corporation and the Business Software Alliance stated:

"The current reexamination process ... is generally not viewed as a viable option by opponents to a patent due to the largely ex parte nature of the process. The BSA urges that reexamination be modified to provide more of an inter-partes proceeding, allowing opponents to a patent to feel more comfortable in relying on the procedure to efficiently resolve their concerns in what may be the most efficient forum."

One particularly striking comment is the oft-heard advice given to a third party who knows of pertinent prior art that could invalidate a patent. The advice is that the third party not use patent reexamination. Instead, third parties are advised to reserve the prior art for later use in either a negotiation with the patent owner, or an infringement action in Federal court. Individuals advocating this stance point to the absence of effective third-party participation in the reexamination proceeding coupled with a perception of "enhanced" validity that a reexamined patent enjoys, especially before a jury. Comments like these suggest to me that as far as third parties are concerned, there is a significant lack of public confidence in the current re-examination system as an effective means for challenging the validity of patents. H.R. 1732 directly addresses the basis of this lack of public confidence in patent reexamination. If enacted, H.R. 1732 would provide third parties the opportunity to participate throughout the reexamination proceedings, but would do so without converting reexamination into a full-scale inter-partes proceeding. The bill would accomplish this by permitting a third party who has initiated a reexamination to provide written comments on any patent owner response to an official action of the Office. It does not permit the third party to raise new issues, nor does it give the third party the option of delaying the proceedings by filing multiple responses or by requesting extensions of time. Third parties will also gain a right of appeal from any final determination of the Office in the reexamination proceeding. This right of appeal, however, comes at the cost of preclusion against subsequent litigation of matters addressed, or that could have been addressed, during reexamination in subsequent judicial or administrative proceedings, if both the third party and the patent owner participate in an appeal to the Federal Circuit following the reexamination proceeding.

The bill would also expand the grounds upon which one may challenge patentability to include compliance with all aspects of 35 U.S.C. § 112, except best mode. This is an important and desirable change, as validity questions related to claim scope and enablement often lie at the heart of a patent dispute. By making it possible to review these questions before the Office, patent owners and third parties alike will benefit through access to the special technical and legal expertise of the Office on the full range of issues with which the Office is familiar.

Finally, although a key reason for H.R. 1732 is to "open up" reexamination, the bill has been carefully crafted to ensure that patent reexamination does not become a vehicle for harassing patent owners. The bill contains two important safeguards in this regard. First, as noted above, the bill explicitly estops a third party from further litigating issues that were or could have been addressed during the reexamination proceeding. This measure will prevent parties from using reexamination simply as a prelude to litigation on the same patent validity issue. Second, the bill precludes a third party from initiating multiple concurrent reexaminations, or from initiating a second reexamination on the same issues resolved in an earlier reexamination proceeding initiated by that party or its privies.

The changes proposed by the bill will make reexamination a more effective interpartes procedure, giving patent owners and third parties alike a speedy, inexpensive and reliable way to resolve important questions related to patent validity. I believe the bill effectively addresses the calls for reform of the reexamination system that have emanated not only from the software industry, but from the patent bar and other industry groups.

The second bill that I have been asked to comment on today is the Patent Application Publication Act of 1995, H.R. 1733. This bill would provide for automatic publication of patent applications 18 months after their earliest effective filing date. This bill is based on an Administration proposal that was forwarded to Congress earlier this year, yet contains a number of significant changes. We support the legislation as a whole, because we believe it will serve the interests of the public in the patent system, and, when combined with the new patent term which takes effect today, will clearly serve the interests of patent owners.

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Currently, all applications for patent in the United States are kept in confidence by the Office until a patent is granted. Only upon grant are the contents of the ap-

plication published. This practice differs from nearly every other country in the world. In most countries, patent applications are published 18 months after the earliest effective filing date claimed by the patent applicant.

H.R. 1733 would change our system to conform to this well-defined global model by providing for publication of an application at a fixed time after the filing of the application. I would like to focus my remarks on three aspects of the legislation that I believe are particularly important.

First, the legislation would require the Office to publish patent applications filed under § 111(a) or under §363 eighteen months after the earliest effective filing date claimed for the application. That date would be the original application filing date if no claim for foreign or domestic priority is made. If an applicant claims the benefit of the filing date of one or more earlier filed U.S. or foreign applications, or claims the benefit of either foreign or domestic priority to the filing date of an earlier filed priority document, publication will occur 18 months after the earliest of any such date claimed. Importantly, only applications filed under § 111(a) or §363 will be subject to the publication requirement; provisional patent applications and design patent applications will not be published.

The legislation would also create "provisional rights" for patent owners. These rights would permit the patent owner to recover a reasonable royalty from any party that uses the subsequently patented invention during the period between the date of publication and the date of the patent grant. To obtain a reasonable royalty, the legislation requires that the invention claimed in the patent be identical to the claimed invention as published, and that the infringing party have actual notice or knowledge of the published patent application. Because this right is limited to a reasonable royalty, the patent owner cannot obtain an injunction or recover attorneys fees with regard to pre-grant infringement. Provisional rights will serve to deter infringing use of the published invention prior to the date of the patent grant, and to compensate the patent owner if such use occurs.

Finally, the legislation will also give published patent applications "prior art" status similar to patents. Thus, a published application will be applicable against other pending applications as a prior art document as of its earliest effective domestic filing date. Pre-grant publication will help bring the most relevant prior art to the attention of the Office during the pendency of any related application.

Pre-grant publication will provide a number of significant public benefits. Most significant is the availability of an English-language disclosure of foreign originated

patent applications no later than 18 months after the foreign application was filed abroad. In most cases, we will publish an English language version of the foreign originated application only six months after a foreign inventor decides to seek protection in the United States. This will occur in those cases where a U.S. application is based upon an earlier filed foreign application and the applicant uses the full one-year priority period available under the Paris Convention. Pre-grant publication will thus place our domestic inventors on an equal footing with inventors in foreign countries, who now have access in their own language to technology disclosed in U.S. -originated applications 18 months after having been filed in this country. Pre-grant publication will also ensure that information about all pending applications will be available to U.S. researchers, scientists, inventors and businesses after a reasonable period. Delays in the processing of applications, whether intentional or unintentional, will no longer prevent American innovators from being able to predict where they should be directing their research efforts. And, when combined with the patent term of 20 years from filing date, pre-grant publication will finally help to put an end to the problems for American industry caused by submarine patents. Finally, the availability of provisional rights in conjunction with the changes implemented through the Uruguay Round Agreement Act will provide patent owners with a significant benefit; namely, a procedure that will enable them to enjoy 19 and one half years of some form of recoverable right under a patent. A patent applicant who files a provisional patent application, and then files within one year a non-provisional application, if H.R. 1733 is enacted, would be able to recover at least a reasonable royalty for any infringing use of the subsequently patented invention that occurs 18 months after the provisional application was filed. Thus, six months after the applicant begins the examination process by filing a non-provisional application claiming the benefit of the provisional filing, a royalty claim will be available. With the 20 year patent term, this translates into 19 and one half years of protection for patent owners who elect to use this procedure.

H.R. 1733, as introduced, differs from the Administration's version of the bill. I would like to comment briefly on some of these differences.

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One significant change is the addition of a new section on patent term extensions for pre-issuance delays. This section would extend the patent term extension authority now embodied in 35 U.S.C. § 154(b) for pre-issuance delay to enable a patent owner to receive an extension where issuance of a patent was delayed due to unusual administrative delays by the Office. It would also enable a patent owner to obtain an extension of up to ten years in duration for pre-issuance delays.

When the Administration developed legislation to implement the Uruguay Round Agreements, we carefully reviewed existing examination practices. We then considered the most likely effect of a 20-year from filing patent term; namely, promotion of a rapid conclusion of prosecution. Based on this careful evaluation, we proposed, and Congress enacted, legislation that provided a limited form of patent term extension authority for pre-issuance delays. Section 154(b), in force as of today, thus provides that patent owners will be able to extend the term of patents, up to a maximum of five years, where the issuance was delayed due to an interference proceeding, a secrecy order or a successful appeal by the patent owner.

Present § 154(b) does not include the authority for patent term extensions on the basis of "unusual administrative delays." The reason we did not propose inclusion of a provision to provide patent term extensions on this basis was that, in our opinion, there would not be a significant number of applications in which administrative processing delays, attributable solely to the actions of the Office, would exceed three years. Present § 154(b) also limits pre-issuance patent term extensions to a maximum of five years. Again, this was based on our belief that there would not be a significant number of applications that are subjected to secrecy orders, or appeal or interference proceedings that would exceed five years.

It remains our belief that the instances will be extremely rare in which delays due to administrative processing of applications attributable solely to the office will exceed three years and that the current statutory authority that limits patent term extensions to five years will provide an adequate remedy in all but the most rare of situations. However, we are aware of concerns that have been expressed by members of Congress and other individuals related to the 20-year patent term. The new provisions related to patent term extensions would fully address the basis of those concerns. Because the instances in which these new provisions would apply will be rare, and because the new provisions fully address the concerns that have been identified, we have no objection to the limited changes that H.R. 1733 would make to § 154(b).

H.R. 1733 also introduces a new provision related to pre-grant publication that would enable an independent inventor, under certain circumstances, to delay the publication of an application until three months after issuance of an Office action addressing the merits of the application. We recognize that this provision has been added to address a legitimate concern that has been expressed by an important segment of our patent user community; namely, that an independent inventor who is not planning to pursue protection abroad obtain some indication from the Office as to patentability prior to the publication of his or her application. Based on our cur-

rent examination statistics, it is an extremely rare occurrence where an independent inventor has not received some indication from the Office on the merits of his or her application prior to the 18th month of pendency. Furthermore, procedures are available today that enable an applicant to obtain expedited processing of an application. Such procedures can be invoked in instances where an applicant desires an early indication of patentability on an application. Accordingly, we do not perceive this provision to be necessary. We also recognize that the provision as crafted will not place a significant burden on the Office. As such, we have no objection to inclusion of this provision if the Congress concludes it is needed to address a legitimate concern.

Finally, I would like to explore the possibility of working with the subcommittee to address two concerns we have related to certain differences between the Administration's proposal and H.R. 1733, as introduced.

First, the bill does not include provisions that were included in the Administration's version of the bill to ensure full recovery of provisional rights. I am referring here to provisions that would exempt provisional rights from the ordinary application of the six-year statute of limitations measured from the date of infringing activity. The Administration's version of this bill would have provided that a patent owner could recover provisional rights regardless of the period between publication and grant, and would be able to do so up to six years from the date of the patent grant. H.R. 1733 does not contain these assurances, which we believe should be part of any publication-based system.

Second, implementation of pre-grant publication will require us to carefully evaluate the procedures we implement to govern the time at which an applicant must make a claim for priority. Priority claims dictate when an application will be pub-

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lished in a pre-grant publication system. In contrast, under our current system, priority claims may be added at any time before the grant of a patent. It has been brought to ovu" attention that in setting forth procedures to permit an applicant to present a "late" claim to priority, we have not addressed certain fee-related questions associated with the procedure of making a late claim for priority.

I thank the Chairman for his leadership in introducing these bills, and would be pleased to address any questions the Committee has on either bill.

Mr. MOORHEAD. Well, thank you.

Our ranking minority member, Pat Schroeder, has a conflict with

two committees. So I'm going to give her an opportunity to ask questions first.

Mrs. Schroeder. Well, I thank you very much, Mr. Chairman. I'm going to just ask one question because, as always, you're very, very thorough, but I'm going to ask a question about a raging tempest that's going on around here. We've got many people asserting that the pregrant publication prematurely discloses inventions to foreign competitors so they can compete with the inventor before he has a patent to protect this invention. How would you respond to that?

Mr. Lehman. Well, I'd respond to that, first, by saying that at the present time any American innovator who chooses to have global patent protection is already filing, virtually simultaneously with their U.S. application, in these other markets. They're filing in Japan, they're filing in Europe, and we want them to do that because we don't want people to be able to rip off their technology in those valuable export markets. The moment they do that, they enter a system where 18 months after they file there, that technology will be very conveniently disclosed to their foreign competitors in their native language.

For most people who are involved in international business and whose patents would be of interest to foreign innovators, we have to assume they're already getting that information. The people, in fact, who are disadvantaged by it are the American competitors who don't have that advantage unless they want to hire somebody to go translate the disclosure in Japan back into English.

The chairman's bill, and your bill, Mrs. Schroeder, provides particular protections for independent inventors. First, there's something called a prior user right, which means that if someone should end up using your invention during this very brief period between disclosure and the issuance of a patent, you have an automatic right under this legislation to reasonable and just royalties to cover that period and to compensate you for any loss that you may have had. Furthermore, the chairman's bill provides — and even though this was not a part of the administration's recommendation, we're fully supportive of the chairman's addition — that if a patent appli-

cant wants to have a little more time to decide whether they should withdraw their patent application because it looks to them like maybe they're not going to get a patent and they'd rather rely on trade secrecy, the bill permits an extension before publication.

The administration thinks this bill really deals with any premature disclosure problem. Since the average patent pendency is 19.5 months, most people have a pretty good idea at that point whether they will get a patent. Our patent examiners don't sit there as some remote bureaucrat, we have a lot of contact between the patent applicant and his or her patent agent or attorney and

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the examiner. The telephone is in very heavy use in the Patent Office. We have informal and formal interviews with the examiner, and so this is not something that necessarily takes place as a mystery to the patent applicant. Also, we're engaged in a major reengineering program right now to make certain that the examiners are more customer friendly and customer responsive. So the way the system is supposed to work is that the patent examiner is supposed to be working with the applicant all along, from the moment he opens up the file wrapper, to define what is the patentable subject matter and make certain that that patent applicant gets a patent on it. By the time that you're at 18 months, in most cases the patent applicant would have a pretty good idea as to whether or not the patent was going to issue, and if they felt that there was a likelihood that it wouldn't and they wanted to instead withdraw it, not make it public, rely on trade secrecy, then they would be in a position to do that.

Mrs. SCHROEDER. Thank you. Thank you, Mr. Chairman. I know we both want to compliment the Commission on being more consumer friendly, and maybe you could teach the Judiciary subcommittees to be more Member friendly in not having all of these hearings at the same time. But thank you. [Laughter.]

Mr. Lehman. Thank you.

Mr. MOORHEAD. There's a number of statements that have been made. Of course, we want to protect the patent industry and the

inventor above all else. I think that's very vital if we're going to be protected for the future and we're going to have an innovative society; we want to protect them.

One of the statements that was made is that if this bill passes into law, multinational and foreign corporations that have to pay billions of dollars to use American technology will be able to copy our newest ideas and "rip them off." Do you want to comment on that?

Mr. Lehman. Well, I just think that that's not true at all. We have the best patent system in the world in the United States, and these particular pieces of legislation are going to make it better. First of all, let me say that 18 months' publication does not deny anybody, in any remote sense, patent protection. The patent, if it's going to issue, will issue, and it will presumably issue in a very timely manner after 18 months, if not practically simultaneously with the 18 months' publication. Any big multinational corporate bully that wants to take a risk of trying to rip off somebody's patent in this period of time had better think twice because we have all of the protections of the patent law and the patent system, so that they can be sued for infringement and sued for a great deal of money. We're seeing patent infringement judgments in the neighborhood of \$1 billion these days, and those billion dollar judgments have been issued against what I guess you might call big multinational corporations. So I believe that there is adequate protection in the existing system to discourage people from abusing 18 months' publication.

As I also mentioned, under the worst case scenario, where somebody actually used one of these disclosed technologies, the patentee has a right to full compensation for that under his or her prior user rights. I think there's adequate protection.

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As I mentioned to Mrs. Schroeder, what we have to remember is that right now the people who are most disadvantaged in the world are the U.S. innovators who want to find out what the state of the technology is in the United States, in the world, want access to that data base at the U.S. Patent and Trademark Office, to find out

where to direct their own efforts. Their foreign competitors have that access at 18 months. They have that access to U.S. technology because U.S. technology patent applications are filed in those markets, but the American competitors and the American innovators don't have that. So this really creates a level playing field for Americans.

Mr. MOORHEAD. Well, one of the other comments that I've heard is that this legislation, along with some of the provisions in GATT, might work a hardship on submarine patents, people who have a filed patent, patent pending, and then constantly change the application, so that the patent doesn't issue, and then later on, when someone's violated the patent pending, they file their full — they get their patent and there are major lawsuits that follow. Will this work a hardship on those folks?

Mr. Lehman. Well, I think the answer is yes, Mr. Chairman, it was intended to work a hardship on submarine patent applicants. Coming back to my overall point, the best patent system is one in which you get innovators in and out of the Patent Office as quickly as you possibly can. You get them to the capital markets to get investments in the new technology. Because we're in a global market today, we can't afford to let the Germans get to these new technologies first, or the Japanese. You need to get the factories built with the investor capital, get the marketing analysis done, and get out into the marketplace to be competitive.

Submarine patents are just exactly the opposite. A submarine patent is when someone — and we've had some unfortunate cases like this — files a patent application on something that might be kind of hard to reduce to practice right now, and they file it in the Patent and Trademark Office and keep it going, even though they know the examiner might reject their claims on the basis of the way they have them formulated right now. Every time they get to the point of the final decision, they pull back and file an extension and a continuation, and, lo and behold, then the world goes on while their patent is sitting in the Patent and Trademark Office.

We have patents that had been in there for 10, 15, even 20 years like this. Other innovators who are really moving the economy of

this country forward, creating jobs, and making us competitive had, by then, come up with new technologies that are on the marketplace and then this submarine patent emerges. The way the submarine patent applicant makes money is they then go around and they send their lawyer knocking on the door of all of these other innovators and they say, "Hey, you know, I've just got a patent last month on this thing that you've been in the market with for 5 years. You know, sorry, I filed it about 20 years ago and it was secret during that whole time, and that's why you didn't know about it and you owe me about \$5, \$6 million or maybe a billion dollars." And then, the corporate management has to make a decision, am I going to hire a lawyer and am I going to go through one of these million dollar patent litigations or am I going to pay the guy off?

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Unfortunately, even though there aren't a large number of these submarine patents, they have been extremely destructive to the innovative community in the United States. You can just imagine, if you're in business and something like that happens to you, how destructive that is.

In fact, we heard lots of complaints in businesses like the computer software industry where, we had big public hearings last year, that led to these legislative proposals. That's why we have a trio of legislation that's really designed to address those complaints. First, the 20-year term from filing, means if you keep your patent going in the Patent Office for 20 years, you're going to have a lot less term left. So there will be an incentive to get in and out of the Patent Office. Second, we have early publication, so the patent will be disclosed at 18 months, and it won't be sitting there lurking mysteriously, only to surface later. Finally, we have the re-examination provision that provides people, where they think we might have made a mistake, and maybe they have some prior art, with a cost-effective and easy alternative to going into a full-scale patent litigation.

Mr. MOORHEAD. We really want, whenever we pass legislation, we really want to protect the entire patent community, and especially those people who have invented things. One of the comments that's made, has been made about this bill and others, is that the

18-month publication and the 20 years from filing patent term are part of the most serious attack on the patent rights in our country's history. Would you comment on that, please?

Mr. Lehman. This legislation did not, Mr. Chairman, come out of thin air. It wasn't something I dreamt up at 3 o'clock in the morning some night. In fact, every single one of these proposals has been around for a while and initially surfaced in the predecessor administration under President Bush, whose Patent Commissioner empaneled an advisory committee of people from across the board in the industry, and they came up with a number of proposals, and 20-year term and early publication were part of that. When President Clinton was elected and I was appointed the Commissioner of Patents and Trademarks, we put that on hold, and we took a second look at those recommendations. In order to do that, we had a series of public hearings in Washington, DC, and we, for the first time in the history of the Patent Office, went out to our customers. More patents are issued in Santa Clara County, CA, than any other jurisdiction in the United States, and so we went out there, to Silicon Valley, the heart of American innovation, and we heard what those people had to say. I can tell you that those people wanted these kinds of reforms.

One reform that we heard from a minority of our customers was that people wanted to abandon the first-to-invent system in the United States. We rejected that reform.

We went forward with the things which are included in this package where there was very wide support from the innovative community in the United States. We saw that support initially in these public hearings. You don't have the ability, of course, to sit there for 10 or 12 hours listening to the stream of public witnesses. You have to be more selective, but we did, we sat there all day lis-

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tening to people. We had hearings here in Washington, and this is what we heard.

I think you'll find, when you look at the representations that will be made to you on this legislation, that overwhelmingly the vast

majority of the U.S. innovative community supports these bills. Supporters include the American Association of Manufacturers, the Software Publishers Association, the Pharmaceutical Manufacturers Association, the Business Software Alliance, the American Electronics Association, the American Intellectual Property Law Association, and the ABA, Patent, Trademark and Copyright Law Section. The organized groups who are most concerned with this, who represent the heart of U.S. innovation, the people that we're looking to keep a high standard of living in America and keep us prosperous, overwhelmingly support this legislation.

Mr. MOORHEAD. The gentleman from Pennsylvania.

Mr. Gekas. Yes, thank you, Mr. Chairman.

I take it, from all that has been said, that the Uruguay Round, and what was developed as a result of GATT then, blends in well with these proposals; is that correct?

Mr. Lehman. Yes, sir.

Mr. Gekas. Yet, we were constrained, were we not, to pass legislation for an extension on what was agreed to at the Uruguay Round; is that correct?

Mr. Lehman. I wouldn't characterize it that way

Mr. Gekas. You'd characterize that

Mr. Lehman [continuing]. Mr. Gekas. The Uruguay Round TRIPS Agreement, Trade-Related Aspects of
Mr. Gekas. Pardon me?

Mr. Lehman. The TRIPS Agreement, which is the Trade-Related Aspects of Intellectual Property, was a major part of the GATT negotiations in the Uruguay Round. The United States received just phenomenal benefits from that. We're going to end up having billions and billions of dollars of money flowing into our economy that wasn't flowing there before because people are going to have to recognize our patent rights. For example, countries like Brazil and Ar-

gentina didn't pay us a penny for our pharmaceuticals. They're going to now have to start really paying a lot of money to U.S. innovators.

The nature of the world today is we can't send the marines into a country that we may have an intellectual property dispute with, and so there's some give and take in international negotiations. There is an interest in "permanentizing" the system and having uniform rules.

One of the things that the United States agreed to in the Uruguay Round, because we thought it was in our own best interest as a country as I've alluded to today, it is a 20-year patent term from filing. The virtually universal term, in the world for patents is 20 years from the filing of a patent, not 20 years or 17 years, whichever is longer; it's 20 years from filing. And there is no doubt about it, that the understanding in those negotiations was that when the United States was talking about a 20-year term, they were talking about a term of 20 years from filing, not some term that was at least 20 years from filing.

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The actual Uruguay Round Agreement does say the patent term must be at least 20 years from filing, and so, technically, we could have provided for some longer option, but there was never an understanding on anyone's part that we were talking about something different from 20 years from filing. Having been involved in negotiations with people, we, as lawyers, can appreciate that you will not have a very good reputation if you try to wiggle out of something on a technicality later on. Your word is very important, and what people perceive your word to mean is very important. We meant, when we were in those negotiations, a term of 20 years from filing. And, furthermore, it's totally defensible. Not only is there absolutely nothing wrong with it, an alternative would be very, very destructive.

You have to keep in mind that under the international system the term is 20 years from filing and under the international system you virtually have to file simultaneously in all the countries in which you want protection. If you wait longer than a year, for ex-

ample, to file after your invention has initially been disclosed, your technology will — in any country where you don't file — go into the public domain. Any American who wishes to operate on a global basis and wishes to have protection outside the borders of this country for their valuable creations has to file in these other countries. So what happens is, if we were to have a term longer, what would happen would be that when the patent term expired after 20 years in other countries, the only place where people would be constrained them from taking that technology and using it is as generic technology, as part of the overall technology base of the country, would be the United States.

I think it's very important to understand that the patent incentive is vital to many kinds of economic improvements, new technologies, and it's vital because it "incent" an investor to go in and make an investment in making that patent a reality, but, on the other hand, we have to remember there is a balance. We would not have the thriving electronics industry and business in the United States if all of Thomas Edison's patents were still valid. All of the innovation would be someplace else. We'd still be using the 1890 light bulb.

It is very important that at an appropriate and very well-understood time, the patent should expire and the technology go into the public domain, so that the rest of the innovative community can have easy access to it. The last thing that you want is to create a situation in which your foreign competitors have access, but the U.S. industry does not.

If we look at the actual reality of what we are talking about, the vast majority of what we have done in the Uruguay Round implementing legislation is that we have actually extended the patent term available to most applicants in our patent system because the current average pendency is 19.5 months, and I can give you more statistics, if you'd like, about various areas of technology. There's not a single area of technology in which we examine in which it takes us 3 years to examine a patent, and, therefore, since we've gone from a system of 17 years from the issuance of a patent to a system of 20 years from filing, that time difference between when we issue the patent and the 17 years will actually result in an ex-

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tension for most people. The average patentee is going to get a longer term under the Uruguay Round, and when you look at all of this and you balance all of these considerations, I think that we have done the only prudent thing. The prudence is suggested by the wide support from U.S. industry that this has, by the fact that it's a bipartisan thing, by the fact that this is basically something where the Bush and the Clinton administrations have had no difference. I think that it should be something that we can move forward with on a consensus

Mr. Gekas. What I'm asking is, did or did not Uruguay accommodate the possibility of extension of the patent years based on some untoward interference that might have happened with the original process or

Mr. Lehman. The answer to that is yes.

Mr. Gekas. Pardon me?

Mr. Lehman. Yes.

Mr. Gekas. Are you saying the Uruguay Round accommodates that?

Mr. Lehman. Yes.

Mr. Gekas. Oh, so it wasn't a unilateral projection of our insistence to have that 5-year or other extension?

Mr. Lehman. What most people thought the Uruguay Round meant was a term of 20 years from filing, but

Mr. Gekas. Right.

Mr. Lehman [continuing]. The way the Uruguay Round is drafted is that it does permit you under certain circumstances to have a term of longer than 20 years, and, in fact, the chairman's legislation that's pending before you really addresses a valid reason for

extension, and that would be situations where, through no fault of the patent applicant, somehow or other because we in the Patent Office screwed up their application, they were not able to enjoy the full patent term that they would have liked to have enjoyed. Also, the initial Uruguay Round legislation provides, for example, for extensions for appeals of up to 5 years. We also have the Drug Price Competition and Patent Term Restoration Act of 1984, for example, where you're dealing with regulatory delay that permits the extension of the patent. All of those extensions are permitted, and they would permit a patent to run for longer than 20 years. I think the chairman's legislation has tightened up on that even further to make certain that there will not be circumstances in which a person, through no fault of their own, would find that they didn't have effective patent term, and we'd be happy to work with you if there are other things that we need to take a look at. For example, on the Drug Price Competition and Patent Term Restoration Act, maybe we need to take a second look at that.

Mr. Gekas. All right, I thank the chairman for the time, but I want to make it a public record that I'm against issuance of any more patents on submarines. [Laughter.]

Mr. MOORHEAD. How about cruisers? [Laughter.]

The gentleman from Michigan, our ranking minority member of the full committee.

Mr. CONYERS. Good morning, Mr. Commissioner and Assistant Secretary. It's good to see you again, and I wanted to find out how

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it took so long for us to get to the submarine issue. Is there somebody against the changes that we would make in this regard?

Mr. Lehman. Well, I think, Mr. Conyers, that you will hear that there are some people who are opposed to it. You know, I haven't participated in this governmental process as long as you have, but I've been around here for a while, and I think we're still searching for that system under which everybody can agree on everything and we can have a consensus.

Mr. Conyers. Well, I'm glad you haven't given up. [Laughter.]

Mr. Lehman. I think we in law and government are innovators, too. That's what this hearing is about. We're always trying to achieve that level of perfection. We've done our darnedest here to try to reach out to people. We've had hearings in the Patent Office. But there are people that would continue to say that the system that permits some of these other abuses is fundamentally good, and I'm sure you'll hear from them, and you'll hear their reasons for that, but I think that you will find that the overwhelming weight of opinion among the people who really are pushing forward innovation in America today, and the organized groups that really are concerned with this, are in favor of these reforms whose time has come.

Mr. Conyers. Right. What about the arguments that come forward that the requester is often not the real party in interest but rather an attorney, and so the patent owner is denied the fundamental right to be confronted by the real party, and sometimes the provisions of law that prohibit the requester from certain future actions are ineffective? Have you met that kind of argument before?

Mr. Lehman. Well, Mr. Conyers, it's the first time I've ever heard that argument, in fact. As a practical matter, one of the nice features about our patent system is that it permits pro se prosecution with the Patent Office. In other words, any inventor has the right to represent himself or herself in any proceeding in the Patent and Trademark Office, and that would be true of a reexamination proceeding; it's true of a patent application proceeding. As a general rule, we counsel people against that, for the same reason that you don't want people necessarily to go into Federal court and represent themselves pro se. Patent agents and patent lawyers can be very helpful to people. Keep in mind that registered patent agents and patent lawyers are licensed by us as members of a very unique bar, and those licensing requirements carry with it very serious ethical obligations. If they violate those obligations in any way, they're basically subject to disbarment.

I think that it's a little bit of paranoia. I think the system, as a practical matter, is pretty sound. If people want to come in pro se, they can. I think in most cases they should go to a patent agent. They'll find, generally speaking, that the agent will be able to hone in their arguments, hone in the case more to their benefit, rather than the other way around.

Mr. Conyers. Thank you.

How will the office handle continuing applications filed more than 18 months after a parent application has been filed?

Mr. Lehman. Under this legislation, the 18-month publication would go back to the original application. As I indicated, there is

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an amendment that Chairman MOORHEAD has put in his bill that would permit a patent applicant, if they're an independent inventor, the people that have the least sophistication sometimes and the fewest resources, to get an extension to get a better reading on whether their patent was likely to issue, and, therefore, not to have to disclose the invention, if they didn't think they were going to get a patent.

Mr. CONYERS. Well, thank you very much. I appreciate your starting off these hearings. I think these are very timely legislative proposals, and I think it will be an important improvement as we continue to move through the patent and trademarks issues. Thank you.

Mr. Lehman. Thank you.

Mr. MOORHEAD. Well, thank you, Mr. Lehman. I appreciate it.

Mr. Lehman. We'll be happy to follow up with any other questions that you might have in writing.

Mr. MOORHEAD. Mr. Conyers has a statement he would like to submit for the record.

[The prepared statement of Mr. Conyers follows:]

Prepared Statement of Hon. John Conyers, Jr., a Representative in
Congress From the State of Michigan

I want to recognize my good friend Congressman Martin Frost and to commend him for his efforts to bring an element of fairness into the patent system by giving small businesses a chance to recover some of their costs when the federal government commits the injustice of stealing their designs and giving them to a competitor. That is an outrageous circumstance and I am sure the Judiciary Committee will very carefully and very thoroughly consider the Gentleman's proposed legislation — H.R. 632.

I also want to recognize the other witness at the lead panel, Bruce Lehman, who accompanied the Subcommittee on an oversight investigation to China and Japan and who has done yeoman work in negotiations with our trading partners to ensure that American companies are able to protect their intellectual property rights overseas.

Today's hearing is one of a series designed to improve the patent system and fulfill the important responsibility Congress has to balance the rewards to inventors so that they will continue to stimulate advances in technology, with the needs of the public so that society as a whole will benefit.

Mr. MOORHEAD. Our first panel of witnesses represents the Intellectual Property Owners, Inc.; the American Intellectual Property Law Association; the Intellectual Property Law Section of the American Bar Association.

Our first witness is Mr. Gary Griswold, representing the Intellectual Property Owners, Inc. Mr. Griswold is chief intellectual property counsel of Minnesota Mining & Manufacturing. He has a B.S. in chemical engineering from Iowa State University and an M.S. in industrial administration from Purdue University and a J.D. from the University of Maryland. He practiced intellectual property for 20 years. He served as a member of the Secretary of Commerce's Advisory Commission on Patent Law Reform from 1991 and 1992. Welcome, Mr. Griswold.

Our second panelist is no stranger to this subcommittee. Mr. Michael KIRK has been with the Patent and Trademark Office from

1962 to 1995, where he climbed the ranks from patent examiner to Deputy Commissioner. In 1991 and 1992, he served as the chief U.S. negotiation on trade-related aspects of intellectual property rights in GATT. He's a graduate of Georgetown Law School and

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practices as a registered patent attorney with NASA. He was awarded the Jefferson Medal for contributions to American intellectual property law in 1992, received the Commerce Department's Gold Medal Award in 1984, and again in 1994, and was awarded the Presidential rank of Meritorious Executive by both President Reagan and President Clinton.

Welcome, Mr. KIRK.

Our third panelist, Mr. Thomas Smith, representing the Intellectual Property Law Section of the ABA — Mr. Smith is a partner in the Chicago law firm that specializes in patents, trademarks, and copyright law matters. He has a bachelor of science degree in engineering from the University of Missouri. He received a jurisdoctorate degree with honors from George Washington University. In August 1994 he became the chair of the American Bar Association, Section of Intellectual Property Law.

Welcome, Mr. Smith.

Mr. Griswold, would you begin?

STATEMENT OF GARY L. GRISWOLD, PRESIDENT,
INTELLECTUAL PROPERTY OWNERS

Mr. Griswold. Thank you. Chairman MOORHEAD.

I'm here today on behalf of the Intellectual Property Owners. I'm president of Intellectual Property Owners. IPO, as it's normally called, is a trade association which includes large and small companies and universities and individuals who own patents, trademarks, copyrights, and trade secrets. IPO members are responsible for a substantial amount of the R&D that's done in the United States every year. In fact, 25 organizations represented on the board did more than \$20 billion in R&D in 1994. IPO members re-

ceived 12,000 U.S. patents in 1993, which represents 23 percent of the total patents received by U.S. nationals in the United States.

As I mentioned, I'm speaking on behalf of IPO, but, as you mentioned earlier, I am chief intellectual property counsel for 3M — or Minnesota Mining, as it's known by some — a company that makes things from post-it notes to heart/lung machines to computer disks — a diverse company that has a lot of interest in patents and \$16 billion in sales. We're still making new things. We had a billion dollars in first-year new sales in 1994. We did a billion dollars in R&D and received 543 patents, which puts 3M seventh on the IPO list of U.S. organizations receiving U.S. patents. We like technology and patents.

I'd like to compliment Chairman MOORHEAD and Representative Schroeder for their leadership and vision in introducing bill 1732, related to patent reexamination and 1773, relating to publication and patent term extension. These bills represent important improvements to our patent system. We think that they will certainly improve the climate for commercializing new technology, create more certainty about the status of patent rights, enhance validity, and reduce costs.

I'm going to turn to 18-month publication first, and that's in bill 1733. This is a key companion, as has been mentioned by Commissioner Lehman, to the 20-year patent term which takes effect today.

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Now Commissioner Lehman mentioned a number of points relative to why we need 18-month publication. He mentioned the need to have technology known so that it's available in the United States to U.S. inventors. In the United States 45 percent of patent applications are foreign origin. These foreign origin applications are published in their countries of origin 18 months after publication and are available to people in those countries in their language, but are not published in the United States until a patent issues.

We need access to that technology in English. An 18-month publication will provide that.

It allows us to build on the technology, as the patent system was designed to do. It also allows us to know the status of patent rights. If you're building an industry and want to invest, you need to go get a license and deal with a patent application. With 18-month publication, you can do it, rather than having something jump out at you later. Also, early publication will enhance validity because we'll know what patent applications are available.

We believe that all applications should be published in 18 months, including those where there's been a request for early examination. We believe that those who do want to ask for early examination and are not going to file an application outside of the United States, or are not going to otherwise publish their invention, should have an opportunity, if they request it when they file their application, to receive an examination and an indication of patentability before publication, in time so that they can abandon their application before publication if the indication of patent ability is negative.

We believe that provisional rights which are provided in the bill — they're not prior user rights; they're provisional rights — are very important rights because they allow the inventor to obtain a reasonable royalty from the time of publication, if the inventor gives notice to the alleged infringer. We think the inventor should give notice to the alleged infringer and also connect that notice to the alleged infringing activities, actual notice. Also, when the patent issues, the patent should have a claim that's substantially identical — it doesn't have to be identical — substantially identical to the claim in the publication. This will allow inventors to receive royalties, if they file a provisional application, for 19.5 years, which is a longer period of time than they receive today.

So we think publication with all of the pieces here is a key companion to the 20-year term. H.R. 1733 is an important bill to be enacted. Now, with regard to the patent term extension that's provided in bill 1733, there's been some question relative to what happens if the patent is delayed in the Patent Office. The patent term extension section of 1733 expands the time in the original Uruguay Round Agreements Act from 5 years to 10 years and also covers an unusual administrative delay. We think delay will happen very in-

frequently, but we believe that this section is a good improvement and should be enacted. Overall, we believe that the 20-year term, plus the publication, will improve the use of technology and will meet the objectives mentioned by Commissioner Lehman.

I'm going to mention patent reexamination for one second, and I know the red light 's on. That's bill 1732. I was part of the advisory commission that came out with the report in 1992. The patent

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reexamination statute was not being used effectively. It was supposed to provide an inexpensive means to look at validity. It wasn't being used because the requester didn't have that many rights. A blueprint was put together by the Advisory Commission. Basically, that blueprint is your bill, and we believe it should be enacted. Those are my comments and I'll take questions later. Thank you.

[The prepared statement of Mr. Griswold follows:]

Prepared Statement of Gary L. Griswold, President, Intellectual Property Owners

Mr. Chairman and Members of the Subcommittee: I am pleased to be here today to speak on behalf of intellectual Property Owners (IPO). I am the current President of IPO. I am also Chief Intellectual Property Counsel for 3M Company in St. Paul, MN. IPO is a trade association that represents large and small companies, universities, and individuals who own patents, trademarks, copyrights, and trade secrets. IPO members are responsible for a substantial share of the research and development and patenting in the United States. In 1994, 25 organizations represented on our Board of Directors, only a portion of the membership of the association, invested \$20 billion in research and development. During 1993, IPO members were granted about 12,000 United States patents, 23 percent of all U.S. patents granted to U.S. nationals.

Our members have a large stake in the effective operation of the U.S. patent system. The patent system is intended to encourage invention and investment in commercialization of new products and services, thereby creating jobs in U.S. industry and strengthening the national economy.

We compliment Chairman MOORHEAD and Representative Schroeder for introduc-

ing H.R. 1732 and H.R. 1733, which would make important improvements in the patent system. We strongly endorse these measures because they will improve the climate for commercializing new technology, create more certainty about the status of patent rights, and reduce costs.

We also want to express our support for another patent bill recently introduced by Chairman MOORHEAD and Representative Schroeder: H.R. 1659, the "Patent and Trademark Office Corporation Act of 1995." We look forward to the opportunity to explain our views on H.R. 1659 at the appropriate time. We are not able to endorse H.R. 632 at this time.

18-MONTH PUBLICATION OF PATENT APPLICATIONS

IPO supports publication of patent applications 18 months after the earliest filing date as proposed by H.R. 1733. The current U.S. patent system, which requires that applications be kept confidential until the patent is granted, is causing uncertainty about the status of rights in new technology and is unreasonably delaying dissemination of technological information. The uncertainty and delay, we believe, are weakening the incentives for U.S. innovation and investment in technology that the patent system is supposed to provide, and are weakening our technological competitiveness.

The United States needs to strike a balance between, on the one hand, the interest of U.S. patent applicants in keeping applications confidential, and on the other hand, the interest of the general public in being able to identify potential patent conflicts at an early date and being able to obtain early access to information in patent disclosures.

Technology owners should have a right to rely indefinitely on trade secret protection instead of patents, but once an owner elects to seek patent protection, the public needs to know of the possibility of patent rights within a reasonable time. Under the 18-month publication system proposed in H.R. 1733, the U.S. public will benefit from obtaining — earlier and in English — information that is disclosed in foreign-origin patent applications filed in the U.S. Nearly 45 percent of applications filed in the U.S. are from abroad. Foreign countries already are making patent application information public in their languages. They are also publishing U.S.-origin applications that are filed abroad 18 months after the priority date.

The U.S. examines patent applications and grants patents much more promptly than other countries, but we are slower to publish foreign-origin patent disclosures.

If a foreign-origin application is granted as a patent 18 months after filing in the United States, for example, the disclosure is not published in the United States today until 30 months after the priority date. By adopting the 18-month publication

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procedure of H.R. 1733, we would move the publication date of foreign-origin applications ahead by 12 months, in step with the rest of the world.

We believe every application should be published no later than 18 months after the earliest filing date, and we also support the concept of having the Patent and Trademark Office make an initial determination of patentability before the date of publication, for those who need such a determination.

Proposed paragraph 122(bK2) of the patent code insures that an application will not be published until 3 months after the Patent and Trademark Office has given the applicant a first notice of whether the invention appears to be patentable. This gives the applicant a reading on patentability while there is time to abandon the application and avoid publication. The bill thereby enables inventors to continue to rely on trade secret protection for some inventions that may have value but do not satisfy the standards for obtaining a patent.

Paragraph (b)(2) correctly limits its benefits to applicants who are not already publicly disclosing the invention and are not relying on a right of priority or an earlier application filing. We suggest that the benefits of paragraph (b)(2) should be available only to applicants who request at the time of filing that their applications not be published until after the first examination. Also, the benefits of paragraph (b)(2) should be available to all patent applicants, not just independent inventors. Large and small companies and universities, as well as independent inventors, may wish to obtain an indication of patentability from the Patent and Trademark Office before allowing their applications to be published.

In addition, paragraph (b)(2) should place an obligation on the Patent and Trademark Office to accelerate applications for which the benefit of paragraph (b)(2) is requested, to ensure that publication of applications will not be delayed beyond the 18-month publication date. The Office already is reaching virtually all cases for first action within 15 months after filing. With careful attention to management of backlogs, the Office should be able to guarantee a first notice of whether the invention appears to be patentable no later than 15 months after the actual filing date.

A key part of H.R. 1733 is section 4, on provisional rights. Provisional rights are

an essential part of any procedure for publishing applications. After an application is published, the applicant must have a right to compensation from competitors who learn of the publication and begin commercializing the invention, assuming the applicant ultimately is granted a patent. Otherwise the applicant could be damaged. Eighteen-month publication with provisional rights complements the 20-year patent term measured from the earliest filing date that was enacted as a part of the Uruguay Round Agreements Act, which, coincidentally, takes effect today. In addition to the right under section 8 to extensions of the 20-year term to compensate for unusual delays in the Patent and Trademark Office, provisional rights under section 4 serve as an insurance policy to prevent adverse effects from unusual delays.

We offer two suggestions for section 4. First, a patent applicant should be required to give actual notice of the published patent application to the alleged "infringer" as a prerequisite to obtaining a reasonable royalty, and the notice should identify the infringing activities. If only knowledge of the published application is required, the door will be opened to litigation over whether the alleged infringer knew or should have known of the published patent application. Second, the requirement that a claim in the patent and a claim in the published application must be "identical" should be changed to include claims that are "substantially identical." This would be consistent with the interpretation given to the term "identical" in the patent reissue statute.

We also would like to offer some suggestions on the manner in which the Patent and Trademark Office should implement 18-month publication of patent applications.

1. The entire patent application should be published. Copies of published applications should be placed in the Office's search files so that members of the public and patent examiners can search the published disclosure and claims. Publication of only a drawing and claim or abstract is not adequate to enable members of the public to search the technology and identify potential liability through a provisional right to a reasonable royalty. The PTO should develop a plan for publishing the entire application that will keep costs as low as possible. While money can be saved by printing only amended claims and corrections to the specification when the patent is issued, we would prefer to have a full patent document printed when the patent is granted, in addition to publication of the entire application at 18 months.

2. Public access to the contents of the application file should extend to all materials added to the file after publication. The public needs access not only to techno-

logical information disclosed in the specification, but also to correspondence with the Office, new and amended claims, prior art citations, and other information that may

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be able to determine the likely scope of patent protection at an early date. The earlier a manufacturer can determine the scope of coverage of a patent, the better the manufacturer can plan its investments in manufacturing facilities and R&D.

3. Third party submissions of prior art information to the Office should be strictly controlled, in order to avoid the kind of "opposition" proceedings that competitors of patent owners use to delay grant of the patent under some foreign patent systems.

In summary, we strongly endorse publication of patent applications at 18 months as proposed in H.R. 1733 because such publication will result in more effective dissemination of technological information — including information in foreign-origin applications that are not available in the U.S. in the English language now at an early date — and will result in earlier availability of information about that status of patent rights in new technology. The earlier dissemination of technology and the greater certainty about patent rights will spur more invention and investment in this country.

EXTENSION OF 20-YEAR PATENT TERM

IPO also supports section 8 of H.R. 1733, which is an important expansion of the authority of the Commissioner of Patents and Trademarks to extend the 20-year patent term measured from the filing of the first application. In a statement in the record of the joint hearing held by this Subcommittee and the Senate Subcommittee on August 12, 1994, IPO vigorously supported the 20-year patent term. We believe and continue to believe that the 20-year term is a fundamental reform in the U.S. patent system. It will eliminate abuses of the patent system that have been harming U.S. industry and the consuming public.

Certain foreign and U.S. companies and inventors have been delaying their patent applications in the U.S. Patent and Trademark Office in order to extend the expiration dates of their patents. This has become a growing problem. After decades in the Office, patents have been granted in mature industries where manufacturers already have invested in product commercialization. The long delays have caused uncertainty for manufacturers who do not know the status of patent rights in new technologies for many years after the patent normally should be granted. Under the old system, the American public also has been deprived of new products and manu-

facturing jobs because the owners of unreasonably delayed patents have not had an incentive to commercialize their inventions within a limited time.

The 20-year term measured from filing of the first application removes the incentive for delay by applicants and creates incentives for patent owners to commercialize inventions promptly. Some delays in the Patent and Trademark Office, however, are beyond the control of the applicant. The Uruguay Round Agreements Act provided for extensions of the 20-year term of up to 5 years when the grant of the patent is delayed due to an interference proceeding, a secrecy order, or an appellate review, but did not provide for an extension of the 20-year term in every situation where substantial delay may occur through no fault of the applicant.

We support the provision in section 8 of H.R. 1733 which extends the 20-year term in the case of any unusual administrative delay in the Patent and Trademark Office that is not caused by the applicant. We also favor the increase in the total duration of all extensions of a patent available under that section from 5 years to 10 years.

Only a small number of patents will need to be extended under section 8, but the authority is important to insure an equitable result in the few cases where patent owners otherwise would receive fewer years of patent protection than under the old system. By retaining the basic principle of measuring the patent term from the earliest filing date, section 8 retains the incentives for patent applicants to avoid delay and to commercialize their inventions within a limited time. U.S. industry receives the benefits of greater certainty about which technologies are protected, and the U.S. avoids losing manufacturing jobs to countries that do not permit unreasonably extended patents. U.S. consumers benefit from lower prices and more new products. We would be pleased to work with the Subcommittee and the Patent and Trademark Office on plans for implementing the patent term extension authority of section 8. We urge that the Office develop a plan for reforming (1) the practice under which the Office makes the second reflection of patent claims "final" and (2) the practice under which the Office requires patent applications to be separated into large numbers of divisional applications. Reform of these practices will speed up the patent examining process. The changes that are needed may be similar to those required by the transitional provisions of the Uruguay Round Agreements Act for certain applications on file on the effective date of the new legislation. If the Office

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needs additional legislative authority, the authority should be included in H.R. 1733.

We also support section 9 of H.R. 1733. This section makes a technical correction to avoid inadvertent loss of rights when the last day for filing a regular patent application that follows a provisional application is a Saturday, Sunday, or Federal holiday within the District of Columbia.

PATENT REEXAMINATION

IPO urges early passage of H.R. 1732, which refines and improves the patent re-examination law that was passed by Congress in 1980. We want to compliment Chairman MOORHEAD and Representative Schroeder and the Patent and Trademark Office for a proposal that will benefit all of the users of the patent system.

H.R. 1732, like H.R. 1733, will increase certainty about the status of legal rights in technology. The greater certainty will improve the climate for inventing and for investing in commercialization of new products. I am pleased personally to see that the bill implements most of the recommendations made to the Secretary of Commerce in 1992 by the Advisory Commission on Patent Law Reform, since I had the opportunity to serve as an alternate member of that Commission.

The 1980 patent reexamination law was intended as a quick and inexpensive alternative to court litigation on issues of patentability involving earlier patents or printed publications. The Advisory Commission on Patent Law Reform concluded, however, that the law is failing "to provide an expert forum as a faster, less expensive alternative to litigation of patent validity" because many third parties are reluctant to use reexamination.

H.R. 1732 will encourage greater participation in patent reexamination proceedings by third parties. Section 305(b)(3) of the patent code as amended by the bill gives third party requesters a right to file one written comment on each response filed by the patent owner. This is a significant change that will help level the reexamination playing field and encourage use by third parties.

Code section 306 makes a major change by giving third party requesters a right of appeal for the first time. Third party requesters will be able to appeal to the Board of Patent Appeals and Interferences and to the Court of Appeals for the Federal Circuit. We agree with the approach taken by the bill of giving both the patent owner and the third party a right to appeal to the Federal Circuit and giving neither of them a right to de novo review of a reexamination proceeding in the U.S. District Court for the District of Columbia. The right of appeal should induce more third parties to use reexamination.

We also support the other improvements in reexamination made by H.R. 1732, including (1) expanding the issues that can be reexamined by including issues under section 112 of the patent code except for the "best mode"; and (2) consolidating the order for reexamination and the first Office action.

H.R. 1732 seeks to avoid duplicate litigation in reexamination and in court. Code section 306(c) estops third party requesters from participating in a reexamination appeal to the Federal Circuit and later asserting patent invalidity in another forum on a ground that the party raised or could have raised in the reexamination. Similarly, code section 308(b) requires that once a final decision has been entered in court against a party who is asserting patent invalidity, then that party may not request reexamination on issues that the party raised or could have raised in court. We support this effort to avoid duplicate litigation, but suggest clarifying the meaning of "could have raised." If this term is given a broad interpretation, it may discourage some parties from using quick and inexpensive reexamination proceedings.

H.R. 1732 is an important proposal for improving reexamination of patents on the types of issues that are routinely considered by the Patent and Trademark Office during the initial examination of patent applications. Some IPO members have suggested more limited changes; others have suggested much greater changes that would establish a post-grant "opposition" proceeding in which all issues of patent invalidity could be raised, including issues such as prior use and sale. By increasing third party participation while retaining the existing reexamination framework, H.R. 1732 takes a middle ground. We believe this bill has widespread support in the patent community, and we hope it can be enacted promptly.

AMENDMENT TO 28 USC § 1498

Our limited review of H.R. 632 causes us to question whether the bill should be enacted, at least in its current form. The bill amends 28 U.S.C. 1498 to mandate payment of reasonable costs including expert witness and attorney fees when a patent used by the United States is owned by an independent inventor, nonprofit orga-

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nization, or small business. We do not know why the rule for payment of attorney fees and costs in patent suits against the government should be different from the rule for payment in suits between private parties. Neither do we know why the rule for payment to independent inventors and small organizations should be different

from the rule for payment to large organizations.

We appreciate the opportunity to present these views. I will be glad to answer any questions.

Mr. MOORHEAD. Thank you.

Mr. Smith.

STATEMENT OF THOMAS E. SMITH, CHAIR, SECTION OF INTELLECTUAL PROPERTY LAW, AMERICAN BAR ASSOCIATION

Mr. Smith. Yes, Chairman MOORHEAD, members of the subcommittee, I thank you very much for giving me this opportunity on behalf of the American Bar Association, Patent, Trademark, and Copyright Section, which has now had its name changed to the Intellectual Property Law Section, to present those views of the section. These are not my personal views; these are the views of the section.

Our section has over 13,000 members, which represent the intellectual property law community, representing clients of every size, large, small, medium size, individual inventors. In other words, our experience has been across the board.

We arrive at our resolutions, our positions, through debate of our membership at our — once a year we have a meeting. This year it's going to be in Colorado Springs in 2 weeks, and there are certain aspects of the two bills which we're going to comment on that we would ask leave to present our views on those aspects after our members have had a chance to debate those issues. There are other proposals in which we favor slight adjustments in the language in the two bills which we would like to have you consider. They're already part of our policy decisions that have been made by our members. These policy decisions have been made with regard to the bills 1732 and 1733. We will not have any comments with regard to H.R. 632.

Turning now to the reexamination, actually, our section was, I'd like to believe, was the one that really started the reexamination

ball rolling because it was Bob Benson, our former chair of the ABA, then the Patent, Trademark, and Copyright Section, who promoted that. That was prior to 1977, when the Dann amendments were put into effect by Commissioner Dann who thought that we could accomplish this through administrative fiat. After it was determined that third-party requesters were causing too much of a problem in connection with that, the reexamination process was revisited. The Dann amendments went out and the reexamination statute went in in 1981.

The purpose of that reexamination was to make the efficient resolution of the validity of patents without recourse to expensive litigation. It has been mentioned that litigation cost, at that time, was \$250,000 to litigate a patent. It's much, much more expensive now, as the Commissioner has pointed out.

So what we were trying to do was to make patents more certain. This was one way of doing it, we believed the best way of doing it, the least expensive way of doing it, allowing patent validity to

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be tested in the proper place, in the least expensive place; namely, in the Patent and Trademark Office.

The laudable objectives of that legislation, however, never came to pass because third-party requesters were really prevented from doing anything other than just responding to the initial order of the Commissioner with regard to the reexamination. They were not permitted to respond to the various responses in the reexamination process that were made by the patentee.

We believe that the present bill will solve many of those problems. The present bill provides for the — gives a limited role for the third-party requesters, but still permits them to respond to each and every response that the patentee files, and this, we believe, is an important process. It should encourage third parties to come in and use the system where before third parties were very reluctant to do that. Although it was proposed or thought that about 2,000 requests per year would be filed, actually, less than 2,000 third-party requests have been filed since 1981. So we believe that parts

of the bill in 1732 will be very salutary in achieving the goals of the reexamination process.

The matters with regard to appeals and the estoppel are matters which we will be taking up at our meeting in 2 weeks, and we will debate those issues at that time, but, in general, our support is for 1732. We feel that it is essential to the process of reexamination that we have these changes. We will be debating the third-party requester ability to participate in the appeal and the estoppel issues at that time.

Let me now turn to 1733, the patent application publication bill. We support this bill. We adopted a policy favoring enactment of legislation to provide for early publication of patent applications with provisional rights. Let me say that we believe that the package — the 20-year term and 18-month publication, provisional rights — those three things are part of a package; they're really not separable. Unfortunately, they were separated out. We now have the 20-year term. We need, as part of that package, this 18-month publication and provisional rights. We need early publications for the reason that the Commissioner stated very aptly. I will not go over those, but our section supports that, has supported that for many years, and we believe that those parts should be enacted as a part of this entire package.

We have a number of concerns with regard to the extension of the patent term extensions. We believe that there should be patent term. We have support for those patent term extensions in general, but, basically, what we're going to try and debate at our meeting next month is what are the conditions under which those extensions should be given, and we would like to have an opportunity to present those views to this subcommittee if we may.

But we feel, again, that both of these bills are very important to our patent system and would be salutary. Thank you very much.

[The prepared statement of Mr. Smith follows:]

Prepared Statement of Thomas E. Smith, Chair, Section of Intellectual Property Law, American Bar Association

Chairman MOORHEAD, Ranking Member Schroeder, members of the Subcommittee:
Thank you for your invitation to testify on the bills being considered by the Subcommittee at today's hearing.

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I am the Chair of the Section of Intellectual Property Law of the American Bar Association. The views I will be expressing represent those of the Section of Intellectual Property Law. They have not been approved by the House of Delegates or Board of Governors of the American Bar Association, and, accordingly, should not be construed as representing the position of the Association.

The Section of Intellectual Property has more than 13,000 enrolled members. We follow activities in the Congress relating to intellectual property laws, and deliberate on and debate issues concerning which our members have experience and knowledge. Through these processes, we from time to time offer recommendations to members and Committees of the Congress. We hope our observations and recommendations are useful to the Committee, and welcome suggestion on how we might be more helpful.

My testimony will be in support of H.R. 1732, the "Patent Reexamination Reform Act of 1995," and H.R. 1733, the "Patent Application Publication Act of 1995." As I will explain in my testimony, the Intellectual Property Law Section has adopted a number of formal policy positions over a period of a number of years which support the principles, and in many instances, the particular provisions, of these two bills. In the case of a few provisions in the bills, we have adopted no position, and our general support for the bills does not extend to these provisions, which I will identify.

We have not adopted any positions regarding H.R. 632, and therefore my testimony will not address that bill.

H.R. 1732: PATENT REEXAMINATION

Issues regarding patent reexamination and reissue, and the role that third party participants should play in such proceedings, have frequently had the attention of the patent community, the PTO, and the Congress during the past 20 years. In 1977, the PTO instituted rules, known as the "Dann amendments," permitting "no defects" reissue patent applications to be filed by patent owners. Under these rules, third parties could intervene as protestors in the proceedings to consider the reissue application.

Many practitioners felt that, under the Dann amendments, third party intervenors abused the reissue process. In this regard, our Section, then known as the Section of Patent, Trademark and Copyright Law, adopted a resolution favoring the abolition of the Dann amendments. The Dann amendments were abolished, and the present statutory reexamination provisions (35 U.S.C. 301-307) went into effect July 1, 1981.

OBJECTIVES OF PRESENT REEXAMINATION STATUTES

In approving these reexamination provisions, the House Committee on the Judiciary articulated the following purpose of the legislation:

"This new procedure will permit any party to petition the Patent Office to review the efficacy of a patent, subsequent to its issuance, on the basis of new information about pre-existing technology which may have escaped review at the time of the initial examination of the patent application. Reexamination will permit efficient resolution of questions about the validity of issued patents without recourse to expensive and lengthy infringement litigation. This, in turn, will promote industrial innovation by assuring the kind of certainty about patent validity which is a necessary ingredient of sound investment decisions." House Report No. 96-1307(1), to accompany H.R. 6933, (hereafter referred to as the "House Report" at pages 3-4.)

Your Committee report elaborated further on the objective of reexamination as a means to reduce litigation and the resultant delay and expense:

"The cost incurred in defensive patent litigation sometimes reaches \$250,000 for each party, an impossible burden for many smaller firms. The result is a chilling effect on those businesses and independent inventors who have repeatedly demonstrated their ability to successfully innovate and develop new products. A new patent reexamination procedure is needed to permit the owner of a patent to have the validity of his patent tested in the Patent Office where the most expert opinions exist and at much reduced cost. Patent Office reexamination will greatly reduce, if not end, the threat of legal costs being used to 'blackmail' such holders into allowing patent infringements or being forced to license their patents for nominal fees." (House Report, page 4).

The costs today are considerably higher than the \$250,000 mentioned in the Report.

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SHORTCOMINGS OF PRESENT LAW

Experience since the enactment of sections 301-307 seems to indicate that the Committee's laudable objective that reexamination serve as a speedier, less costly substitute for litigation has not been achieved, at least not to the extent hoped for. The Committee Report indicates (page 25) that, at the time the 1981 legislation was enacted, approximately 2000 reexamination cases per year were expected by the pro.

In fact, in the 13 years following the July 1, 1981 effective date of section 301-307, a total of only 3482 requests for reexamination were received by the PTO. Fifty-five percent of these requests were made by third party requesters. We believe that the use of reexamination by third party requesters has been limited by the inability of third party requesters to participate significantly in the reexamination prosecution.

Under the current procedure, a third party requester files, as part of its request for reexamination, reasons which it believes support reexamination. Section 303 provides that the Commissioner then has three months within which to determine if "a substantial new question of patentability affecting any claim of the patent is raised by the request."

If such a determination is made, the Commissioner must order reexamination and allow the patent owner at least two months to file a statement in response. If, and only if, the patent owner files such a statement, the third party requester has one, and only one, opportunity to be heard.

As noted in the explanatory material accompanying the bill when it was sent to the Congress by the Commerce Department, many patents owners forego their right to comment on the order of reexamination thereby denying third party protestors even that one opportunity to reply.

INCREASED PARTICIPATION BY THIRD PARTY REQUESTERS

As early as 1985, our Section identified this very limited role for third party requesters as a deficiency in the present reexaminations statutes and procedures. At that time, we called for legislation to provide a greater degree of participation by third-party requestors in reexamination proceedings. We specifically recommended that this greater participation include a privilege of responding one time to each re-

sponse by the patent owner to an official action.

In 1993, we adopted a policy favoring consolidation of the order for reexamination and first office action. In the same resolution, we favored allowing a third party requester to submit written comments, within strict time deadlines, on the patent owner's response to the first office action. We recommended limiting the scope of such comments to issues covered by the office action and the patent owners response.

H.R. 1732 goes a long way toward achieving these objectives. Consolidation is permissive under the bill rather than mandatory, but supporting material accompanying the bill indicates that PTO expects "that consolidation will occur in the vast majority of cases."

The bill would allow third party requesters to comment upon any patent owner response filed to any PTO office action on the merits. This would be limited to one time only written comments "within a reasonable period not less than one month from the date of service of the patent owner's response." Third party comments would be limited to issues covered by the Office action or the patent owner's response.

The Section of Intellectual Property Law feels that these changes are important and beneficial. Under current law, once reexamination is ordered, the proceedings become essentially ex parte between the examiner and the patent owner. As I noted earlier, the only opportunity for third party participation other than filing an original request occurs if the patent owner elects to respond to the order of reexamination. There is no opportunity to comment on any other office actions during the course of reexamination.

This inability to be heard throughout the reexamination process, coupled with a belief that courts and juries are more likely to uphold the validity of a reexamined patent, often leads potential third requesters to argue patentability in front of a judge or jury, rather than in a reexamination proceeding.

Our section has for many years favored modifying reexamination statutes and procedures to address these disincentives to utilization of reexamination as an alternative to litigation. We believe H.R. 1732 addresses these concerns in a positive way, and holds out real hope that the expectations expressed in the Committee Report in 1980 might be realized.

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The bill amends section 304 to eliminate the patent owner's privilege of filing a statement in response to the reexamination order. Since no such statement is allowed, the bill removes the strategic advantage that the patent owner now has to submit a statement when it is to his or her advantage to do so, but forego a statement when the patent owner feels it is more advantageous to deny a privilege of response by the third party.

COMPLIANCE WITH SECTION 112

We also support the provisions of the bill which expand the scope of reexamination to include the requirements of 35 U.S.C. 112, except for the best mode requirement. In 1993, our Section adopted a resolution supporting such an expansion, a position which was reaffirmed last year, and again by the Council of the Section just last month.

PREVENTING TWO BITES AT THE SAME APPLE

Section 3(f) of H.R. 1732 adds a new section 308 to title 35. Proposed section 308(b) is designed to prevent a losing party in infringement litigation from "relitigating" its assertion of the invalidity of patent claim by filing a third party request for reexamination with the PTO.

The Intellectual Property Law Section supports this provision, which is consistent with a policy position which we adopted in 1993.

THIRD PARTY PARTICIPATION IN EXAMINER INTERVIEWS

Our Section also supports a requirement that, under controlled conditions, third party requesters be permitted to participate in any examiner interview initiated by the patent owner or by the examiner in reexamination proceedings.

The "Statement of Purpose and Need" accompanying the Speaker letter which transmitted the proposed bill to the Congress addressed the question of such third party participation in examiner interviews. Page 6 of this Statement states that, while no statutory provisions exist or are proposed in H.R. 1732 in this regard, the Office has the authority to provide for such participation by rule making.

The Statement of Purpose and Need concludes the discussion of this topic with the following observations: "Such interviews could be conducted under controlled conditions before the examiner and could include the participation of an additional, more senior. Office representative. Third-party requesters should not be permitted to initiate examiner interviews."

We support these conditions of third party participation, which are virtually identical to conditions called for in our 1993 policy statement. We note, however, that not only is there no statutory provision for such participation proposed in the Administration bill, but that the Statement accompanying its submission states merely that such procedures could be initiated by rule making. It does not express an intention to do so.

Accordingly, we recommend that such third party requester participation be specifically authorized by an amendment to the bill. We further recommend that the bill not permit third party requesters to initiate interviews, and that a senior PTO official should join the examiner in conducting the interview.

APPELLATE RIGHTS

As a further incentive to utilization of reexamination, H.R. 1732 would provide third party requesters with appeal rights parallel to those provided to patent owners, both to the Board and to the Federal Circuit. Review by way of a civil action under 35 U.S.C. 145 is not provided for.

If these appeal rights are exercised, the third party is then estopped from later asserting, in any other forum, the invalidity of any claim determined to be patentable on appeal on any ground which the third party raised or could have raised in reexamination,. This is to add finality to reexamination when the third party appeals or participates in an appeal.

The Intellectual Property Law Section of the ABA recognizes the importance of issues of appeal rights in the overall proposal to reform laws and procedures governing patent reexamination. Although we do not presently have a position on these issues, they are under active consideration. We expect to adopt policies regarding appeal rights in reexamination proceedings at our Summer Conference in two weeks. We will promptly inform you of our recommendation once they are finalized.

Let me now direct a few remarks to H.R. 1733, the "Patent Application Publication Act of 1995."

The Intellectual Property Law Section supports early publication of patent applications. Knowing, Mr. Chairman, of your interest in the matter and that you planned to introduce legislation calling for early publication, our Section Council met to adopt a position on early publication just last month.

At that time, we adopted a policy favoring enactment of legislation to provide for early publication of patent applications "with provisional rights." In this regard, we are pleased to note that H.R. 1733 does provide for provisional rights. We view provisional rights as an indispensable component in any legislation proposal calling for early publication. We could not support mandatory early publication without provisional rights to protect inventors from those who, utilizing information made available by publication, begin to exploit the invention between the time of publication and issue of the patent.

The policy statement we adopted last month is a reaffirmation of support for early publication which we expressed in 1991. That support for automatic early publication was also tied to provisional rights. In addition, at that time we conditioned our support upon there first having been a change in United States law to provide a patent term measured from filing date of the application or from priority date. That change was made by the Uruguay Round Agreements Act, and, as we all know, became effective for applications filed beginning today.

H.R. 1733 calls for automatic publication 18 months from the earliest filing date. We believe this is an appropriate period of time. Our 1991 policy supported publication no sooner than 18 months and no later than 24 months from the earliest filing date or priority date.

We do believe that, in addition to provisional rights, early publication must also be accompanied by steps to provide accelerated prosecution of applications so that a first office action is provided well in advance of publication. This will enable inventors to make an informed decision whether to pursue the application or abandon it and rely upon trade secret protection.

H.R. 1733 addresses these concerns in provisions which you added, Mr. Chairman, to the draft bill proposed by the Administration. Those provisions prohibit publication of an application from an independent inventor until three months after first office action, if such an applicant requests such a delay. Applications asserting pri-

ority under sections 119 or 365(c), those asserting the benefit of an earlier application under sections 120, 121, or 365, and international applications under section 363 are not eligible for such delayed publication. Additionally, the applicant must certify that the invention has not been and will not be the subject of an application in a foreign country.

These provisions do move in the right direction by addressing the dilemma facing inventors whose applications are about to be published before there is any indication whether those applications might be approved.

Rather than merely delaying publication indefinitely, we believe a superior way to address the problem is to mandate first office action in advance of the scheduled publication date. In an 18 month publication regime, we recommend that this first office action be required within 14 months from the filing date. We also believe that any such relief should be available not only to independent inventors, but to all applicants.

PATENT TERM EXTENSION

Mr. Chairman, we note that you have also included in H.R. 1733 provisions (section 8) to expand the patent term extension provisions enacted in the Uruguay Round Agreements Act (URAA) last December.

With patent term now to measure from filing date rather than from issue date, it is especially essential that inventors not lose valuable term of protection through delays in processing applications which are beyond the control of the applicant. The URAA recognizes this principle in its provisions for extension of patent term when delays occur due to interference proceedings, government secrecy orders, or successful appeals of adverse determinations of patentability.

Section 8 of H.R. 1733 would modify the extension provisions in the Uruguay Round Agreements Act in a number of ways.

Perhaps most significant is the addition of new grounds for patent term extension in addition to the three contained in the URAA. Under the bill, extensions could also be granted for any "unusual administrative delay by the Office in issuing the patent."

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H.R. 1733 would also provide a ten year "cap" on the maximum term of extension

which could be granted for any qualifying delay. This ten year cap would apply to both the currently eUgible categories, for which a 5 year cap is now applicable, and the new "unusual administrative delay" category.

Unlike the URAA provisions, section 8 of H.R. 1733 would not apply the extension provisions when a patent issues within 3 years of the date of filing or commencement of the national stage under the Patent Cooperation Treaty, and would not take into account the benefit of any earlier filed patent application.

Finally, section 8 contains a "reasonable efforts" requirement on the part of the applicants, which would deny extension for any period during which the applicant did not make reasonable efforts to conclude processing of the examination.

On a number of occasions, the Section of Intellectual Property Law and its predecessor have adopted policy statements favoring legislation to extend patent term when the ability to exploit an invention has been delayed by government authorities and through no fault of the patent owner.

In 1980, we adopted a position which "favors in principle granting to a patent owner an extended patent term when the ability to exploit commercially a patented invention has been delayed, during the term and through no fault of the patent owner, by governmental authorities, statutes or regulations."

We reaffirmed this position in 1984. In 1993, we broadened our support for patent term extension to include circumstances other than delays caused by governmental action. At that time we expressed support for "legislative extensions of the term of a patent if there are extraordinary circumstances that have substantially adversely affected the patent owner's enjoyment of the benefits of the patent."

The above described policies of our Section have been developed in the context of regulatory delay in the approval of patented products which require such approval before they can be marketed. However, the considerations supporting extensions under those circumstances are quite similar to those addressed by the "unusual administrative delay by the Office in issuing the patent" provisions of H.R. 1733. With patent term now measured from date of filing, every patent application unjustifiably delayed by the government will now result in loss of real time to commercially exploit the invention. Previously, under term measured from date of issue of the patent, this loss of real time of protection was, for the most part, limited to products, which, although already the subject of valid patents, required regulatory approval before they could be marketed and commercially exploited.

The question of whether and how to expand the extension provision of the Uruguay Round Agreements Act is another topic which our Section will schedule for full debate at our upcoming Conference later this month. With the Subcommittee's permission, I would like to supplement today's testimony with a report on the conclusions reached in those discussions.

Thank you again, Mr. Chairman and Members of Subcommittee, for the opportunity to present these views on behalf of the Section of Intellectual Property Law of the American Bar Association, I would, of course, be happy to respond to any questions Members may have.

Mr. MOORHEAD. Mr. KIRK.

STATEMENT OF MICHAEL K. KIRK, EXECUTIVE DIRECTOR,
AMERICAN INTELLECTUAL PROPERTY LAW ASSOCIATION

Mr. KIRK. Thank you, Mr. Chairman. I appreciate the opportunity to be here today to present the views of the American Intellectual Property Law Association on this important legislative package that you have before us.

AIPLA strongly endorses enactment of H.R. 1732 and 1733, Mr. Chairman, and we commend you for offering these bills, as well as for your other efforts to improve the operation of the patent and trademark systems, as demonstrated by your development recently of H.R. 1659, to transform the Patent and Trademark Office into a government corporation. We pledge to work with you diligently to try to see this to fruition. This legislation will bring major improvement, in our opinion.

Turning first to H.R. 1733, AIPLA has long favored publication of all applications for patents. The publication of pending applica-

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tions is a cost-effective means of ensuring that U.S. inventors will have prompt access in the English language to a comprehensive technological data base similar to that which foreign inventors in our major trading partners receive today, as mentioned by Commissioner Lehman.

The important factor here, Mr. Chairman, is that our inventors, with your 18-month publication legislation, would receive foreign technology disclosures, in English, 12 months earlier than they do today. This would be a major step forward, in our opinion. The 18-month publication, coupled with the patent term of 20 years from the earliest effective filing date, will fully address the problems created by applications which languish in secrecy for years in the PTO before issuing as patents, to the surprise of industries built on what they thought to be public domain technology.

Moreover, the new basis for patent term extension and the provisional rights that you have in H.R. 1733 provide a complete answer, in our opinion, to the concerns which have been voiced about the potential loss of patent term under the Uruguay Round Agreements Act. Not only would a patent applicant receive up to 10 years added term for any cumulative delay caused by secrecy orders, interferences, successful appeals, or unusual delays caused by the Patent and Trademark Office, but the applicant will also have a right to obtain a reasonable royalty for the use of his or her invention, beginning 18 months from the earliest effective filing date, and even earlier if publication is requested earlier. Thus, in the vast majority of cases, Mr. Chairman, patentees will be guaranteed the opportunity of at least 18.5 years of rights, a combination of royalties and exclusive patent rights.

The AIPLA also endorses the concept of allowing applicants to receive a first examination or first Office action by the PTO prior to publication, as you have provided in your legislation. Of course, almost all applicants today would normally receive at least one Office action well before publication, and many, if not most, applications would receive the final decision by the examiner to allow or reject the application before publication would occur. But the guarantee that you have provided in your legislation will ensure that those domestic inventors whose patent applications contain trade secrets which they would like to keep as a trade secret, should they not get a patent, will be able to do so by withdrawing their applications before publication with full knowledge of the situation insofar as obtaining patent rights is concerned.

We believe, however, that this concept could be better implemented by providing in title 35 the possibility for accelerated examination. Moreover, we believe this opportunity should be available for all applicants since the desire to maintain an invention as a trade secret will apply not only to independent inventors, but to many small businesses as well.

In addition to requiring actual notice of an invention claimed in a published application, as was mentioned earlier, H.R. 1733 allows such rights to arise when it can be shown that the user had knowledge of rights. It is our position, Mr. Chairman, that provisional rights should only be available when there has been actual notice given by the patentee in a manner that reasonably identifies the acts that give rise to liability for royalties. Conditioning the avail-

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ability of provisional rights on the basis of knowledge would lead to unnecessary litigation to determine whether a person actually possessed such knowledge, and this would be exacerbated by the widespread availability today of patent and other data bases that many large companies and other users have access to.

We would agree with the comments offered by Mr. Griswold that the invention, in order to receive provisional rights, should only have substantial identity between the published application claims and the patent claims. We believe that to limit this to identical claims might unduly proscribe the availability of provisional rights. We think that the same interpretation should be given to the term "identity" here as is given in the reissue section of the patent statute to determine the issue of intervening rights.

With respect to reexamination, Mr. Chairman, after some 15 years of experience, we would agree with you and with Secretary Mosbacher's Advisory Commission on Patent Law Reform that it is time to amend this procedure. A better balance needs to be struck between the rights of the patentee and the rights of third parties to ensure that there is a reasonably efficient, prompt proceeding to properly consider issues of patent validity. We believe that this bill accomplishes that, and we would like to see this become law as soon as possible.

We had initially, like, the Advisory Commission, recommended that the third party only have two opportunities to comment to the patent examiner during the reexamination process. The same recommendation was made by the Advisory Commission under Secretary Mosbacher, but with the understanding that the Office will make every effort to conclude the reexamination proceedings as promptly as possible, we find the provision in the bill allowing the third party to comment after each response by the patentee to be acceptable.

We are also comforted by the statement in the Commerce Department's statement of purpose and need that there is an intention to conduct reexamination proceedings with special dispatch, and we would like very much to see that reflected in the report of this legislation.

Mr. Chairman, that concludes my statement. Thank you.

[The prepared statement of Mr. KIRK follows:]

Prepared Statement of Michael K. KIRK, Executive Director, American Intellectual Property Law Association

Mr. Chairman, I appreciate the opportunity to appear before the Subcommittee today on behalf of the American Intellectual Property Law Association (AIPLA) to present the position of the AIPLA on H.R. 1733, the Patent Application Publication Act of 1995; H.R. 1732, the Patent Reexamination Reform Act of 1995; and H.R. 632, a bill to amend Section 1498(a) of title 28, United States Code, to mandate recovery of patent owner's reasonable costs and fees in successful suits against the United States for patent infringement.

The American Intellectual Property Law Association is a 9,400-member national bar association whose membership primarily consists of lawyers in private and corporate practice, in government service, and in the academic community. AIPLA represents a wide and diverse spectrum of individuals, companies and institutions involved directly or indirectly in the practice of patent, trademark, copyright, unfair competition law, as well as other fields of law affecting intellectual property.

The AIPLA strongly endorses the enactment of H.R. 1733 and H.R. 1732. We com-

mend you, Mr. Chairman, for introducing these bills and for your continued efforts to improve the operation of the intellectual property laws of the United States. In this regard, we particularly commend you on your untiring efforts to improve and

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streamline the operation of the United States patent system as demonstrated by your development and introduction of H.R. 1659 to transform the Patent and Trademark Office into a government corporation. We pledge to work diligently with you and your staff to pursue this transformation and look forward to hearings on H.R. 1659 at an early date.

PATENT APPLICATION PUBLICATION ACT OF 1995

H.R. 1733 would provide for the publication of each pending application promptly after the expiration of 18 months from its earliest effective filing date, with the exception of applications subject to secrecy orders pursuant to section 181 of title 35. The Commissioner would be authorized to determine what information concerning published patent applications would be made available. To ensure that applications were promptly published 18 months from their earliest effective filing date, the Commissioner would also be authorized to consider the timely failure of an applicant to claim the benefit of the filing date of an earlier filed application as a waiver of such benefit.

H.R. 1733 would authorize independent inventors to request that their patent application not be published until three months after the Commissioner makes a notification under section 132 of title 35. Applications claiming the benefit of an earlier filing date would not be eligible to benefit from such a request. In addition, an applicant would be required to certify that the invention disclosed in the application was not or would not be the subject of an application filed in a foreign country.

A patentee would enjoy provisional rights in the form of a reasonable royalty from anyone who with actual notice or knowledge of the published patent application made, used, offered for sale, sold, or imported the patented invention into the United States, during the period from publication of the application until grant of a patent. The right to obtain a reasonable royalty based upon the international publication of an international application designating the United States would begin when the Office received a copy of the internationally published application. The right to obtain this royalty would be conditioned on the invention claimed in the patent being identical to the invention claimed in the published patent application. Finally, a published application would have patent defeating, prior art effect as

of its earliest effective U.S. filing date. The same status would be accorded to a published international application that satisfied the requirements of paragraphs 1, 2 and 4 of section 371(c) of title 35.

The cost of such early publication would be recovered by adjusting the filing, issue and maintenance fees, by charging a separate publication fee, or by some combination of such fees.

H.R. 1733 would also amend section 154(b) of title 35 which authorizes the Commissioner to extend the term of patents in certain circumstances. It would add to the three existing possibilities for an extension to compensate for delays in the patent issuance process a fourth category for unusual administrative delays by the Office in issuing a patent. It would extend the period for all four categories of extension from five to ten years, but would count only once any period of delay that overlapped with one or more other reasons for delay. H.R. 1733 would also consolidate and make applicable to all four categories of delay the requirements currently applicable only to delay attributable to successful appellate review. Thus, no patent would be extended that had issued before the expiration of three years from the earliest filing date to which the application was entitled and the period of any extension would be reduced by a period equal to the time during which the applicant failed to engage in reasonable efforts to conclude the processing for reexamination of the application.

H.R. 1733 would also make a technical correction to section 119(e) of title 35 to ensure that co-pendency between a provisional and complete application would not be lost in those situations where the final day for filing a complete application falls on a Saturday, Sunday or federal holiday within the District of Columbia. This would be accomplished by extending the pendency of the provisional application to the next succeeding secular or business day.

The AIPA has long favored 18-month publication of all applications for patents, except for applications that are the subject of secrecy orders. The publication of pending patent applications is a cost effective means of ensuring that United States inventors will have prompt access — in the English language — to a comprehensive technological database similar to that which foreign inventors in our major trading partners already receive from their regional and national patent offices. Early publication will allow U.S. inventors to avoid duplicative research and optimize investment decisions in pursuing technological development.

In addition, early publication will assist the Patent and Trademark Office in their examination of patent applications by more effectively placing relevant prior art before examiners. Potential interferences can be identified and provoked by applicants at an early date, avoiding situations where later filed applications issue before earlier filed applications for the same invention. Inventors and companies will be able to receive more complete and accurate patentability assessments in non-infringement opinions since potentially adverse patent rights can be more readily identified and monitored.

A major benefit of 18 month publication is that it, together with a patent term of 20 years from the earliest effective filing date, will eliminate the adverse consequences of an application which languishes in secrecy for years in the Patent and Trademark Office before issuing as a patent — to the surprise of an industry built on what had been thought to be public domain technology. Not only will U.S. companies know at a relatively early stage what technology may be the subject of a patent, but they also know when the term of the patent covering that technology will end.

Together with the new basis for extension of patent term, the provisional rights provided under H.R. 1733 provide a complete answer to the concerns which have been voiced regarding the potential loss of patent term under the Uruguay Round Agreements Act. Not only will patent applicants now receive up to ten years added term for any cumulative delay caused by a secrecy order, an interference, a successful appeal of an examiner's rejection, or an unusual delay otherwise caused by the Office, but the applicant will also have the right to receive a reasonable royalty for the use of his or her invention beginning 18 months from their earliest effective filing date and even earlier should earlier publication be requested. In the vast majority of cases, patentees will be guaranteed the opportunity of at least 18½ years of rights and, should they file a provisional application and request early publication of their complete application, this period could exceed 19½ years. In reviewing the submission from the Department of Commerce and in discussions with Subcommittee staff, we understand that it is intended that the six year limitation on damages in section 286 of title 35 will not apply to the ability of a patentee to recover royalties under this provision. If this is indeed the case, then in situations where the issuance of a patent was delayed due to an interference, successful appeal, or unusual delay by the Patent and Trademark Office, the combined period of a right to a reasonable royalty plus full patent rights could, in rare cases, be as great as 29½ years. While we trust that every effort will be made by the Office to ensure that all patents will be issued promptly so as to avoid such protracted periods of rights, we believe that this should remove completely any concerns raised by inventors

fearful of not receiving an adequate period of patent rights.

The AIPLA also endorses the concept of allowing applicants to receive a first examination by the Patent and Trademark Office prior to publication. This will permit those domestic inventors whose patent applications contain trade secrets to make informed decisions about whether to continue the patenting process before the mandatory publication of their application occurs. We would suggest, however, that applicants requesting such treatment be guaranteed the right by statute to an accelerated examination by the Office to ensure that publication could occur promptly at 18 months with no exceptions.

We also generally support the eligibility requirements contained in H.R. 1733 for receiving accelerated or guaranteed examination. Applicants whose commercialization has revealed their trade secrets, whose publication of their inventions has destroyed any trade secret opportunity, or whose foreign filing will result in publication of their patent applications in any event should not be able to benefit from this provision. However, we believe that the ability to request such accelerated examination should be accorded applicants since the desire to protect trade secrets contained in applications that will not mature into a patent will affect all applicants and especially many small business applicants. Finally, we would recommend that the Commissioner, in establishing regulations to implement this procedure, provide that the request for such treatment be made upon or shortly after filing and that any fee established be reduced by 50% for any independent inventor, non-profit organization, and any small business concern as defined under section 3 of the Small Business Act.

As we noted, H.R. 1733 authorizes the Commissioner to establish a date by which priority must be claimed to ensure that all applications can be published at 18 months. AIPLA supports such a prohibition on late claims for the benefit of prior-filed applications. In fact, we would go even further. The provision should preclude any claim for priority that, if accepted, would result in publication of an application for patent later than 18 months from the earliest effective filing date of the application. Such a requirement would both encourage careful consideration of priority

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claims at the time of the filing of a patent application and would ensure that the public has the benefit of reliable and timely notice of potential patent rights. Again, from our perspective, one of the chief benefits of a system of publication of pending applications is the certainty that it brings to the patenting process. Inventors and the public at large should be able to make early, complete and accurate assessments of patentability and patent rights.

We do have a few technical suggestions to offer with respect to H.R. 1733. The first of these concerns the question of provisional rights for the use of an invention between the time of publication and the time of patent grant. In addition to requiring actual notice to the user of an invention claimed in a published application as a condition for entitlement to provisional rights, H.R. 1733 also allows such rights to arise when it can be shown that the user had knowledge of the published application. We believe that provisional rights should only be available where the person using the published application is given actual notice by the patent applicant in a manner that reasonably identifies the acts that give rise to liability for royalties.

We do not believe it would be appropriate to permit provisional rights to be made available simply on the basis that the person using the invention knew of the published application. Conditioning the availability of provisional rights on the basis of knowledge would lead to unnecessary litigation to determine whether a person actually possessed such knowledge, especially with the widespread availability of patent and other data bases. Moreover, we believe that it is entirely reasonable to place on the patent applicant the burden of giving actual notice to a third party that he or she is using a claimed feature of the published application if the patent applicant wishes to enjoy provisional rights.

In addition, we note that the right to obtain provisional rights in H.R. 1733 is only available if the invention claimed in the patent is "identical" to the invention claimed in the published application. We are concerned that this may too narrowly proscribe the provisional rights and make them unavailable in situations where minor changes exist between the claims in the published application and the subsequent patent. Liability should attach if a claim in the granted patent is "substantially identical" in scope with a claim in the published application. The same standard of claim identity that is required between an original patent grant and a re-issued patent or reexamined patent to defeat a claim for intervening rights should be used to establish provisional rights between a published application and a subsequently issued patent.

Finally, we noted that H.R. 1733 would condition the patent defeating, prior art effect of published international applications to those that satisfied the requirements of paragraphs 1, 2, and 4 of section 371(c) of title 35. This would require that patent examiners, inventors, and the public wait for as much as one year after the publication of an international application designating the United States before they could determine with confidence its status as a prior art reference. In contrast, a published application filed under regular national filing provisions would be imme-

diately regarded as prior art effective as of its original U.S. filing date. We do not believe that efficient, cost-effective patent examination could take place if patent examiners are unable to promptly know the status of published international applications. Therefore, we would support treating published international applications designating the United States in exactly the same manner as published national applications.

Our other suggestions regarding early publication of patent applications do not concern the language of H.R. 1733, but rather its implementation by the Patent and Trademark Office. The Patent and Trademark Office published a request for comments on the 18-month publication of patent applications on December 12, 1994 (59 Fed. Reg., No. 237 at page 6396). A hearing was held on February 15, 1995 at which the views of this Association were expressed. We commend the Office for this outreach to the user community. We would add, however, that while we understand that the goal of the Office is to be in a position to publish an O.G.-like publication containing patent application notices and to include a paper copy of the application in the examiner's search file and in the Public Search Room by January 1, 1996, we strongly urge that the Office proceed as rapidly as possible to include each published application in the Automated Patent System, both full text and image. It is important both to the quality of the examination process and to the ability of the user community to benefit from published applications that these steps be taken as soon as possible.

PATENT reexamination reform act of 1995

H.R. 1732 would expand both the scope of the reexamination process and the ability of the public to participate in that process. In addition to allowing requests for

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reexamination to be based upon patents and printed publications, H.R. 1732 would allow requests for reexamination to also raise issues of compliance with section 112 of title 35, except for the best mode requirement. Where the Commissioner makes a determination to order reexamination of a patent, H.R. 1732 would allow the order to be accompanied by the initial Office action on the merits of the reexamination. Even if a separate reexamination order is issued, however, the patentee, unlike existing law, would not be permitted to file a statement on the order.

Where a reexamination proceeding is initiated upon the request of a third party, documents filed by either the patent owner or third party would be served on the

other party. Where the patent owner responds to any Office action on the merits, a third party requestor would be given one opportunity to file written comments on each response by the patent owner. Either the patent owner or a third party requestor could appeal the final decision of an examiner in a reexamination to the Board of Patent Appeals and Interferences, and each could be a party in an appeal taken by the other to the Board. Similarly, either the patent owner or third party requestor could appeal a final decision of the Board of Patent Appeals and Interferences to the Court of Appeals for the Federal Circuit (CAFC) and, again, each could be a party in an appeal taken by the other. In appeals to the CAFC, however, a third party who participates as a party or who files an appeal would be estopped from later asserting, in any forum, the invalidity of any claim determined to be patentable by the CAFC on any ground which the third party requestor raised or could have raised during the reexamination proceeding.

Finally, H.R. 1732 would prohibit reexamination proceedings in certain circumstances. First, once an order for reexamination has been issued, neither the patent owner nor a third party requestor could file a subsequent request for reexamination until a reexamination certificate was published under section 307 of title 35, unless authorized by the Commissioner. In addition, once a final decision was entered in a civil action under section 1338 of title 28 holding that a third party requestor had not sustained its burden of proving the invalidity of any patent claim in suit, the third party requestor could not thereafter request reexamination on the basis of issues which were or could have been raised in such civil action.

The reexamination system contained in sections 301-307 of title 35 was developed in the late 1970's and was enacted into law in December of 1980, becoming effective on July 1, 1981. Its purpose was to provide an avenue for patent owners and third parties to bring to the attention of the Patent and Trademark Office pertinent patents and printed materials which an examiner might not have uncovered during the course of patent examination. It was believed that reexamination would provide an efficient, effective, and relatively inexpensive technique for the Office to consider whether an issued patent was valid, whether its claims should be narrowed, or whether it should not have been issued at all. It was perceived that the reexamination process would thus benefit patent owners, the public, and lessen the burdens on the federal court system.

During the debate on the establishment of the patent reexamination system in the United States, attention was focused on achieving the right balance between permitting third parties to come forward with evidence and participate in proceedings and providing patent owners with a means to evaluate the validity of issued patents

quickly and inexpensively without undue harassment. With the benefit of nearly 15 years experience with reexamination, the AIPLA has concluded that the procedure is not performing as effectively as was envisioned and that a better balance needs to be struck between third party participation in the reexamination process and the interests of patentees in ensuring that the reexamination process remains reasonably prompt and inexpensive with no undue harassment. AIPLA believes that H.R. 1732 strikes a much better balance between these competing goals than does existing law and endorses its enactment.

When the AIPLA testified on an earlier reexamination proposal, it identified a number of desirable reforms in the existing reexamination law and practice. These included:

(1) that a party to a suit under section 1338 of title 28 that had not sustained its burden of proving a patent in the suit invalid be barred from requesting reexamination of the patent once a judgment had been entered in Federal Court.

(2) that the order for reexamination and the first action on the merits be consolidated and that the patent owner not be permitted to file a statement in response to the order for reexamination.

(3) that a third party requestor be permitted to file comments twice in a reexamination proceeding — once following the first action on the merits and once at the conclusion of the reexamination proceeding.

(4) that a third party requestor electing to appeal to the Board of Patent Appeals and Interferences and to the Court of Appeals for the Federal Circuit be required

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to waive his or her right to assert invalidity of the patent in question in any other forum on grounds which were raised or could have been raised in the reexamination proceeding.

(5) that neither the patent owner nor third party be given the right to challenge the outcome in a reexamination proceeding by filing a civil action in district court under section 145 of the title 35.

We are pleased that H.R. 1733 essentially adopts these recommendations. Although the consolidation of the order for reexamination and the first action on the

merits is permissive, rather than mandatory as we had suggested, we note that the opportunity for the patent owner to file a statement with respect to the order for reexamination and the opportunity of a third party requestor to file a response to such statement have been eliminated. Since we understand that in the vast majority of cases the reexamination order and the first action on the merits would be consolidated, we find this approach acceptable.

We also note that rather than limiting a third party requestor's participation to a comment after the patent owner's response to the first office action and a comment at the conclusion of the reexamination proceeding, H.R. 1732 would allow a third party requestor to file a written comment on any response made by a patent owner to an Office action on the merits. We had thought that limiting a third party requestor to two opportunities to comment would be sufficient, particularly in view of memories of the lengthy, complex, and costly procedures experienced with the so-called "no fault reissue" practice utilized by the Office in the late 1970's and early 1980's. However, since we understand that the Office will make every effort to conclude patent reexamination proceedings as promptly as initial examination proceedings, we also find this provision acceptable.

We would particularly like to commend you, Mr. Chairman, and your staff" and officials at the Patent and Trademark Office who have listened to our concerns and accommodated them in this most recent draft; of H.R. 1732.

RECOVERY OF PATENT OWNER'S REASONABLE COSTS AND FEES

The remedy for unauthorized manufacture or use of a patented invention by or for the government is a suit in the Court of Federal Claims under section 1498(a) of title 28 for reasonable and entire compensation. H.R. 632 would amend section 1498(a) by mandating that reasonable and entire compensation include the owner's reasonable costs, including reasonable fees for expert witnesses and attorneys, if the owner is an independent inventor, non-profit organization or an entity with less than 500 employees. The amendment would apply to any action under section 1498 that was pending or brought on or after January 1, 1995.

The Equal Access to Justice Act (EAJA), 28 U.S.C. §2412, permits an award of costs against the government when the claimant prevails, although such an award is not required. Thus, H.R. 632 would expand the government's liabilities for attorneys' fees beyond the EAJA.

While we recognize that section 2412(d) of the EAJA permits the award of attorneys fees to certain individuals, non-profit organizations and entities with less than 500 employees and having a net worth of \$7 million when the government litigation

position is not substantially justified, we are concerned about the extension of that concept which H.R. 632 would make. For example, litigation costs running in the tens of millions of dollars could just as effectively deny access to the federal courts by a large corporation as could costs of a few thousand dollars to an individual inventor. Indeed, a more far ranging review of the practices of government agencies in awarding contracts requiring the use of patented and proprietary technology to low bidders, with little or no consideration of the rights involved, might be a more appropriate topic for review in these changed geopolitical times. In any event, the AJPLA has not yet been able to develop a detailed position regarding H.R. 632. The concludes my prepared testimony, Mr. Chairman. I would be happy to answer any questions which you or other members of the Subcommittee might have and, of course, we pledge to work with you and the Subcommittee, with the Patent and Trademark Office, with other bar associations, and with all users of the patent system to see that these desirable amendments to our domestic patent law are enacted at the earliest possible time. We are eager to see the provisions of H.R. 1732 and H.R. 1733 become law by January 1, 1996. We believe that the earliest possible effective date is the interests of domestic inventors, large and small, and represents an important statement by the United States that is prepared to make positive changes to its patent system, changes that will make the world's best patent system even better.

Mr. MOORHEAD. Well, thank you very much.

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Mr. Griswold, one of the statements that has been made against this legislation is that, if H.R. 1733 is passed into law, multinational and foreign corporations that have had to pay billions of dollars to use American technology law will be able to copy our newest ideas and rip them off. Do you want to comment on that?

Mr. Griswold. Well, I don't think that multinational companies — and I'm from one — I don't see us ripping anybody off, frankly. What will happen is we will know — we'll be alerted to what patent rights are coming down the pike. With 18-month publication, we'll know, and if publications are in areas where we will be moving our technology or our activity, we will, indeed, be dealing with, and I'm sure approaching, those people that have those publications to resolve those issues. Publication will allow us to deal with it, either by staying out of that area or by getting a license and dealing with

it upfront, as we move into an investment path.

One thing that will happen is that publication will allow better prior art to be brought to the surface and strengthen the patents that, indeed, do issue. That's a very important part of this publication procedure. So I don't see that ripoffs will happen, no.

Mr. MOORHEAD. Well, one of the other statements that has been made, that the 18-month publication and 20 years from filing patent term are part of the most serious attack on patent rights in our country's history. Can you relate to that?

Mr. Griswold. I can't relate to that statement, 3M is a company that has received 543 patents in 1994. Now if this bill was a major attack on patents, we wouldn't be for it. We're very much supportive, and so are our members who represent 23 percent of the patents that are granted in the United States to U.S. nationals. So I can't relate to that. I don't think it's a serious attack. I think that it is an improvement on the system. The bill will give incentive for people to commercialize technology. It will be published and then people will deal with whoever it is that owns that patent right; the technology will be commercialized, and the key here is we want to have technology commercialized. That's the bottom line. We want it commercialized and we want people who commercialize to take into account those who, indeed, own patents.

So, no, I don't identify with that statement.

Mr. MOORHEAD. Well, one of the other things that they say that's a serious accusation is that publishing pending applications is like taking out a newspaper ad that says "Steal our ideas and here's how we did it."

Mr. Griswold. Well, once again, there is a royalty right that sets in place with the 18-month publication, and I don't think that people who are good business people are going to want to take on that kind of an issue. They will not steal those ideas. The patent right will be there. They'll have to deal with that patent. So I don't think there will be a theft of those ideas. I certainly cannot see that as an issue here.

Mr. MOORHEAD. I don't like to deal with these questions, but since the accusations are made, I have to at least find out what people that are working in the industry think about them and whether there's any basis for them, because it's important to this committee that we find out what the truth is.

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Under H.R. 1733, information contained in a patent application would automatically be published after 18 months or sooner unless requested otherwise, and that information will constitute prior art for subsequent applicants regardless of whether the published information is overly broad, in-depth, or merely a phony futuristic idea. My question is, can a large entity abuse the system and sabotage competitors by filing an overly broad application? In other words, can people abuse the system by filing an overly large application?

Mr. Griswold. People will be able to file patent applications and have them published. The publication will be prior art. Today what happens is when a patent application is filed and then it becomes a patent, it becomes prior art as of its filing date once it's patented. One of the problems you have right now is you don't know what the prior art is because applications are kept in confidence and the examiners are not examining patents sometimes over that prior art. So you have a weakened patent situation. You may get a patent, but the validity will be in question.

Mr. MOORHEAD. Mr. KIRK.

Mr. KIRK. Well, I would just add to that, Mr. Chairman, that today if someone wished to pursue such a tactic, that is, to publish unduly broad pieces of information in an attempt to create prior art to defeat another's right to a patent, it could be done, I would submit, much more efficiently and a lot cheaper than filing patent applications, given the cost of patent attorneys and the cost of filing fees. Indeed, establishing some publication to put this useless information garbage in and then sending it to the Patent and Trademark Office would be a much better way to do it, and that could

be done today, but it's not being done. So the publication and the content of the publication will speak for themselves, would be used by examiners or not used depending upon its value. So we would not see this as being a real threat.

Mr. MOORHEAD. Is this a problem in other countries that have adopted it?

Mr. Smith. No, I don't think it is. It certainly has never been brought up that I've heard of in connection with any foreign countries, but I am more familiar with this country. I agree with what

Mr. KIRK says; there are much better ways of publishing prior art than filing it in patent applications. But, after all, isn't that what we really want to do, get the prior art, the best prior art, before the Patent and Trademark Office, and, indeed, before the innovators? That's what we want to do, and, of course, the quality of that publication depends upon the quality of the information that's contained therein. So I think it has a salutary effect to have publication of applications in this country, and I've never heard any objection to it from those abroad.

Mr. MOORHEAD. H.R. 1733 provides that only an independent inventor or a small entity may request their patent application not be published until 3 months after receiving an examination notice from the PTO. Should this be limited to the small entity or opened up to all who file a patent application?

Mr. Smith. Well, I'll answer that because our position is that it should be — the position of our section is that it should be opened up to all entities. We see no reason why it should not, but we be-

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lieve that everyone should have the opportunity to have their patent examined and the first action issued before a determination is made to allow that application to continue and to be published. So we would like — our position is that we would like to see that application examined within 14 months of the time of filing, and that would give the applicant a time to withdraw the application after

examination but before publication. We believe that it should be available to everyone.

Mr. MOORHEAD. Mr. KIRK.

Mr. KIRK. We would agree with that fully, Mr. Chairman, that it should be available to all applicants because not only independent inventors might have technology which they could adequately protect as a trade secret, should a patent not be available.

Mr. MOORHEAD. Mr. Griswold.

Mr. Griswold. We agree. It's in our paper that it should be open to all.

Mr. MOORHEAD. One of the positive features of our patent system is that, unlike other countries, we don't make it easy to obstruct the issuance of a patent. By broadening the use of reexamination under H.R. 1732, will this make it easier for third parties to obstruct the issuance of patents?

Mr. Smith. No, I don't think so. I think that the process is, after the patent issues, we want to make sure that that patent is as valid as possible. Prior art comes to the attention of the applicant or the patentee or any other person. That should be brought to the attention of the Patent and Trademark Office. There is the place where it's least expensive to determine whether or not that prior art is an invalidating prior art, and we believe that it should be done, and we're glad to see that the bill, indeed, not only relates to reexamination of prior art, but also of section 112 objections except for, of course, the matter of the best mode.

Mr. MOORHEAD. Under H.R. 1732, who is estopped against further litigation, only the requester, and if so, must he be identified as the true party of interest?

Mr. Griswold. Well, I think you're getting to the question of whether, when somebody appeals to the Federal circuit, they are estopped or is just their attorney estopped? The answer is, when you file an appeal in the Federal circuit, you have to identify the

real party in interest. So the person will be identified. If there's any issue on clarity there, I believe that, indeed, the real party in interest should be identified and estopped.

Mr. MOORHEAD. A different opinion?

Mr. KIRK. Mr. Chairman, I wanted to comment not on this, but on the previous point regarding the potential for abuse in the reexamination proceeding. I think we must keep in mind that when a reexamination request is filed with new information and the Commissioner makes a determination to order a reexamination, the examiner is charged with making a complete search, together with the new additional information that has come in, so that every step is taken to make sure that the claims of the patent are of proper scope and not too broad because some information was missed. But once this reexamination occurs, if someone were to try to come along later and to seek reexamination a second time, they must have additional, different relevant prior art or the Commissioner is

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not going to order reexamination. This is a safeguard which we believe goes a long way toward avoiding any abuse of the reexamination legislation.

Mr. Griswold. Could I add one point to that? That decision, if there's no substantial question of patentability, is not appealable.

Mr. MOORHEAD. The gentleman from California, Mr. Bono.

Mr. Bono. Thank you, Mr. Chairman.

First of all, I want to thank you for holding this hearing. We're going into the 21st century and our patent laws need to be looked at. The chairman has vigorously gone into these various patent — this various patent legislation, and he's revising all of this, and it's nice to sit here and hear all of you approve of this because I have always thought that many of the laws have been antiquated, and he hasn't stopped here. As I said, he's gone into other areas, and to the pleasure of the owners of the patents, and I'm glad you vali-

date these new bills as well.

I came in here late, but I tried to get as educated as possible from reading this and listening to you, but I know the intent here is to bring patent law into the future. One of the big contentions that the chairman has brought out is that a patent is as intellectually tangible as anything else and should have the same kind of treatment as something that has a hardcore appearance; something that you can hold and touch. I think because sometimes you can't.

People don't treat it the same way, but I certainly think that they should be treated the same way, if not with more impact, because in my view it is the future.

So I want to commend the chairman and you for this effort. I think it's somewhere that we have — it's where we have to go and we must be very articulate in getting there, and I appreciate the effort.

Thank you, Mr. Chairman.

Mr. MOORHEAD. Well, thank you, and that concludes our first panel. We thank you gentlemen for being here with us today.

Mr. Smith. Thank you.

Mr. MOORHEAD. If you have any further comments to make — we may have further questions also — ^but would you get them to us as early as possible?

On our second panel, the first witness will be introduced by Congressman Mike Forbes of New York.

STATEMENT OF HON. MICHAEL P. FORBES, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. Forbes. Mr. Chairman and members of the committee, I thank you for this opportunity to introduce Dr. Raymond Damadian. He is from Long Island, from my home area, and I would say to this committee, as you deliberate this very, very im-

portant issue, that if ever there was a laboratory to examine what can go wrong for somebody who has been a budding entrepreneur and come up with a great idea, but did not have necessarily the protections, as obvious as it would seem, did not always have what would seem to be the protections of the patent law and had to fight to make sure that his efforts were sustained, it's Dr. Raymond Damadian. He's the founder of Ponar Corp., which is a corporation that manufactures the MRI machines, and Dr. Damadian himself

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is the inventor of MRI, a process that obviously is most commonplace today in America, but he has been in an ongoing struggle for almost 20 years, and it's a little guy, if you will; it's a David and Goliath if you ever saw it, where this gentleman put ever3rthing in his life into this process and then spent the last 20 years trying to salvage this original invention.

So I appreciate the committee's indulgence and the opportunity to introduce my friend, Dr. Raymond Damadian. He has some valuable information. I thank you for the opportunity again, Mr. Chairman.

Mr. MOORHEAD. Well, thank you.

Our second witness is Mr. Kenneth Addison who's currently serving in his fourth term as president of the Oklahoma Inventor's Congress. Mr. Addison is also the editor of the Oklahoma Inventor Newsletter, the director of the United Inventors Association of the United States, and an affiliate of both the Alliance for American Invention and the National Congress of Inventor Organizations. An independent inventor, Mr. Addison has worked in private industry, for Lhe U.S. Corps of Engineers, for the Department of Defense, and in his own engineering practice.

Welcome, Mr. Addison.

Our third witness on our second panel is Mr. Andrew Kimbrell, who is the president and executive director of the International Center for Technology Assessment. Mr. Kimbrell's special areas of

interest include technology issues, global environmental problems, bioethics, and wilderness protection. He's a graduate of the New York University Law School and served as the policy director and counsel of the Foundation on Economic Trends and the Coalition of Biotechnology Patenting. Mr. Kimbrell also served in private law practice. He has authored numerous articles concerning biotechnology.

Welcome, Mr. Kimbrell.

Dr. Damadian, we welcome you. Your invention certainly has done a great deal of good for mankind. Congratulations.
STATEMENT OF RAYMOND DAMADIAN, M.D., PRESIDENT AND
CHAIRMAN, FONAR CORP.

Dr. Damadian. Thank you, Mr. Chairman.

When I was asked by Congressman ROHRABACHER to testify today, I thought that I'd be eager to do that because I thought it might be worthwhile for the Subcommittee on Courts and Intellectual Property to hear from someone who's invented something and gone forward to try to use his patent and that invention to build a business.

We've actually done that. We've run a company for 17 years. We're a small company, a small public company on Long Island. We employ 250 people, and we sell in the world markets and we sell in the domestic markets. We know what manufacturing is; we know what production is, and we know what it is to compete against giant corporations that are many times our size, and attempt to use our patent for its designed purpose to offset the size disadvantage so that new technology can be implemented. I thought I would begin by giving you a brief sketch of the history of MRI and how it got started. The story begins about a quar-

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ter of a century ago when I was fortunate enough to make the discovery that cancer tissue gives off an abnormal NMR signal. Today we call it an "MRI" signal. This signal was a radio signal that

could be detected by radio antenna external to the body, and so it led immediately to the proposal by me of a body scanner that could be used to hunt down cancer deposits in the body. That caused me to file the first MRI patent in 1972, which started a new "shoe" in the Patent Office, which today is named MRI spectroscopy.

As any technology, it wasn't long before other contributors came to the fore, most notably Dr. Paul Lauterbur at Stonybrook and Peter Mansfield from England, who made additional important contributions.

We then built the first human scanner in 1977. We achieved the first full body human scanner in 1977. We started our little company and formed our corporation Fonar, in 1978. In 1980 we introduced the first commercial MRI scanner ever at the Radiological Society of North America at which time we launched a new industry, which today is a multibillion-dollar industry.

My purpose here today is not so much to share with you my experience as an inventor or as an originator, but more to share with you what someone has to go through who has founded a new technology, invented something new, and attempted to use the patent the way it's intended to be used, to build a new business and to let you have some insight as to all of the pitfalls and torments that really are part of that process, and to get you to see just how difficult it is today, for a patent holder to use his patent to start a new business. Perhaps it will give you some insight as to why so few patent holders are doing it today. Many patent holders are exercising their rights to secure a royalty, but few are attempting to build and start new companies because of all the pitfalls and difficulties and because of the lack of protection available from the U.S. patent.

Now I thought I would begin by giving brief thumbnail sketch of where the patent comes from. Of course, it all starts with the U.S. Constitution, article I, section 8, which gives the right of authors and inventors the rights to their inventions and writings for a limited period of time, but it wasn't very long after that, only about a year later, when President George Washington himself cajoled Congress to sign into law the first U.S. patent act. I think it's in-

interesting to see the form it took. It said nothing about the rights to a royalty. The law that was signed into law was the right to exclude others from the making and using and selling of that invention. Now it's clear that what President Washington had on his mind was the tools for the inventor to start new businesses for the benefit of the American people.

You must remember, of course, that he was emerging from the Revolutionary War and there was a desperate need to commence and build a new independent industrial base for the benefit of our country, and the expression of that was the exclusive right to make, use, and sell.

The purpose was to build new businesses in America. And what followed? Well, what followed was, of course, the result of President Washington's patent act. It came in the 19th century as the most spectacular industrial growth in all human history. What it pro-

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duced was named the Industrial Revolution. So we had Samuel Morse in 1840 with the Morse Code, the founder of Western Union; Alexander Bell, the founder of AT&T; Edison, the founder of General Electric; George Eastman, the founder of Kodak, and on and on the list goes of spectacular companies built mostly in the 19th century with the founders using their patents to achieve the needed protection to start whole new, spectacular industries for our country.

Now my own experience has been a little different, and it isn't in the 19th century. It's the late 20th century, where the power to use the patent on a new invention to start a new industry has been greatly eroded. What we are addressing today, in my view, are some new bills before this committee that seek to even further erode the ability of our Nation's inventors to use their patents to build new businesses for the financial benefit of the American people.

At our company we learned after 17 years what should be obvious; namely, that an individual with a new idea and a new inven-

tion starting out in a technological framework, where giant corporations wish to be, cannot do so; cannot even begin to countenance to do so, unless he has a patent and his patent is exercised and enforced.

Now what I have done, Mr. Chairman, is to make available to you as part of my testimony; a chart. The chart, as you see, describes two chain reactions and are written the way one would write a chemical reaction. One shows the chain reaction that occurs when patents are not enforced; the chain reaction of unenforced patents. The second is the beneficial chain reaction on the economy of enforced patents. The chart of unenforced patents summarizes my experience of trying to build a new high-technology company without patent enforcement.

And if you don't mind, I'd like to start on the bottom chain reaction, the chain reaction of the unenforced patent. First you see that the immediate result of a poor policy of patent enforcement is disinterested capital. Entrepreneurs like myself simply can't get investors to plow money into a company where that investment capital is simply going to fund the development for some giant waiting predator.

The immediate result of disinterested capital is few successful new manufacturing enterprises, the upshot of which is erosion of America's internal markets by foreign competition and imitation of America's inventions by foreign competitors. What then follows is loss of employment, the loss of America's manufacturing base, which I feel America has been suffering; a decline of national wealth; old companies with quarter-to-quarter foresight; declining national revenues; negative balance in trade, and one more that I would add, a shrinking economic pie.

Now if we go to the chain reaction of the enforced patent, we see what the enforced patent does for the benefit of America indeed what it in fact, achieved when it catalyzed the Industrial Revolution. In the first place, what you have with an enforced patent is abundant investment capital. Investors the world over beat a path to the door of somebody who has an enforceable patent because they know that the enforced patent will be the root cause of expo-

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nenial growth for that new company. The collective result of abundant capital will be, just as we had in the 19th century, many successful emerging new companies. Something that I must tell you from my own experience is not doable today. Patents cannot be used to build businesses.

The emerging new businesses will be headed by founders. Companies headed by founders will have long-term growth orientation, not quarter-to-quarter foresight; increased employment; the growth of America's manufacturing base, and what I would like to add most to that an expanding economic, fueled by the new inventions, not what we have today in America, a contracting economic pie. My final statement is that the principal victim of a failed patent is not the patentee. It's very painful for the patentee to struggle as many years as I did and not be able to put a company together and get his patents enforced. All the same the principal victim is not the patentee. The victim is the public. Businesses backing patent protection for their developments fail. Masses of employees lose their jobs as a result.

As Senator O.H. Piatt said in 1890, when he was commemorating 100 years of the U.S. Patent Act, "There never has been a patent in which the pecuniary reward to the public has not been infinitely greater than the pecuniary reward to the inventor." I'd like to use AT&T as an example.

Prior to Alexander Bell's patent enforcement, he couldn't pay his bills; he couldn't pay his rent; he was going out of business. Patent enforcement came by one vote in the Supreme Court. That act of enforcement created the AT&T we know today.

In the course of time over its history, the revenues of AT&T are approaching \$5 to \$6 trillion, half of which approximately \$3 trillion has been paid in salaries — ^vastly greater sums of money than Alexander Bell ever received. The employees of AT&T were the

beneficiaries of his patent and the business it built.

Now the last and concluding statement I will make, Mr. Chairman and Members of the Congress, is that I am not in favor of H.R. 1733. As someone who knows how patents operate in the life of a company, I see it as antithetical to the well-being of a startup company, the small business that wants to implement new ideas for the benefit of his employees and the public.

To be very specific, I'm an inventor. I would apply to the Patent Office. At 18 months there would be a request for a publication of that patent. That would come before my patent issued, perhaps 8 months before, perhaps 12 months before. As the patentee H.R. 1733 creates for me the very real prospect that I have disclosed my technology to the world and will receive no patent in return. Why would I do that? I wouldn't. I don't do it in Japan. Our company doesn't file patents in Japan. We don't file patents in Europe either for the same reason. It is much too dangerous to publish your know-how to the world when there is serious risk that no patent will come in exchange for that published know-how. We file them in the United States because we have the best patent system in the world. I don't think we ought to make the U.S. system worse to accommodate foreign initiators who do not like out patents interfering with their erosion of our internal markets.

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As far as H.R. 1732. is concerned, I consider H.R. 1732 in combination with H.R. 1733 virtuously fatal to the U.S. patent system. What H.R. 1732 means to me, as a business owner and a manufacturer of products, is that there isn't any patent that I have that isn't fair game to some international third-party competitor who would like to remove that patent from the American marketplace.

He can, through his surrogate attorneys, or through any third party, initiate an action in the U.S. Patent Office, instruct his legal army to contest the patent at the Patent Office, an economic offensive which my tiny company cannot match. And where there is no professional judge with the power to control the surrogate attorneys when they are enjoying spare and poor patent examiners.

The last thing I would like to say is that at the back of the document that I've given you, I've taken the liberty to enclose the trade balance figures for medical equipment in the world. I would like to call to your attention America's medical equipment trade deficit with Japan of \$320 million. America's medical equipment trade deficit with Germany of \$276 million. That's one trade deficit I think ought not to be there. If our company's patents for the sale of MRI's, had been enforced, that balance of trade would have been positive not negative. The MRI industry built on my American invention is today a multibillion-dollar industry and there is no excuse for this negative balance of trade in medical equipment other than poor patent enforcement.

I do support Congressman Frost's bill H.R. 632. I think that's beneficial to all of us. I have one more point to make. We have extensive testimony from supporters of the two noxious bills before your committee, H.R. 1733 and H.R. 1732 about how these bills help competition in the international markets which I doubt. I would like to draw your attention to the fact that a small entrepreneur starting a company in America is not interested in the international markets. He is interested in being able to sell his product in his own market. He needs his home market to get started. In short, he needs patent protection at home, not in some foreign market that he'll never get to if infringing competitors destroy him at home. We have a vast domestic market which all the world wants to take part of and a patent system that our foreign competitors want to trade so that their consumption of our internal market can proceed without opposition from American businessmen. I plead with you, Mr. Chairman, to not let them do that to us. Thank you.

[The prepared statement of Dr. Damadian follows:]

Prepared Statement of Raymond Damadian, M.D., President and Chairman,
FoNAR Corp.

Dear Mr. Chairman, I appear before you today principally as the President of a Small Public Company of 250 employees, Fonar Corporation, which I founded over 17 years ago for the manufacture of MRI machines. I ask that you kindly forgive me for whatever may at first appearance appear to be self-serving. I intend it only

as rapid identification so that you may truly realize that I am someone who has genuinely been making a serious attempt to build a new manufacturing business for America around an important new invention through the use of his patent. Our little company, Fonar introduced the first commercial MRI scanner in 1980. In so doing it launched an MRI industry which today is a multi-billion dollar world-wide industry. I started our company after originating the concept of the MR scanner more than 10 years before following my discovery in 1970 of the abnormal NMR signal given off" by cancer tissue. I filed the first patent for an MR scanning machine

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in 1972 and completed the first human scanner and obtained the first MRI picture of the Uve human body in 1977. The testimony therefore I am about to give i bring to you from someone who has attempted to build a great new business for the benefit of the American people using the patent he obtained for a pioneering new invention.

I therefore stand before you today as someone who has fully exercised the patent system in all of its dimensions for the purpose I believe it was intended, namely to build a new business enterprise for the benefit of the American people, new employment for ovu" citizens, and new products and new revenues for our GNP through the use of newly invented American technology and utilizing the protection of the U.S. Patent. I wish not so much to be regarded by the committee as the inventor of MRI today as I wish for today's purpose to be seen as a business builder who has attempted for 17 years to build a great new manufacturing enterprise for America by the use of his patent.

My experience has been extensive and my sole purpose for being here today is to share my experience with you and perhaps share with you to some extent a first hand account of how a Patent is used to build a new business for America and how crucial that Patent is to our economy.

As Winston Churchill most appropriately said — The more thorough one's knowledge of history the further he is likely to see into the future (paraphrased) — . Mr. Churchill's statement is particularly appropriate since the role the U.S. Patent has played in building the economic colossus of industrial America has been forgotten.

As I have written before I believe strongly that the current failing of our once proud American manufacturing economy is due to the disappearance of a powerfil

market force from our economy that America has unknowingly relied on. That market force is the force of the U.S. Patent. It is now largely toothless. That it has gotten into this state is largely the result of a public that is unaware of the vital role the effective patent has played in their economic well being. A judiciary that has equEdly failed to understand the critical role the effective patent has played in building our economy has led to a judiciary that in recent years has failed to understand the criticality of proper enforcement of our patents or how essential the proper enforcement of the U.S. Patent is to maintaining America's standard of living.

With poor enforcement, particularly of the right to exclude America's individual inventors and entrepreneurs have now largely lost the one tool they had for building successful businesses for America. Lacking this tool they cannot build competitive manufacturing enterprises for America anymore. The record of recent history shows they aren't building the great manufacturing enterprises of history any longer. They aren't because the tools they needed for the building, enforced U.S. patents, have been taken away. Outside the chemical and pharmaceutical industry the power of the U.S. Patent to exclude competitors for a limited period so the innovator can build a new business is largely impotent. Only in the chemical and pharmaceutical industry is the exclusionary principle of the U.S. Patent widely respected and enforced. Because it is the pharmaceutical industry has prospered and continues to prosper.

Without enforced patents they are missing the means to protect themselves from powerful predators which they must have if they are to get their businesses established. Stripped of effective patents they lack the means of raising investment capital. Today's investors have little respect for patents. They understand that financing young companies with exciting new products means financing products for waiting predators. They are disinclined to risk their capital on such ventures.

Without the U.S. Patent was effective legendary new companies like AT&T, IBM, Dow, International Harvester, Kodak, Polaroid and many others were built. They cannot be built in today's environment because the innovator lacks the protection of Article 1, Section 8 of the U.S. Constitution — the right of inventors and authors to their discoveries for a limited period of time — that these companies enjoyed.

My comments come from my actual experience. After laboring 8 years to build the first MRI scanner and obtaining the first patent for the magnetic resonance (MR) scanner I labored another 17 years to build a successful MRI manufacturing company (FONAR). Labor as we would to produce innovation after innovation in MRI for our company a host of giant companies, most of them foreign, appropriated our inventions the instant they were introduced. It grieves me, in fact, to see that in 1992 America had a \$320,000,000 medical equipment trade deficit with Japan and a \$276,000,000 trade deficit with Germany. I know that if my right to exclude under

my MRI patent had been enforced the medical equipment trade would have shown a surplus for America instead of a deficit.

My experience is not unique. Bob Keams' experience with the intermittent windshield wiper has been the same. In his case poor enforcement cost America a multi-

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billion dollar windshield wiper market. Four members of the National Inventors Hall of Fame have not been able to get the patents that got them into the National Inventors HaU of Fame properly enforced. Two could not get their patents enforced at all and the other two took 25 years to achieve enforcement, well beyond the time when they could have built successful companies for America. In each of the years, 1989, '90 and '91 approximately 1100 patent complaints were filed with the U.S. District Courts. In each of those years only approximately 85 came to trial. The data make it clear that the inventor's chances of receiving the court ordered injunction he needs to keep others from making his product are not very good.

Because the odds are so heavily against them today's innovators use their patents to negotiate royalties. They do not use them for the purpose they were intended by the founding fathers. To the clear detriment of the American people they do not use them as Edison, Bell, McCormick, Eastman, Hollerith and countless others did in the 19th century to build legendary companies for our country. They can't. I am bringing the vital nature of the U.S. Patent and its overwhelming importance to the U.S. economy to your attention because I know the 104th Congress is intent on overcoming the economic difficulties that have threatened our country for the past decade. When I hear Congress debate the economy I never hear the U.S. Patent mentioned or hear any discussion where the U.S. Patent might fit into plans to restore the economy. I believe the U.S. Patent in fact possesses the most powerful restorative powers of all. My purpose in writing therefore is to remind the 104th Congress, the Congress in which we all have such high hopes, that a very powerful market force, the U.S. Patent, is available for use to restore the U.S. economy. I would ask the 104th Congress to enter into serious debate as to how the power of the U.S. Patent can be restored. There are legions of technically sophisticated members of our citizenry that are eager to build new companies for our nation once the patent has been liberated and successful companies are being born under its protection.

My specific objections to H.R. 1733 and H.R. 1732 is that their chief result is to further weaken an already weakened patent system which I firmly believe our eco-

conomic system cannot survive. The 18-month publication rule of H.R. 1733 means the patentee will have his technology published to the world whether or not his patent has been granted. A substantial likelihood will arise that he will end up with the worst of all possible worlds, his invention published to the world and no patent to protect it. Few inventors can opt for that choice in my view and will opt to maintain their innovations as trade secrets instead, if they bother to continue inventing at all. Conversion to wholesale trade secret protection in industry will in the end be the ruin of the U.S. Patent system and all the benefit it has brought America. Eighteen-month publication will also expose the small innovator to wholesale attack from giant corporate competitors who fear his invention and seek its suppression before patent issuance. The small inventor will find himself entirely lacking in the resources needed to defend his invention from such assault.

H.R. 1732 is even more onerous in consequences. The broadened powers it grants for patent voiding (reexamination) will now subject the issued patent and patentee to wholesale third party attack. Giant foreign corporations (domestic giants as well), and their legal armies will be able to ask for reexamination of any issued U.S. Patent that they perceive to be encumbering their unqualified access to the U.S. market. The foreign corporation will be able to remain unidentified. The patent voiding process (reexamination) will proceed at the Patent Office with the full-fledged legal armies of giant corporations making their case without the patentee's knowledge and without a judge present who is knowledgeable about the rules of evidence to protect the patentee and his patent from the wholesale distortion and misrepresentation of evidence before a legally naive patent examiner. Such attacks may well be used to run years off" the lifetime of the patent to shorten its effective lifetime. Used in combination with H.R. 1733 the two are certain to be fatal for the U.S. Patent system. An effective patent on a pioneering invention discovered after the 18 month publication period and delayed in issuance by a host of interference proceedings brought by an aggressor will successfully exhaust some of the patent clock as a result of the new 20 year from filing rule passed by GATT. A well-orchestrated attack after 18 month publication has disclosed the existence of the patent and its substance should provide corporate attorneys the information and the time they need to mount an effective corporate patent voiding attack (reexamination) on the patent after it issues. The individual inventor will find himself entirely lacking in the financial resources to counter such an offensive.

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asi

114.900

0.01

8,072.557

Iran

8,180.754

0.31

0.00

8.180.754

Ruaala

5,841 ,775

0.29

1.817

0.00

5.830.086

Jamaica

5.724,008

0.28

0.00

5.724.008

Ireland

5.185,856

0.28

1.255.277

0.07

9.810,570

Finland

4,838.582

0.24

20.784,918

1.17

(15.048.333)

NawZaaland

4.107.808

0.20

5.475

0.00

4.102.420

Portugal

3.583.806

0.18

41.204

000

3,542,894

TOTAL

1 .982.048.423

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1.787.894,504

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193,250.910

OTHERS

54.183.348

8.345,470

48,817,889

WORLD TOTAL

2.017.108.771

1.778.030.063

241,068.786

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Mr. MOORHEAD. Mr. Addison.

STATEMENT OF KENNEITH F. ADDISON, JR., PRESIDENT,
OKLAHOMA INVENTOR'S CONGRESS

Mr. Addison. Thank you, sir.

Mr. Chairman, distinguished members of the committee, ladies and gentlemen, I come before you today, as the chairman stated, as a representative of the 20,000 members of the organized American inventive community, to present our views and to state our position relative to the bills which are the subject of these hearings. Serving in my fourth term as the president of the Oklahoma Inventor's Congress, as a director of the United Inventors Association of USA, a delegate to the National Congress of Inventor Organizations, and an affiliate of the Alliance for American Innovation, which has its offices here in Washington. I literally have my finger on the pulse of the entire innovative community.

We are gravely concerned over the direction being taken by the legislature relative to our longstanding and highly successful sys-

tem of intellectual property laws. These laws have remained virtually unchanged, in principle, for over 200 years, and have enabled the development of this Nation from a renegade group of colonies to the world's industrial and economic leader. This advancement did not come about through aggression and conquest of industrialized nations, but rather, by the toil and sweat of a motivated and creative populace and a strong system of patent laws. Indeed, that motivation has been encouraged and fostered since the beginning, as inventors and their discoveries were specifically recognized in article I, section 8, of the Constitution. The first patent law, enacted in 1790, gave substance to the constitutional mandate by granting to inventors, who met certain specific requirements, a fixed term, originally 14 years, later increased to 17, during which they could control and profit from their discoveries, and was the precursor and cause, if you will, of the Industrial Revolution, which made this Nation great.

The current administration, by its efforts to alter and dilute these laws and make intellectual property a bargaining chip in international trade agreements for the benefit of other nations, is demonstrating a complete lack of comprehension of the purpose, the intent, and the scope of American patent law.

The purpose of the American patent system is to provide incentives to inventors to disclose their discoveries to the public by granting a fixed period of control over those discoveries. At the expiration of that period of control, the inventor relinquishes all rights to the invention and grants to the public the free use of the discovery as it becomes a part of the public domain. The intent of the law is to expand public knowledge of technology, science, and the useful arts. The scope of the law is national.

Our patent laws are as uniquely American as our Government and our people. They protect both foreign and domestic invention equally within America. They do not traverse our national boundaries. They do not protect American invention in Europe or in the Orient, in Canada, or in Mexico. Our laws protect, with equal vigor, the rights of foreign inventors who hold American patents, within the United States and its territories. Our laws are not inter-

national in nature or in scope. They are, however, despised for their precision and their strength by our trading partners and a number of multinational corporations — ^both foreign and domestic, I might add — who view them as barriers to international trade. It is interesting to note, however, that despite their aversion to these laws, nearly 50 percent of the patents granted by the U.S. Patent and Trademark Office are issued to foreign corporations or individuals. Due, however, to the nationality of these laws, there is absolutely no legitimate reason for them to be included in any international trade agreement. These laws relate to the internal protection of intellectual property and have nothing to do with international trade. To tamper with them is to tamper with the Constitution of the United States of America.

Nonetheless, the American patent system is now under attack by forces within our own legislature. H. Res. 1733 would reverse the 205-year-old statute which guards the secrecy of a patent application throughout its prosecution by causing the contents of the application to be published 18 months after filing, and in most instances several months, or even several years, before the issuance of the patent to protect the invention completely disclosed by the application. This is an open invitation to those nations and corporations who pursue the business of patent piracy as a matter of policy. Simply put, these nations and corporations will take the disclosed information and file patent applications which will somehow miraculously be issued in their own countries before the patent covering this information is issued in the United States. Anyone who fails to recognize the potential for harm to American technological development inherent in such a system must certainly be suffering, from at least, terminal naivete.

This bill, which would destroy the remainder of the little incentive that remains for the developers of America's technology and sound the death knell for our technological leadership must not be allowed to pass into law.

The same must also be said for H. Res. 1732, which makes the issuance of a patent into a license to destroy a small entity patent

owner. It is a hunting license for large companies to bring their full legal resources to bear to attack and destroy any individual inventor or small business that gets an important patent issued. It takes the controversy out of the Federal courts, where it belongs; it deprives the patent owner of important rights and protections that the patent owner has in the Federal courts and protects the large company from the legal recourse of the patent owner, while placing the small entity patent owner at the mercy of predatory large companies.

Further, it implements third party reexaminations in a manner that will severely reduce the number of small entities seeking patents in America. Owning a patent would be too dangerous for a small entity and would cost the average inventor far beyond his means to defend himself upon repeated reexaminations.

Equity for the little guy is a basic premise of the Federal court system. A large company cannot file a lawsuit against a small entity patent owner just because the small entity owns a patent. A large company can only file a lawsuit if the patent owner tries to enforce a patent against the large company. In this way, the Fed-

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eral courts prevent a large company from attacking a small entity just because the small entity owns a patent, or owns a house or a car or any other property.

Reexamination circumvents the Federal court system and its historical concern for equitable treatment for the small entity. Reexamination gives a large company the right to file a legal action in the Patent Office to attempt to destroy an important patent, and even to destroy a small entity patent owner, just because a patent was issued.

Reexamination, as set forth in H.R. 1732, is a "star chamber" action, which Webster's Dictionary defines as being "characterized by secrecy and often being irresponsibly arbitrary and oppressive." The party in interest, the large company paying for the reexamination, does not have to identify itself. The large company, typically, has an attorney act as the "requester" for the reexamination. The

large company remains totally anonymous. This circumvents the equity implemented in the Federal court system, where the real party in interest has to identify himself. Certainly a patent owner has the right to be confronted by the real party in interest.

Rather than belabor this issue during this presentation, and unnecessarily impose upon your valuable time, I have included a more comprehensive analysis of this legislation in the written testimony which was earlier submitted to the subcommittee, and respectfully request that each member carefully peruse this material prior to making any decision relative to these issues.

Mr. Chairman, in concluding my remarks, I would remind the subcommittee that while the general public and the employees of American industry may not fully understand the patent system, they will be among the first to notice the negative impact of this legislation by the decline in employment and lowering of the living standard which would be brought about by the passage of these bills, and you must be prepared to answer when they ask, why.

Mr. Chairman, in closing, I would like to refer to my opening remarks wherein I listed the four large organizations representing inventors in this country. Among the thousands and thousands of individual inventors with whom I network regularly, many on a daily basis, I have yet to find a single one who supports either of these bills.

Mr. Chairman, when you remove "of the people, by the people, and for the people," all that remains is government.

Thank you.

[The prepared statement of Mr. Addison follows:]

Prepared Statement of Kenneth F. Addison, Jr., President, Oklahoma Inventor's Congress

Chairman MOORHEAD and members of the Courts and Intellectual Property Subcommittee, my name is Kenneth F. Addison, Jr., Pte. I live at 1600 North 70th West Place in Tulsa, Oklahoma 74127. I am president of the 500-member Oklahoma Inventor's Congress. Our organization is also affiliated with the Alliance for Amer-

ican Innovation which has been a leader in the battle to restore our historic patent term by the passage of H.R. 359. More than 165 members of congress have co-sponsored this legislation yet we have not had the opportunity to have a hearing. Yet, these two bills just introduced are having a hearing. I am extremely concerned that these two bUls (H.R. 1732 and H.R. 1733) are going to seriously weaken the historic American patent system.

For over 200 years, since the American patent system was created in 1790, patent applications have been kept in secrecy until they issued as patents. Historically, a

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patent disclosure is not published until the patent issues because an inventor permits public disclosure of his trade secrets in return for the grant of a patent. H.R. 1733 violates this basic premise by seeking to publish the patent application after 18 months without a patent being granted. This is particularly contradictory because, if a patent is about to be issued, H.R. 1733 results in double publication (publication of the application and the patent), but if a patent is not about to be issued, the inventor is losing his trade secrets without getting a patent.

Seasoned businessmen know that a one-sided agreement will backfire. Taking advantage of America's inventors will not result in any benefits to America, although it will certainly result in benefits to foreign companies. Violating a 200-year-old premise and disregarding the wisdom of Thomas Jefferson will harm America's inventors and will harm America's competitiveness. Also, publishing an inventor's trade secrets without giving the inventor a patent is also against established public policy. It is obvious that such an action will cost jobs, emerging industries and national wealth.

The reasoning behind changing this historical law appears to be early dissemination of information. However, H.R. 1733 will have the reverse effect and will have a detrimental effect.

First, H.R. 1733 will discourage inventors from filing patent applications for their most important inventions. The classical decision, whether to keep the invention a trade secret or get patent protection, will now be weighed more heavily in favor of trade secret protection rather than patent protection. The net result of H.R. 1733 will be early publication of many mundane inventions, but with fewer important inventions to publish or to issue.

Second, H.R. 1733 violates the time honored policy of rewarding an inventor for his contributions. Long before the inventor has a patent to enforce, and even long before the inventor knows what patent protection (if any) he will receive, his invention will be disclosed to the world. The inventor's efforts to commercialize his invention will be jeopardized because large companies; with their greater financial, manufacturing, and marketing resources; will preempt the inventor's undercapitalized attempts to get a foothold in the market. The inventor will see competition entering the market before he has a patent to protect his technology.

Third, H.R. 1733 will encourage the Japanese tradition of patent flooding, the filing of many mundane patent applications by competitors to surround and to strangle a cutting-edge technology. In Japan, patent applications are published in 18 months; then cutting-edge patent applications are immediately surrounded by a flood of copycat patent applications having minor changes. This flooding preempts the inventor's continuing R&D efforts and forces the inventor to negotiate with his competitors in order to commercialize his own invention. Patent flooding is consistent with the Japanese system, which encourages copying and discourages innovating. However, America's competitiveness requires innovation, not copying. America cannot remain competitive playing by the Japanese rules.

Fourth, H.R. 1733 will disclose American technology to foreign companies more quickly so that foreign companies will get a head start and America will lose another competitive edge. For example, it is well-recognized that the American competitive edge is technology and the Japanese competitive edge is production. Premature disclosure of technology will reduce the competitive edge of American innovators by giving foreign companies advance disclosure of pending American technologies.

Fifth, H.R. 1733 will more seriously harm cutting-edge American industries. Patents on cutting edge technologies (such as biotechnology) take longer to issue because they involve more advanced technology, they seek broader claims coverage, and they are more likely to be appealed. The GATT legislation provided for 5-year extensions of the patent term and H.R. 1733 seeks to increase the extensions of the patent term to 10 years.

Inconsistently, H.R. 1733 seeks to publish after 18 months. Consider a biotechnology patent issued after 13 years (a 3-year base period and a 10-year extension as provided for in H.R. 1733), the technology will be old and well established in the marketplace, having been published 11.5 years earlier by the time the patent issues. The competitors will be producing a second generation of the invention by

the time the inventor gets a patent on the first generation of his invention.

In conclusion, H.R. 1733 will severely weaken the patent system by the publication of patent applications 18 months after filing. For over 200 years, American patents have been published when issued, not while still pending. However, the Patent Office acquiesced to the Japanese government's demands to publish an American inventor's trade secrets whether or not a patent has been issued and whether or not a patent will ever be issued. This violates the Constitutional mandate regarding inventions by discouraging the filing of patents. H.R. 1733 will prematurely disclose

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an invention to foreign competitors so that they can compete with the inventor before he has a patent to protect his invention.

H.R. 1733 seeks to change historical American patent laws. It goes against public policy, it will discourage innovation, and it will harm America's competitiveness. Thomas Jefferson was right, H.R. 1733 is wrong.

Now, let me take this time to discuss H.R. 1732. H.R. 1732 makes the issuance of a patent into a license to destroy a small entity patent owner. H.R. 1732 is a hunting license for large companies to bring their full legal resources to bear to attack and destroy any individual inventor or small business that gets an important patent issued. H.R. 1732 takes the controversy out of the Federal courts where it belongs, H.R. 1732 deprives the patent owner of important rights and protections that the patent owner has in the Federal courts, H.R. 1732 protects the large company from the legal recourse of the patent owner, and H.R. 1732 places the small entity owner at the mercy of predatory large companies. H.R. 1732 implements third party reexaminations in a manner that will severely reduce the number of small entities seeking patents in America. Owning a patent would be too dangerous for a small entity.

Equity for the little guy is a basic premise of the Federal court system. A large company cannot file a law suit against a small entity patent owner just because the small entity owns a patent. A large company can only file a law suit (a Declaratory Judgment law suit) if the patent owner tries to enforce a patent against the large company. In this way, the Federal courts prevent a large company from attacking a small entity just because the small entity owns a patent (or owns a house or a car or any other property).

Reexamination circumvents the Federal court system and its historical concern for equitable treatment for the small entity. Reexamination gives a large company the right to file a legal action in the Patent Office to attempt to destroy an important patent and even to destroy a small entity patent owner just because a patent was issued. Reexamination does not need the patent owner to attempt to enforce his patent. The issuance of a patent is cause enough for a massive attack under reexamination. The problem is compounded under reexamination because the patent owner is stripped of important legal rights that he has in the Federal court system.

Reexamination is a "Star Chamber" action. The party in interest (the large company paying for the reexamination) does not have to identify itself. The large company typically has an attorney act as the "Requester" for the reexamination, the large company remaining totally anonymous. This circumvents the equity implemented in the Federal court system where the "real party in interest" has to identify himself. Certainly, a patent owner has a right to be confronted by the "real party in interest."

In H.R. 1732, the "Requester" is estopped and prohibited from certain future actions (35 USC 306(c) and 35 USC 308 as amended by H.R. 1732). This is absurd. The true "Requester" does not have to be identified and typically is not identified. Only an attorney firm is estopped and prohibited. The "real party in interest" merely hires another law firm as the new "Requester" and hence evades the estoppel and the prohibition. Alternately, in foreign countries, different companies file multiple reexaminations in sequence to use up the balance of the patent term.

Presently, in reexamination a "Requester" prepares a legal brief, often an overwhelming large legal document, and then must step aside while a patent examiner prosecutes the reexamination against the patent owner. However, H.R. 1732 permits a large company to bring its full legal resources to bear against a patent owner without the patent owner having made any move to enforce his patent. The issuance of a patent to a small entity by itself will be the hunting license to attack and destroy the small entity under H.R. 1732.

35 USC 282 establishes a "presumption of validity" for a patent. In a Federal court action, this is a very important asset. However, this "presumption of validity" does not apply in reexamination. Effectively, during reexamination an issued patent goes back into prosecution in the Patent Office, starting all over again as if it had just been filed, except that (a) many years of the patent term have already expired, (b) the patent term continues to run during reexamination and (c) the patent owner is now up against a team of attorneys hired by an infringer or other adversary.

What is the value of getting a patent issued when an infringer can return the patent owner to "square one," devastate the patent owner's finances, and consume most of the patent term with impunity. In a Federal court action, an infringer who loses is liable for an injunction and damages. In a reexamination under H.R. 1732, an infringer who loses the reexamination actually wins because he has gained 5 to 8 years of infringement with impunity, he has no liability for an injunction or damages, and he has used up 5 to 8 years more of the patent term.

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Presently, the Patent Office prosecutes a reexamination without the "help" of the "Requester." With H.R. 1732, a large company will be able to prosecute and appeal its own reexamination against the inventor. This will turn reexamination proceedings into a form of litigation with a team of high-paid litigation lawyers overwhelming a small entity patent owner. It is common for a patent litigation to cost millions of dollars, sometimes exceeding \$10 million. Also, H.R. 1732 will turn the Patent Office into a litigation arena, overwhelming the already strained patent examining corps. A patent examiner is not trained to be a Judge for two teams of attorneys filing reexamination briefs. It is inequitable to place a patent owner at the mercy of an unnamed infringer with only a patent examiner as a judge after first depriving the patent owner of his statutory presumption of validity and his right to seek an injunction and damages. The Patent Office is no place for patent litigation. Presently, reexamination is limited to prior art issues. However, with H.R. 1732, reexamination is being expanded to cover 35 USC 112 issues (written description, enablement, claim drafting, and other issues). This will significantly increase the burden of a reexamination proceeding. For example, it will involve extensive testimony of expert witnesses and it will involve arguments ad nauseam relation to nuances of claim drafting and disclosure drafting.

Presently, in reexamination, a decision by the Patent Office in favor of the patent owner is not subject to challenge by the "Requester". However, with H.R. 1732, the "Requester" can appeal to the Board of Appeals and to the Court of Appeals when the patent examiner decides that the patent is patentable. Such appeals take years and add enormous cost to the burden of a small entity patent owner after the patent examiner has found for a second time (the first time was when the patent originally issued) that the invention is patentable. Third party appeals are clearly inequitable. Reexamination under H.R. 1732 significantly shortens the effective term of a patent. The time that a patent is under reexamination (realistically, 5 to 8 years

through prosecution and appeal) is effectively subtracted from the patent term. This is because, when a patent is under reexamination, it cannot reasonably be enforced. Licensing activities and District Court actions will typically be put on hold until the reexamination is concluded. Technology obsolescence can be expected to occur by the time that reexamination is concluded even if the patent has not expired. Also, it is common in foreign countries to have a sequence of oppositions, one after another, using up the patent term for a foreign patent. Two or three reexaminations in sequence would cause a patent to expire without ever being enforceable. This is how the patent system works in Japan, which produces few fundamental innovations. Should the American patent system be the same?

Presently, for a Patent Office fee of \$2,000: a "Requester" can institute a reexamination that can cost the patent owner over \$100,000 and use up many years of his patent term. Under H.R. 1732, for a Patent Office fee of \$2,000; a "Requester" will be able to institute a reexamination that could cost the patent owner over \$1,000,000. This would be devastating to an individual inventor or a small company. H.R. 1732 is a hunting license for large companies to destroy the innovative small entities that are the basis of America's competitiveness and job creation.

Mr. MOORHEAD. Mr. Kimbrell.

STATEMENT OF ANDREW KIMBRELL, EXECUTIVE DIRECTOR,
INTERNATIONAL CENTER FOR TECHNOLOGY ASSESSMENT

Mr. Kimbrell. Thank you, Mr. Chairman. I appreciate this opportunity to speak here before you and the subcommittee. I'm the executive director of the International Center for Technology Assessment, which is a nonprofit corporation devoted to alerting policymakers and the public to new advances in technology. I also speak here representing the Edmond Institute, among the few think tanks in America that deals with how intellectual property issues interact with technology and environmental issues.

I have a very different perspective than my co-panelists. Being a public interest attorney, I've had to deal with patenting issues far more than I've wanted to in the last 10 years. In dealing with a variety of patenting issues, including those in biotechnology and computer technology, I take another perspective here. Of course, it

is an absolutely essential aspect of the patent system to provide incentive to inventors, but that is not the sole goal or the sole function of the patent system. The patent system also owes a duty to the public, and that is in the role of providing information to the public, vital information, about new technologies. There are four different functions that the patent system should provide in order to perform this service correctly.

First, it has to alert the public to new developments in technology. Then it allows the assessment of that technology, something that I'm very interested in. Third, it aids in promoting the development of that technology through that assessment and knowledge. And, fourth — and this is very, important — it helps avoid the duplication of research.

Now many of us in the public interest community believe that the patent system, and certainly our current patent laws have not been very successful in fulfilling their duties to the public. Over the years we have seen a series of front page stories, including today's New York Times' story on the patenting of medical procedures, that underscore how we've entered a sort of patent morass.

We also see an exponential rise in patent litigation. There has been skyrocketing patent litigation in virtually every cutting-edge technology. If you want to know what's blocking a lot of patents, and a lot of companies from helping the American economy, it's this new influx of litigation. These are direct failures of the Patent Office to perform its public interest duties.

The two bills that I want to speak about, 1733 and 1732, go a very long way toward remedying these problems. They represent very important and significant reform of the patent law. I think that the publication of patents at 18 months, again, is very significant and, performs several vital public interest services. It alerts the public to new developments in technology. Also, if there is a dispute that's going to lead to litigation, it gives all parties early notice of that dispute. Moreover it harmonizes our laws with other patent regimes in Europe and Japan.

Clearly, we're in a global economy. I appreciate there are American interests in that global economy, but we no longer can pretend that our patent system can be unrelated to those of Japan and Europe. It's confusing to have different regimes. It's confusing to the public interest community, and confusing to industry as well.

We should not view publication as some kind of giving up of the rights of patent holders. The proposed bills provide several key protections to the patent holder. There's a very important provision which no one has mentioned today, which is that this law provides that there will be no disclosure of any information about a patent without the Commissioner's direct approval, and that decision is not appealable.

Additional protections that have been discussed today, include provisional rights and extension of patents. Together these represent very solid protection for the patent holder.

By the way, we talked about the huge trade deficits we have with Japan and with Europe, and yet they have patent disclosure after 18 months. So, clearly, disclosure does not hurt competitiveness but does something very positive to an economy. We should try it.

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I also want to discuss the patent reexamination issue. A major function of the patent system is to resolve patent disputes and avoid extraordinary amounts of litigation. Shouldn't the Patent Office itself be the most efficient forum for patent disputes? It should have the most expertise to resolve these issues for any inventor, small or large at the lowest cost. Reexamination is the process that should offer third parties a fair opportunity to challenge patents. It seems to me that it's very important that we allow the patent law and reexamination procedures to function for third-party requesters in a way that is fair and equitable, but this is not the case today.

First of all prior to this, any reexamination had to be based on

documenting prior art. Section 112 issues were not allowed to be an aspect of any reexamination. This bill remedies that.

As has been mentioned before, in the past there was a very limited amount of material that the requester could comment on generally just the response by the patent holder. Now the requester can respond to the first Patent Office action. That allows us to escape the problem where a patent holder withholds a response so that the third-party requester has nothing to respond to at all, a tactic that certainly many of us have seen used often.

Additionally, and I think rather incredibly, the third-party requester has never been allowed to appeal the result of a patent reexamination. This bill provides equity between a patent holder and a third-party requester. Both are allowed to appeal. I think that's very important.

Again, what we would like to see, and I think this would be an extraordinarily successful result, one that would be least costly for any inventor, any company, is to see all these litigations that go on for years and that are incredibly costly shifted into the reexamination process, which, according to this act, is going to be short and efficient. I think the public, the industrial sector, the public interest sector are well served by this.

Having said that, I do have two caveats, and these really go back to the former Secretary Mosbacher's advisory panel's excellent report. There were two other things they recommended as regards reexamination that I was sad to see were not part of this bill. One is — and it was discussed I think fairly and honestly by the Commissioner today — is that there is a lot of ex parte negotiations that go on between the Patent Office and patent holders. This is totally appropriate in the initial examination. However, in the reexamination process, ex parte communication between the Patent Office and the patent holder means that the third-party requester is not privy to those conversations, and those conversations are often not reflected in the record. Certainly, speaking as a lawyer of many years, there's a traditional legal doctrine that ex parte communications with a decisionmaker are not the ideal way to come to fair decisionmaking. So I wish that the proposed bill had mandated

open access by the third-party requester to such ex parte discussions. I'm not suggesting a third-party requester should have the power to prevent or initiate such discussions but at least have access in such discussions.

And, finally, the advisory panel recommendations including providing appeal procedures for the initial reexamination decision by

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the Commissioner. It is, of course, totally appropriate and necessary that the Commissioner make the original decision on whether there's actually a legitimate question raised by a reexamination. However, there should be an appeal process, and that is unappealable.

I think that we need to begin thinking of some orderly appeal of the Commissioner's decision perhaps on a very limited basis. Those two caveats aside, I think the two bills we have before us represent very, very important patent reform in an age where both technology and global economics are becoming far more complex, and the Patent Office simply has to evolve and develop along with those new developments.

Thank you.

[The prepared statement of Mr. Kimbrell follows:]

Prepared Statement of Andrew Kimbrell, Executive Director, International Center for Technology Assessment

Chairman and Members of the Subcommittee, I am Andrew Kimbrell, Executive Director of the International Center for Technology Assessment (ICTA), a non-profit organization formed to help the general public and policy makers better understand how technology affects people's lives. The Center performs assessment of technology encompassing the economic, ethical, social, environmental and political impacts that can result from the applications of technology or technological systems. The Center also provides the public with independent and timely information about the potential impacts of technology. I am also here representing the Edmonds Institute. This institute is one of the few think tanks in the nation devoted to the relationship of

intellectual property to environmental and technology issues.

I appreciate this opportunity to discuss Patent Reform. The debate — which has taken place both nationally and internationally — is one of key importance in the development and assessment of technology. Over the last two centuries the patent system has rewarded inventors in order to stimulate advances in technology. The now familiar Congressional mandate is for the patent system "to promote the progress of science and useful arts, by securing for limited times to authors and inventors, the exclusive right to their respective writings and discoveries."

It is often thought that conferring valuable patent rights to an inventor is the sole rationale and function of the patent system. This is incorrect. The patent system was also meant to provide a vital information service to the public primarily through the complete disclosure of an invention. This public service accomplishes several important goals including alerting society to new advances in technology, allowing for up-to-date assessment of technological advances, promotion and additional development of technology and discouraging unnecessary duplication of research. Therefore, the success of the patent system must be judged not only on how much incentive it provides to inventors but also on how it balances the rights of individual inventors as against the rights of the public.

I believe I speak for many in the public interest community in stating that patent law has often failed in maintaining this balance. In recent times technology has become increasingly omnipresent, complex and interconnected. The French philosopher Jacques Ellul is certainly correct in maintaining that technology is the primary agent of social change in our society and that technology has become the central component in our day to day lives. In this sense technology is a kind of legislation. The technologies that we promote have more influence on our daily lives than the vast majority of legislation passed in Congress. Moreover, recent advances in biotechnology, computer and telecommunications technology and other cutting edge technologies have created a mix of opportunity, risk and legal confusion. Patent regimes in Europe, Japan and the United States have often responded quite differently to these new legal challenges, creating further difficulties. U.S. patent law has not adequately evolved or adapted to our changing times and new technologies. As a result, patent litigation in developing arenas of technological development has skyrocketed.

The bills that are the subject of today's hearing represent a significant step towards making our patent system more responsive to the public. They also resolve key harmonization questions as regards the patent systems of Japan and Europe,

and reduce the cost and complexity associated with modem patent litigation. I will limit my more specific analysis to two provisions in the bills before the committee:

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(1) the provision for early publication of patent applications in H.R. 1733, and (2) the provisions which afford third parties greater participation in reexamination proceedings before the Patent and Trademark Office in H.R. 1732.

PUBLICATION OF PATENT APPLICATIONS

The U.S. patent system has traditionally afforded applicants the right to keep patent applications confidential until the date of patent grant. Among other advantages, this has permitted applicants to retain trade secret protection for their inventions until the date the patent is issued and disclosed to the public. This benefit is clearly an attractive one for the individual patent applicant. However it badly skews the balance between the rights of the patent holder and those of the public, which is effectively locked out of information about a patent until its publication subsequent to issue.

Early publication of pending patent applications as mandated in H.R. 1733 resolves this imbalance and represents a significant step in restoring the patent system's function of providing the public with information about technological developments. Publishing patent applications as soon as possible after the expiration of a period of 18 months from the earliest filing date has several important benefits stemming from its acceleration of public access to information contained in the patent disclosure. First, it would permit earlier public interest assessment of technological developments. It would also reduce patent litigation by allowing for identification of potential patent conflicts sooner. This provision would also speed technological development by providing useful information to the public at an earlier stage after its discovery. Finally, it represents an important harmonization of the U.S. patent systems with those of Japan and Europe, reducing conflicts between international patent systems.

As for the rights of the patent applicant, H.R. 1733 continues to provide trade secret protection. It does this by assuring that no information concerning the published application will be made available to the public unless a determination in favor of such disclosure is made by the Commissioner.

PATENT REEXAMINATION

Since 1981, over half of all reexamination requests have been filed by third parties. Notwithstanding such third party participation, the present patent system is highly prejudicial to a third party seeking reexamination of a patent. Under this system a third-party requestor is provided an initial opportunity to present arguments for unpatentability of issued claims but solely on the basis of newly-discovered documentary prior art. H.R. 1732 remedies this limited basis for reexamination by allowing for a reexamination based on any of the requirements of section 112 except for the best mode requirement. This provision represents an important, common sense expansion of the scope of reexamination. Clearly, by their very definition section 112 issues are amendable to documentary presentation and are routinely considered by examiners. They therefore should be a basis for ordering reexamination. As noted by The Advisory Commission on Patent Law Reform (August 1992), "a 'substantial new issue of patentability' should be found where the requester establishes in the request a prima facie violation of section 112 which was not considered previously on the record. While this may present certain evidentiary issues where affidavits are involved, this is no more than examiners face in examination of original applications." The present patent system's limiting the basis for reexamination to documentary prior art effectively precludes the public from an effective administrative determination of all the substantial issues of patentability, issues that were considered in the initial examination. This irrational limitation undoubtedly is responsible for encouraging the exponential increase in patent litigation.

Moreover, under current practice, a third party requester may only comment on the patent owner's statement (in response to the decision ordering reexamination). As a tactic to deprive third parties of this opportunity some patent holders simply refuse to file a statement waiting instead for the first Office action. H.R. 1732 remedies this injustice by allowing for the third-party requester to file written comments not just on the patent owner's response but also on issues covered by the Office action. This provision, therefore, ensures the third party requester an opportunity to comment while shortening the duration of many reexamination proceedings. This provision also encourages reexamination as an effective alternative to litigation.

H.R. 1732 also allows a third party who requested and participated in a reexamination to appeal any adverse decision of the Examiner to the Board of Patent Appeals and Interferences and to the Federal Circuit. It further provides that third party and the patent owner should be permitted to participate in any appeal by the

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other. Under the current system only the patent holder is allowed to appeal a reexamination determination. This is not only unjust, but also creates the perception among many third parties that the reexamination system is not a fair alternative to challenging validity in court. Once again this means that third parties are less likely to request reexamination as an alternative to litigation because of the perceived unfairness of the system. This represents a significant failure of the patent system. A primary purpose of the system should be to provide an expert forum which is a faster, less expensive alternative to litigation of patent validity.

The bill also provides adequate protection for the patent holder by mandating that any third party which files a notice of appeal or who participates as a party in any such appeal is estopped from any later assertion in another forum of any claim that was raised or should have been raised during the reexamination proceedings. H.R. 1732 does fail the public on two issues, however. First, it continues the current patent system's practice of making the Commissioner's initial determination, on whether a substantial new question has been raised by a third party, nonappealable. This is unfortunate and may in itself represent a significant disincentive for third parties to utilize the reexamination process as an alternative to litigation. Additionally, the bill should have provided that a third party requester have the right to participate in any interview initiated by the Office examiner and the patent holder. These interviews can be highly prejudicial to third parties, especially in that the record rarely if ever reflects what has transpired. Additionally, the policy of denying third party access to such interviews violates the traditional legal doctrine that neither party should have ex parte contact with a judge or other decision maker.

Mr. MOORHEAD. We have a problem. There's a vote on the floor and it's necessary for me to vote. So I'm going to have to recess for about 10 or 15 minutes, and I hope it doesn't inconvenience you too much, but around here votes come first and we're required to cast them, if we possibly can. So I will return as rapidly as my feet will bring me back.

[Recess.]

Mr. MOORHEAD. If you don't mind, I'm going to ask Mr. KIRK, who has worked in the Patent Office and probably understands this

subject as well as anybody, to come up and just kind of sit there next to you, Mr. Addison, if you don't mind.

Mr. Addison. Surely. Surely. Come on, Michael.

Dr. Damadian. Mr. Chairman.

Mr. MOORHEAD. Yes?

Dr. Damadian. Congressman Forbes has asked me to ask you to make these documents part of the proceedings in the record of this hearing.

Mr. MOORHEAD. Would you — I'll ask my counsel to get them.

[The information follows:]

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Or Damadian receiving the National Medal of Technology, the nation's highest honor in technology, from President Ronald Reagan at the Executive Offices of the White House on July 15, 1988. In giving the award, President Reagan cited Dr. Damadian for his "independent contributions in conceiving and developing the application of magnetic resonance technology to medical uses, including whole-body scanning and diagnostic imaging "

The Story of MRI

"Where did the system go wrong?" we asked. . . . We propose that what went wrong is what has gone wrong in all aspects of our society . . . in our families, our schools, our businesses, our government.

by RAYMOND V. DAMADIAN, M.D.

Inventor of MR Scanning. Inductee National Inventors Hall of Fame, 1989:
Recipient National Medal of Technology from President Reagan, 1988
Delivered in panel (he IVo. ^hington Patent Lawyers Club. Washington, D.C.. Feb. 10. 1992

IN INVITING ME to speak today.
Jim Laughlin explained that the

Washington Patent Lawyers
Club had decided that it would like
to hear the story of the Invention
process from a real inventor. Frank
Laubscher, your Secretary, asked
me to "Let us have It both barrels."

So I'm here today Intent on honor-
ing both requests.
As I address the topic of the role
of the INDIVIDUAL INVENTOR in
today's economy I wish to make
clear that in all references I make to
the inventor in this talk I am refer-
ring exclusively to the INDIVIDUAL

INVENTOR and the experience he
encounters in trying to use his pat-
ent to get a new technology busi-
ness started in today's economy.
The inventor-employee of a
large corporation is a different spe-
cies. What the court record is in
upholding the patents of large
corporations and their employee-
inventors has little or no bearing on
how the INDIVIDUAL INVENTOR is
faring as a patent-holder plaintiff in
the courts.

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My experience has been that of
an INDIVIDUAL INVENTOR. The ex-
perience of the well-financed large
corporation enforcing Its patents as
a patent plalntllT (e.g. Polaroid,
Honeywell) is not germane, in my
view, to the experience of the INDI-
VIDUAL INVENTOR who is seeking

to begin a NEW BUSINESS for the American people with the patent as his only asset. What is happening to him is what I believe is the central issue concerning Americas ability to hold onto its prosperity. In thinking how I might best profile the life of an inventor for you. I thought to begin with an anecdote that would enable you to see how an Inventor sees himself. When I first began developing the MR scanner In 1970, I would meet new people and they would ask. "What is it that you do?" After explaining that I was working on a new invention that would someday scan the entire body non-invasively. hunt down cancer deposits and provide scans of all the body's organs using radio signals and magnets, they would commonly respond by saying. "Yeah, sure." Well, it's 22 years later, there are approximately 4,000 MR scanners installed worldwide and it has become a multi-billion dollar industry and a world-famous technology. I still meet new people and they still ask what it is that I do. Now I tell them that I have Invented the MR scanner. They still say. "Yeah, sure" — and one chap added. "And my uncle's President of the United States." So you see. looking at it from the inventor's side, it's "Yeah, sure" when he starts and "Yeah, sure" when he's finished and from his perspective, nothing's changed. The MRI story itself begins with the first time I ever saw an NMR (nu-

clear magnetic resonance) machine.
Freeman Cope called me in 1969
when I was still a young professor en-
gaged in active research at the State
University of New York Health Sci-
ence Center in Brooklyn. He said.
"Let's team up and use the NMR ma-
chine to make the first measurement
of potassium in tissue by NMR." My
Job was to acquire bacteria from the
Dead Sea called halophiles that had
20 times the normal complement of
potassium and that would give the

I said to Freeman at
breakfast, "If you could
ever get this technolo-
gy to provide the chem-
istry of the human
body the way it does
for the chemist on a
test-tube of chloro-
form, you could spark
an unprecedented revo-
lution in medicine."

1 Cope first introduced Damadian to the workings of
the machine in 1969 while they were performing spectroscopy experiments on potassium-nuclei
at NMR Specialties in New Kensington, Pennsylvania.

experiment a chance at succeeding.
Freeman's Job was to run the NMR
machine. He had borrowed some
time on a machine at a small manu-
facturer outside of Pittsburgh.
To our mutual delight, the po-
tassium signal popped up on the
oscilloscope screen the instant we
put the bacteria into the machine.

We were happy, but I was awed by something else. I observed with considerable excitement. "Good heavens. Freeman, this machine is doing chemistry entirely by wireless electronics." "a terribly unsophisticated distillate of a profession so distinguished as NMR. A few days later, still awed by the technology. I said to Freeman at breakfast. "If you could ever get this technology to provide the chemistry of the human body the way it does for the chemist on a test-tube of chloroform, you could spark an unprecedented revolution in medicine."

I proposed detecting cancer with it. Freeman, envisioning giant magnets, people inside of them, r.f antennae wrapped around them, considered the idea too wild even for his fertile imagination — but I was hooked. When he asked how I would go about it. I proposed that I felt confident from my salt-and-water research that the water NMR signal of cancer tissue would be different from normal, and that if this proved true we could build a scanner around those signals and use them to hunt down cancer deposits in the human body.

I think he agreed that this might be correct, but he wasn't too enthused about proceeding on such a heroic venture that would take, as he put it. "10 years to convince someone it was sane."

Obsessed with the idea of a scanner that could non-invasively

explore the human body for cancers, I returned to my teaching post at SUNY and began immediately to round up rats with tumors in them. Step One for the scanner idea. I decided, was to show for sure that the NMR signal (a sine wave radio signal that decayed with time) could distinguish between cancer and normal tissue.

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Now I feared it was too good to be true and that I had made the measurement improperly. I repeated it and repeated it. each time getting the same result as I re-examined and tested my method on standard solutions to certify that I wasn't fouling up. Eventually. I concluded I wasn't.

The T₁ of the rats' Walker Sarcoma tumors was distinctly elevated when compared to normal. I concluded that if I could return to Brooklyn, grow up some more rats with a different tumor.

▲ TOP AND LEFT: Dr. Oamaian's discovery that the NMR signal given off by cancer tissue is recognizably different from that come back to Pitts-

burgh of normal tissue, because the elevated T₁ and T₂ values, was reported for the first time in his article "Tumor Detection by Nuclear Magnetic Resonance," that was published in the March 19, 1971 issue of Science. Note the marked difference between the T₁ values of the normal liver and the cancerous tumor (Novikoff hepatoma). It was his discovery of the cancer scanning NMR signal that inspired Dr. Damadian to build a machine that could noninvasively search the human body for diseased tissue. LOWER RIGHT: Original data from Dr. Damadian's notebook comparing tumor and normal tissues of a rat.

With a collection of tumor-bearing rats fixed securely in the trunk of my car, I made off for Pittsburgh and the NMR Specialties Company where Freeman and I had done the potassium-bacteria work. Paul Yajko, the company's president, had said I could have a few days on one of his NMR spectrometers that was enroute to a customer, provided I worked on my own and didn't distract any company employees from their work. Mr. Yajko provided me with an operator's manual on how an NMR spectrometer worked and I was on my own. Never having operated an NMR machine before (Freeman had per-

formed the K* experiment a few weeks earlier), the nest of coaxial cables, vacuum tube amplifiers and digital programmer units that constituted the electronics was very effective at intimidating beginners. Eager not to wear out my welcome with Mr. Yajko. though. I kept my distance from company employ-

ees. I paged through the manual on my own until I came to a procedure I thought I could manage. It was called the T[^] Null measurement. I practiced T, measurements by this method for several days using distilled water samples until I could reproducibly get the published textbook values for T, of distilled water. (T, is a measure of the time it takes the NMR sine wave signal to decay to zero.) I then tried the first rat tissues taken from the animals I had brought from Brooklyn.

After a few more days of measurements to be confident I was measuring T, in the different normal rat tissues reliably. I decided to attempt the cancer measurement. To my mind, this was the measurement that would make or break my MR body scanner idea. I needed that abnormal cancer signal if there was to be any hope of a human scanner that could hunt down cancer deposits in the body. I held my breath and made the first measurement. It was differ-

burgh and repeat the result (in this case,

the Novikoff hepato-
ma), then I could
trust the general
NMR result of cancer versus normal
and could consider generating a
manuscript for reporting the find-
ings to the scientific community.
After successfully repeating the
T, measurements on the Novikoff tu-

I decided to attempt
the cancer measure-
ment. To my mind, this
was the measurement
that would make or
break my MR body
scanner Idea. I needed
that abnormal cancer
signal if there was to be {
any hope of a human
scanner that could
hunt down cancer de-
posits in the body. I
held my breath and
made the first measure-
ment. It was different —
dnunatlally different!

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The Making of "Indomitable"

Although he had never built a magnet before. Dr.
Damadian set about to build a 5.000-gauss supercon-
ducting magnet — at that time the ninth-largest in the
world. For an electromagnet to be superconductive, it
has to be kept immersed in liquid helium. To keep heli-
um in a liquid state, it has to remain at a temperature
below minus 269 degrees Celsius, nearly absolute zero
That required a Thermos-bottle-like arrangement called

a dewar to drastically slow down the three main types of heat transfer — conduction, convection and radiation.

Dr. Damallan's magnet design called for the construction of three huge doughnut-shaped metal rings nested within another.

▲ The smallest doughnut, made of polished stainless steel, contained the wire hoops comprising the magnet and the liquid helium. To reduce heat conduction, the magnet was prevented from touching its container with special supports made of material that was a poor conductor of heat

▲ It was up to Michael Goldsmith, with the help of a couple of graduate students, to wind the wire for the two magnet hoops. Niobium-titanium wire obtained at the "miraculous" price of ten cents on the dollar from Westinghouse Corporation was tightly and precisely wound off a wooden spool into two 53-inch-diameter hoops, each containing 30 miles of wire, an almost trance-producing process that went on for weeks at six days a week, 16 hours a day.

A The second doughnut, to be filled with liquid nitrogen to help cool the helium, was made of aluminum wrapped with 85 layers of super-insulating aluminized Mylar to bounce off unwanted heat radiation. The third and largest doughnut, a half-inch-thick aluminum can visible in the finished machine on the next page, contained the other two doughnuts surrounded by a 10⁻⁶ TORR vacuum.

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Though surrounded by liquid nitrogen and encased in a vacuum atmosphere, the liquid helium for the magnet had to be replenished daily. To store liquid helium Dr. Damadian and Larry Minkoff had to build a reservoir tank to sit astride the huge magnet. Unfortunately, it leaked intolerably and it took weeks of valuable time to find and fix the microscopic leaks in the porous metal

Drs Damadian, Minkoff and Goldsmith and the completed Indomitable. Although it was built to operate at 5,000 gauss, some of the wire in the magnet had to be

bypassed through a special access sleeve made by
Dr Goldsmith Along with the bypassed wire went the
(held strength The team would have to try producing a
human image at only 500 gauss.

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▲ To go (rom an NMR machine which analyzed test-tube-size samples of single compounds in
pure solutions to electronically mapping the inside of the human body was, as Dr. Damadian
described it, "like going from a paper glider that you tossed across the classroom to a 747." The
latest machine, an example of one such NMR spectrometer, was smaller and less sophisticated
than the machine used at NMR Specialties II was ordered by Dr Damadian in 1971 to perform
ongoing tissue biopsy studies at Brooklyn's Downstate Medical Center after his discovery of the
cancer scanning signal at NMR Specialties in New Kensington, Pennsylvania.

Moreover, I soon had a manuscript on its
way to Science. Science published
the paper. "Tumor Detection by Nuclear
Magnetic Resonance" in their
March 19, 1971 issue (see table on
page 3). The paper in its opening
paragraph generated for the first
time the concept of the NMR body
scanner. It gently proposed "In principle,
Nuclear Magnetic Resonance
possesses many of the desirable features
of an external probe for the detection
of internal cancer."

The patent for the full embodiment
of the first MR scanner was
filed in 1972 and issued from the
U.S. Patent Office in 1974. It was the
first description ever of a machine
based on NMR for detecting diseased
tissue in the live human body.

With publication in hand and the
patent issued, it wasn't long before
the idea of the body scanner was attracting
advocates and detractors.

Theoretical physicists claimed to

have done calculations demonstrating the idea was beyond what the theory of physics would allow. Apart from confounding the funding sources who didn't want to finance something that couldn't be done, the claim of the theorists proved amusing to us: indeed, a challenge. How often in scientific history does a group of experimentalists like us get an opportunity to do something the theorists say can't be done. We relished that chance. We proceeded to

the first step: trying to make the first successful scan of a tumor in a live mouse. This we achieved in 1976. More success brought more challenges. Chemists, who themselves had amassed more than two decades of NMR experience measuring the NMR spectra of small chemical samples that were spun at around 10,000 rpm, would ask at conferences upon hearing the body scanner idea. "Now, Doctor, how fast do you propose to spin the patient?" We survived the pundits, though, and managed to convince enough people that the idea had sufficient merit to warrant some funds, at least to build the first human-size scanning machine. Ken Olson, the pre-scient Director of the National Cancer Institute (NCI) Diagnostics Division caught the vision and became the inside champion at NCI for the MR scanner. Construction of the first MR machine, which we named Indomiable, commenced in January 1976. By

May 1977. after many fits and starts .
in completing the welds on the cryo-
gen apparatus and in obtaining the
1 0" TORR vacuum needed for the
magnet, our homemade 5.000 gauss
niobium-titanium liquid helium su-
perconductor (operated at 500 gauss)
was complete and ready for testing.
After performing scans on the full
OSCAR FAMILY (a series of containers
of different sizes containing nickel-
I doped water and artificial air sacs to

simulate lungs), we were ready to at-
tempt the first live human chest.

Here we had an unexpected
problem. No one would get into the
magnet. It was finally agreed that
the person who most deserved this
moment of glory and also the
chance to prove that magnetic fields
when combined with radio fields
were not fatal was the silly fool who
thought up the idea in the first
place. I was elected.

As the project director. I had
more privileges than the ordinary
sample. I could see to it that I had a
willing cardiologist on hand, a
blood pressure monitor, a defibrilla-
tor and shock paddles, an EKG ma-
chine (connected), an EEC plus an
emergency CODE team equipped
with oxygen and a stretcher to deal
with the unexpected. The emergen-
cy CODE team left after the first 15
minutes of the scan for the lack of
their usual adventure.

The problem with the scan, how-
ever, was that it didn't work! All we

got for our 18-month effort of building Indomitable was a normal EKG. Mike Goldsmith, Larry Minkoff and I were sally disappointed with this result. MR scanning had failed us. Our critics were proved right. It couldn't be done. We didn't relish the prospect of delivering the evidence that proved we were, in fact, the fools they had agreed we were all along. Mike Goldsmith provided the first hypothesis to explain the failed experiment. I was simply too fat for his r.f. coil, he said — "a regular oven stuffer." as he put it. The antenna coil Mike had built to wrap around my chest to pick up my body's NMR

The problem with the scan was that it didn't work! . . . MR scanning had foiled us It couldn't be done. We didn't relish the prospect of delivering the evidence that proved we were, in fact, the fools they had agreed we were all along.

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LEFT: The first attempt for a human scan was with Dr Damadian sitting in Indomitable, the world's first MR scanner that he and his colleagues built. A blood pressure cuff was affixed to his right arm, an EKG was wired to his chest, and oxygen was kept handy. The cardiologist (standing at left in above photo) I was there in case the magnetic field produced any strange cardiac effect on Dr Darradian. No signal was received from the scanner. The team decided that Dr Damadian was oversized for the cardboard vest housing the antenna and that he must have detuned it. A thinner 'guinea pig' was needed.

T The "perfect-sized" Larry Minkoff finally agrees to be scanned.

Fli-iS

signals was too small. The largest one Mike had been able to build, up to that point, and still get a signal was 1 4 inches in diameter. As far as Mike was concerned. I was loading the impedance of his antenna "mercilessly" and we'd never get it to work. We needed a smaller sample! Larry Minkoff was perfect. He was thin, and an inch smaller than me all the way around. The problem was. he wouldn't get into the scanner. After several frustrating weeks of trying to get bigger coils and different designs to work. Larry surprised us by saying he would, at last, get into Mike's coil and test the scanner. It was July 2, 1977. more than six weeks after the failed attempt on me. He said he had decided that "the time for NMR scanning had come" and that, moreover, in the "intervening weeks since I had been scanned, he hadn't detected any undue deterioration."

With the good news of Larry's announcement. Mike and I worked fe-

verishly through the day to get Indomitable up to speed before Larry changed his mind. We had to get a field on Indomitable's magnet, verify the vacuum was holding on the seals, establish that her liquid helium level was adequate and not evaporating from some new heat leaks,

and be sure that the maze of electronics we had assembled to operate Indomitable for the scan was functioning according to "spec." It took me the better part of 14 hours to run through the two pages and 50 or so items on my MR scan checklist before we were ready for countdown. By midnight, July 2, Indomitable was ready. Larry took his upright sitting position on the movable scanning rail inside Indomitable. He was positioned in Indomitable's magnetic field so that the signal-producing "sweet spot" (pea-sized) was centered in his heart. Mike and I rushed to the controls to see if there was a signal. This was where things had come apart on my scan.

To our great delight, a generous signal from Larry's chest greeted us on the oscilloscope. At the same time, we had verified that Larry "had a heart" after all, something Mike had begun to question. The world's first human scan, after all these months, was finally underway. If Larry had any thought of getting out of the scanner at this point, having fulfilled his plan to "get a signal." Mike and I hastened to preempt such a move by quickly advancing him to the next scanning location to proceed with the scan.

Mike and I rushed to the controls
To our great
delight, a generous signal
from Larry's chest

greeted us on the
oscilloscope The
world's first human scan
was finally underway.

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Within a few minutes, the sweet
spot was moved into Larry's lung
field, a gas-filled region lacking wa-
ter and therefore a region where the
hydrogen NMR signal should be ab-
sent. It was! The scan was working.
The "sweet spot" was successfully
focusing within Larry's chest.

We continued to scan, moving
inch-wise along one scanning line
until the line was completed and then
moving the scanning rail backwards
one inch to begin a new scanning line.
We proceeded in this fashion until
4:45 A.M. the morning of July 3, 1977.
by which time 106 scanning points
arranged in a

▼ TOP: The data from Michael Goldsmith's notebook where he and Dr
Damadian recorded the oscilloscope measurements of signals received
from Larry Minkoff's chest on the night of the first human MR scan. Each
of the 106 numeric values was given a corresponding color which, when
sketched with colored pencils on a sheet of graph paper, indicated a
rough, but otherwise accurate representation of Minkoff's chest — the
body wall, the right and left lungs, the heart (the right atrium and one of
its ventricles), and the descending aorta CENTER; Dr Damadian's
jubilant hand-written notation, "Fantastic Success!" marked the historic
accomplishment in his notebook BOTTOM: Later, the data was fed into
a computer and interpolated to produce the finished image.

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rectangular grid,
had been
collected.
Mike and I
drew a sketch of
this first scan in
Mike's lab book,
marked the image
with some jubilant
exclamatory about
achieving the
world's first hu-
man scan and
saved the data for
Joel Stutman. our
computer scien-
tist, to computer-
interpolate the raw
data and to form,
in color, the first
human image.
The success of
the first scan.
Mink 5. as we
called It. was fol-
lowed immediate-
ly by scans using
the same "sweet
spot" technique
on two patients
with malignan-
cies, both of the
chest, and also by
a scan of Larry's

normal abdomen.
Going ahead of
my story for a mo-
ment . . . Twelve
years later, in
1989. I listened in
disbelief as my
achievements
were recounted at
the Induction Cer-
emony for the Na-
tional Inventors
Hall of Fame in
Washington. D.C..
humbled by the
fact that I was

deemed worthy of Inclusion In the Hall
of Fame alongside the legendary he-
roes of my boyhood — Thomas Edison.
Alexander Bell. Samuel Morse. Eli
Whitney. Marconi and others whose
coiitrtbuUons created the basis of the
Industrial Revolution from which
America has prospered ever since. The
year tjefore. 1988. President Reagan
awarded me the National Medal of
Technology at the While House for in-
venting the MRI and for creating for
America a new Industry. As we shall
see. however, this isn't quite the way It
ended up; for America, at least.
We were scientists, you see. and
didn't know too much about the
law; patent law. for example. We
simply assumed it worked.
News of the successful scans soon
brought investors eager to sponsor the
manufacturing of these scanners. So
In 1 978. in all innocence and armed

with our patent, we started the world's first company to make MRI machines. FONAR Corporation. Donna, my wife of 32 years as of today, braced herself for a new round of risk and instability. This gentle lady, the true heroine of MR scanning and without whom there might genuinely be no MRI today, had already kept the home fires burning for 1 year and comforted our three children — Timothy, Jevan and Keira — In their all-too-frequent disappointments occasioned by Daddy's delays at the lab.

We sold stock to investors and started trading publicly under the symbol FONR. You see, we believed in America. Like so many before us, we reached for the "Promise," the American Inventor's reward for all his years of toil and self-denial, the "Promise" granted by the U.S. Patent system. By 1980, our little FONAR company had introduced the world's first commercial MRI scanner. A new industry was born, an industry that should have inured to the benefit of the American people, but didn't. Today, 12 years later, out of seven MR] manufacturers with substantial installations, only two remain that are American. They are FONAR and General Electric. Of GE's two products, one was developed for them by the Japanese and is manufactured entirely in Japan.

FONAR's MRI scanner is one of three American scanners left out of a field of 21 marketed models from an invention that was entirely American to begin with and that was born out of the spirit and ingenuity of the American people.

Today the people of America are being denied the economic rewards of that invention. They are being denied all the employment from the great New AMERICAN MR] business enterprise that should have been reserved for the inventor but wasn't because of a patent system that failed America when it came to MRI. And today one more manufacturing enterprise that America gave the world is slipping out of our hands as Americans struggle against foreign competitors in their own domestic market to keep from being pushed out of that market WITH THE VERY PRODUCT THEY CREATED. Had FONAR's pioneering patent been upheld by the courts, it would have been different for America.

Additionally, scan prices to the public have remained unreasonably high (approximately \$1,000 per MRI scan) because the patent-holding company was not allowed to prosper by patent enforcement to the extent that expanded sales volume could engender lower scanner prices and lower scan fees.

What went wrong? How can it be that an invention worthy of the na-

Today, 123 years later, out

of seven MRI maniiifac-
tureis with substantial
Installations, only two
remaiiif that are Ameri-
can . . . FONAR and Gen-
eral Kectric. Of GE's two
products, one was devel-
oped for them by the Jiq>-
anese and is manu&c-
tuicd entiieily in Japan.

tion's highest honor in technology
from the President of the United
States and worthy of inclusion in
the National Inventors Hall of Fame
cannot secure a single royalty from
the U.S. Patent system?

In 1980. FONAR sold its first scan-
ners. By 1982. the Big Companies de-
cided they wanted in. Undeterred by
FONAR's basic patent. Johnson &
Johnson. G.E.. Siemens, Phillips
and. more recently. Hitachi. Toshiba
and Shimadzu all introduced MRI
products — all companies that weren't
there for the first 1 years of hard
work and toil that created the scan-
ner and got it to work.

The stresses on our little compa-
ny began in earnest. FONAR sud-
denly found itself competing with
six \$60 billion companies, each of
whom had marketing budgets that
were five times the budget of our
entire company. We believed.

LEFT: In 1982. FONAR introduced ils second
scanner the Beta 3000. a 3000-gauss
permanent-magnet scanner Ttie 100-ton
machine was joined a year later by the

lighter-weight 17-ton Beta 3000M, a water-cooled electromagnet scanner that could be installed in a semi-trailer for mobility — the first mobile MRI machine ABOVE: MR imaging, fast becoming the cornerstone of modern radiology, shows detail never shown before by diagnostic imaging.

though, that by applying the same diligence at invention that created the scanner, we would prevail against the giants even if we were small. We'd simply out-invent them!

Over the next few years, we generated more than 80 percent of all the innovations in the industry, racking up a portfolio of an additional 20 patents.

It didn't work. Each time we put a new innovation on our scanners, they copied it and had it on theirs in the better part of a year, thereby destroying our selling advantage. In the interim, their salesmen delayed our sales by saying their physicists had determined our new feature could not possibly work (not work, that is, until it was on their machines). FONAR innovations — oblique imaging, multi-angle oblique imaging, permanent magnets, iron core electromagnets, and the first MRI machine on wheels — all met the same fate.

At last I was beginning to confront the reality that an inventor with a new product in an arena populated by giant predators has only one prospect for survival, his patent.

If this fails, he has NO options.

Perhaps the most devastating, though, was the sales pilch of the Big Companies. It was so quaint. To each

of our prospects, they would say.
"You're not going to buy a \$ 1 . 5 million
product from that little company, are
you?They won't be here in five years."

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Here's iihen we learned Com-
mandment I of the Marketplace:
"A Uttle fellow shalt not Invent a
BIG product."
Confident, though, that the U.S.
Patent system would come to the
rescue In this lopsided struggle, we
filed suit in 1982 against the first
Infringer, Johnson & Johnson.
After a seven-week trial in 1985.
we were Jubilant. A Boston Jury had
found our patent to be valid and In-
fringed. WE WON! But our happi-
ness was short-lived. The Judge
overturned the Jury's verdict six
weeks later.
Despite this unhappy outcome
and the fact that little FONAR had
spent \$2.2 million In legal fees It
couldn't afford without a favorable
result. FONAR didn't pack It In. De-
termined, like the little engine that
could, that It was not going to sell
America out to the Japanese as Its
competitors had. or worse yet. sell
out on America's future hope for
this technology. FONAR pressed on.
FONAR didn't want to sell out on
America's Inventors either, particu-
larly the aspiring young mventors of
tomorrow. We knew America needs
them bally and we knew they need-
ed this victory as much as we did .

They would certainly benefit from a
win this size. More Import2mUy. we
recognized It weis the American peo-
ple that needed the win the most.

Was this fBllnre of tlie
U.S. Patent system a
rare accident In the
case of IOU, or was It
Calling iiloner
Inventots everywhere?
It Called Gordon Gould,
Inventor of the laser;
Lloyd Conover, Inventor
of tetracycline; Leonard
Greene, inventor of the
aircraft Bariy Stan
Warning device; and
Robert Keams, inventor
of the Intermittent
windshield wtper.

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Despite the absence of the expect-
ed help from our patents, we kept on
going, selling approximately 1 40 of
the \$1.5 million scanners worldwide
totaling approximately \$200 million
In sales over four yeau^. And we m-
stalled them all across the world, too;
from Japan to China, to Australia, to
India. In every country In Europe,
and all across the United States and
Mexico, a minor miracle considering
the lopsided advantage of the compe-
UUon. And Uttle FONAR made a
healthy contribution to America's
balance of trade, too.
"But where did the system go

wrong?" we asked. I had exercised the

"The strength or
weakness of a society
depends more on the
level of its spiritual life
than on its level of
industrialization. "

— Alexander Hamilton

system the way it was supposed to
work. I found it didn't work. You know,
this was the scientist in us again; al-
ways searching for the root cause.
Was this failure of the U.S. Pat-
ent system a rare accident in the
case of MRI. or was it falling pio-
neer inventors everywhere? It failed
Gordon Gould, inventor of the laser;
Lloyd Conover. Inventor of tetracy-
cline; Leonard Greene, inventor of
the aircraft Early Stall Warning de-
vice; and Robert Keams. inventor of
the intermittent windshield wiper.
We began to ask, "Was this fail-
ure of the U.S. Patent system to up-
hold its inventors a symptom of a
more widespread disease afflicting
our society?"

We wondered, as the data was
beginning to accumulate, if America
was still spiritually healthy. If it
wasn't, we found ourselves asking.
"Can a society, adrift of its spiritual
moorings, continue to discern the
Just from the unjust? Indeed, does
it even care? Can such a society be
kind to its inventors? Ergo, will it
continue to have inventors at all?"
Listen to the words of Alexander

Solzhenitsyn, former citizen of Communist Russia, who experienced first-

hand the oppression of atheism: The strength or weakness of a society depends more on the level of its spiritual life than on its level of industrialization. Neither a market economy nor even general abundance constitutes the crowning achievement of human life. If a nation's spiritual energies have been exhausted, it will not be saved from collapse by the most perfect government structure or by any individual development: a tree with a rotten core cannot stand. This is so because, of all the possible freedoms, the one that will inevitably come to the fore will be the freedom to be unscrupulous; that is the freedom that can be neither prevented nor anticipated by any law. It is an unfortunate fact that a pure social atmosphere cannot be legislated into being."

Today, I know that I am addressing a congregation of lawyers and that lawyers have accepted their burden to engage daily in the occupation of deciding what is right from what is wrong. At the very soul of their profession lies the eternal struggle, the struggle between the forces of good and the forces of evil. Moreover, so are the very roots of the Law itself. We remind ourselves that the Law descended down to us from Great Britain that plays so large a part in our contract and tort law and that provides the basis for much of our statutory law is called

the Common Law. the term Com-
mon Law a mere euphemism for
Biblical Law or the Law of the Bible.
In other words, the law we live
under traces all the way back to the
original Laws of Moses and the bib-
lical expansions of this Law. A law-

Can a society, adrift of
its spirital moorings,
continue to discern the
Just from the unjust?
Indeed, does it even
care? Can such a
society be Und to its
inventors? Ergo, will it
continue to have
Inventors at all?

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yer is never fer from the Laws of the
Bible when he comes to the end of a
case and wishes to decide right
from wrong Justly.

Thus, from where I sit. a lawyer
cannot fully understand the Law
unless he understands first the
Bible and where that Law originat-
ed. It seems to me that it would be
like me trying to build an MRI ma-
chine without first knowing how a
magnet worked.

I am comfortable, therefore, in
the company of lawyers offering my
hypothesis for what went wrong
since they are the one group that

I have at last made my j
greatest discovery of

all; namely, that the
highest purpose a man
can find for his life is to
serve the Will of God.
can understand. They trace the ori-
gin of their profession to the Bible.
We scientists, you know, must
always begin with a hypothesis. We
propose that what went wrong is
more than what went wrong in the
instance of the MRI patent case.
Rather, it is what has gone wrong
in all aspects of our society. It is
part of what has gone wrong in our
families, in our schools, in our
businesses, in our finances, and In
our governments.

As a working scientific hypothe-
sis, call it Hypothesis I. Part A. we
propose that what has gone wrong
is that We as a people have drift-
ed away from the legacy of Grace
left us by our Puritan forefathers.
We have so long profited mightily
from the legacy of their self-
discipline and devotion to the Al-
mighty and from the Great Awak-
enings that restored us when we
wandered away over the centuries,
that we have permitted our vanity
to let us dare believe that we have
done it by ourselves and that our
stunning string of successes in
technology, free government, war.
individual freedom and finances
came to us by dint of some superior
effort or intelligence.

We submit it as part of our hy-
pothesis, call it IB, that this is not,

in fact, what happened but that
these prosperings were Instead
the blessings of an Almighty God
Whom our forefathers had con-
sented of their own free will to
honor and to obey.

Now let me read to you from a
speech that characterizes our times
well. I think. Perhaps you can
guess the author.

"It is the duty of nations, as well
as of men. to owe their dependence
upon the overruling power of God; to
confess their sins and transgres-
sions in humble sorrow, yet with as-
sured hope that genuine repentance
will lead to mercy and pardon; and
to recognize the sublime truth, an-
nounced in Holy Scriptures and
proven by all history, that those na-
tions only are blessed whose God
is the Lord •

"We have been the recipients of
the choicest blessings of heaven. We
have been preserved, these many
years, in peace and prosperity. We
have grown in numbers, wealth and
power as no other nation has ever
grown; but we have forgotten God.
We have forgotten the gracious hand
which preserved us in peace, and
multiplied and enriched and
strengthened us; and we have vainly
imagined, in the deceitfulness of our
hearts, that all those blessings were
produced by some superior wisdom
and virtue of our own. Intoxicated
with unbroken success, we have be-
come too self-sufficient to feel the ne

cesslty of redeeming and preserving
grace, too proud to pray to the God
that made us.

"It behooves us. then, to humble
ourselves before the offended Power,
to confess our national sins, and to
pray for clemency and forgiveness."
'Lincoln here is citing the Scripture.
"Blessed Is the nation whose God is the
Lord" (Psalm 33: 1 21 and The wicked shall
be turned Into hell, and all the nations that
forget God" (Psalm 917) We have surely
been blessed as a nation commencing with
the miracle birth of our countr>' granting to
its citizens a measure of freedom unknown
through the 6.000 year history of the hu-
man race; and granted to our forefathers
because they stood Jast and obeyed the ad-
monition of Galatlans 5: 1 which directs us
to 'stand fast in the liberty wherewith
Christ hath made us free."

Certain as you were to recognize
America of the '90s in this writing be-
cause It so well characterizes our
times, this narrative was. in fact, writ-
ten by Abraham Lincoln in 1 863 when
our country' was in a similar despair.
Our MRI experience and these
above considerations have led us to
take another scientific step based on
the data. We propose it as Theorem I.
If America is to be rescued, she
must be rescued from the pulpit —
it is too late for the White House —
and the rescue must come soon
Americans must come to recog-
nize that America runs off its
spiritual batteries, not off its bank

accounts, and that when its
spiritual batteries are drained, its
bank accounts will be empty.
Finally, gentlemen, after a thrilling
and tortuous career, aspiring to and
pursuing what I believed to be noble
goals of the highest and most useful
purpose in a profession of science and
medicine which I indeed like very
much. I have at last made my greatest
discovery of all: namely, that the high-
est purpose a man can find for his
life is to serve the Will of God.

Americans must come
to recognize that Ameri-
ca runs off its spiritual
batteries, not off its
bank accounts, and that
when its spiritual batteries
are drained, its bank
accounts will be empty.
What I would like most to
achieve tonight would be to cause
those of you who have not reached
this realization ahead of me to come
to this understanding, without
wasting all the years I did stum-
bling toward this simple truth.
Only then can we all talk together
about a New Beginning for America.
As scientists, we are prone to work on
where the problem is and not where it
is not. This is where we see the prob-
lem for America today and where the
cure must come. Like most scientists,
we are often accused of being ahead
of our time. In this instance, though, I
fear that we are not. 3

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THE U.S. PATENT:

AMERICA'S FORGOTTEN ASSET

Its Historic Role in Wealth Generation

Our courts must recognize that they alone possess, by their control of patent enforcement, the power to restore or dismantle our economy. They must appreciate that all the laws needed to properly enforce U.S. patents are already in place having been repeatedly reaffirmed by two centuries of congressional legislation. All that is needed is enforcement by the courts of the laws that already exist. In principle, there is only one law granted inventors by Congress and only one law regarding America's prosperity that is in need of enforcement, namely the right of inventors to EXCLUDE others from making their invention for a limited period (Art. I, Sec. 8, U.S. Constitution). This is the right granted by Congress to every inventor by his patent in order to enable America's inventors to build businesses and thereby generate wealth for America (Congress' intent).

Our courts will have to demonstrate the same courage in upholding patents that they expect from the inventors who create them.

A Dr Raymond V Damadian, inventor of MR scanning, with history-making prototype named Indomitable, used to make the first MR image of a human on July 3, 1977 The machine is now on permanent display at the Smithsonian Institution's Hall of Medical Sciences

by RAYMOND V. DAMADIAN, M.D.

I ONCE THOUGHT that the Patent was one of many elements of our economy. I recently realized that

the Patent is not AN element of our economy but that It IS our economy . We as a people have forgotten the formative role it has played in building and maintaining a prosperous America. Indeed. I now believe that our current failure at patent enforcement is the root cause of the failing finances of our nation and of our rising rate of Joblessness. America was founded on the Patent (U.S. Constitution. Art. 1. Sec. 8).

The U.S. Patent was not Incidental to the American economic system as I had mistakenly construed from the current lack of respect accorded it by present-day infringers. It was formative. In fact, so fundamental Is it to the American economic system as It was structured by the Founding Fathers and as it operates today that our economic system is quite Incapable of compet-

I Ing in today's economic arena without It. Our recent efforts in the past four to five decades to operate our I economy without the Patent and to permit predators to disregard it and to prosper from unlawful Infringement is. in my opinion, largely responsible for the current financial distress of our beloved nation.

! It has taken the unrelenting erosion of our domestic ' market by foreign competitors to make us realize Just how basic the Patent is to the U.S. economy and to the successful operation of the free market system we practice In America — a free market that minimizes government intrusion and optimizes freedom for the individual. and a free market that is not encumbered with international trading companies and a consortium of national banks that operate as corporate partners.

The U.S. Patent did not come to its position as the cornerstone of the American economy by chance. It was deliberately set In Its place by the Founding Fathers.

I The Scriptures make It clear that witty inventions are

loniioM nil --i I in '^1 M«. >|IM,II <<MI,;

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"These Letters Patent are to Grant ... for the Term of SEVENTEEN YEARS . . . the RIGHT to EXCLUDE others from MAKING. USING and/or SELLING the said invention throughout the United States."

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God's blessing for an upright people: "I wisdom dwell with prudence, and find out knowledge of witty Inventions" (Proverbs 8:12)

The first US Patent system was set in place by George Washington (U.S. Patent Act. April 10. 1790). Eli Whitney's cotton gin (1794) was the first of the succession of great American inventions to emerge from the Patent Act . Morse's telegraph in 1840. Bell's telephone in 1876 and Ekilson's electric lamp in 1879 continued the succession of spectacular new business enterprises that utilized the new patent law to generate wealth for America.

Thereafter, the cycle of new inventions and NEW BUSINESSES spurred on by Washington's new law seemed to spiral upward endlessly creating for America the first airplane industry, the first radio industry, the first television industry, the first computer industry and countless other wealth -generating enterprises for America too numerous to cite.

Indeed, for a period spanning approximately 100 years from Morse's patent (1840). the cycle of inventions and the formation of new prosperous businesses continued unbroken, breaking down only after World War II. It

is in the same period that we began to observe a decline in the rate of formation of new manufacturing industries that could be likened to the magnitude of the aircraft industry, electric light industry, automotive industry, radio industry, television industry and computer industry.

While it would not be reasonable to attribute this slowdown in the rate of birth of new industries to an

argument that there were no new industries to invent, it would be reasonable to correlate the slowdown to the concurrent decline in patent enforcement and the failure of the system to provide inventors and their inventions the protections from predators that they needed to get their businesses started.

For an inventor, it is hard to imagine anything more tragic than to labor a decade to create a great new invention only to have all the fruits of his labor pirated away at the moment his invention demonstrates marketplace success. Few inventors will seek to repeat such an experience.

In 1991, 1,097 patent complaints were filed in our U.S. District Courts. Only 86 succeeded in getting to trial. The statistics were the same for 1990 and 1989.

Dr Damadian in the early days of FONAR Corporation conducting MRI experiments during the development of the medical industry's first commercial scanner. FONAR's QED 80,

The U.S. Patent converted inspired American inventions into successful business enterprises that have prospered America since her inception. Inventors drawn by the economic success of their predecessors continued the succession of spectacular inventions and the new business entities they spawned became an American tradition that multiplied American wealth and expanded individual freedom to a level unprecedented in human history.

So fundamental has the role of the Patent been as a predicate of wealth generation in our economy that I fear the central role it has played in generating wealth for our country has been forgotten. Moreover, the failure to recognize the pivotal position the Patent has played in the formation of new American enterprises is now operating to the detriment of our economy.

America's economy is predicated on an effective PATENT and the TEMPORARY MONOPOLY the Patent has granted our inventors over the years to build businesses from their inventions. Care must be taken not to judge the importance of the U.S. Patent to the American economy by the apparent absence of a significant role for the patent in the economies of our foreign competitors. Our foreign competitors may have economies that in the main operate outside the invention process and are not particularly invention-driven economies like ours. They may indeed exploit our inventions in conjunction with low-interest, long-term government loans (not available, to American companies) to achieve economic leverage within the American market.

So pivotal is the Patent to our economy that to dismantle the Patent is to dismantle our economy. Our record of recent years has not been good. In 1991, 1,097 patent complaints were filed in U.S. District Courts. Only 86 succeeded in getting to trial. The statistics were the same for 1990 and 1989. Since a trial is required to grant an inventor the injunction he needs to EXCLUDE competitors (the LIMITED MONOPOLY right Congress provided him in his patent), these statistics mean that when an inventor files a complaint regarding his patent,

no

he has less than a 7.8 chance out of a 100 of having his right to exclude others enforced. This simply was not the deal the Inventor made with our government

when he disclosed his invention nor is it the deal our government (Congress) expected him to get.

In return for disclosing his invention to the public.

Congress assured him that a patent would issue in his name that would give him the right to exclude others from making his invention for a limited time.

Moreover, of the 86 patents that came to trial in 1991, it is certain that not all were granted excluding injunctions. Indeed, a significant number of patentees no doubt lost at trial. In other words, exclusionary injunctions were granted patentees in substantially less than 7.8 out of 100 cases. If patentees won in only half of the 86 trial cases (a reasonable guess), then only 3.9 out of 100 patentees received exclusionary injunctions' and therefore received the patent-holders right to exclude others from making his invention.

In the 1890s, Koreklyo Takahashi, a Japanese official was sent to the United States. After his visit he reported, "We have looked to see what nations are the greatest, so that we can be like them. We asked ourselves what is it that makes the United States such a great nation? We investigated and found that it was patents, and we will have patents," (Congressional Record at 901, January 20, 1962),

Mr. Takahashi correctly identified the U.S. patent (and its proper enforcement) as the root of American prosperity.

In 1891, the Honorable O.H. Piatt, U.S. Senator from Connecticut, at the Centennial Celebration of the first 100 years of the US, Patent system, stated. "When our fathers asserted constitutional authority for Congress to promote the useful arts, by granting to inventors for a limited time the exclusive control of their

- The need to assume that 3.9 percent of filed patent complaints ended (in exclusionary Injunctions that granted the patentee's right to a limited monopoly was made necessary by the fact

that the Statistics Division of the Administrative Offices of the Federal Courts, the entity with the responsibility to compile data for U.S. courts does not collect or compile statistics of U.S. Patent cases. Indeed, after Inquiring in the appropriate Congressional committees and throughout the Administration of the Judiciary. I was Informed that many people have searched for and want to know the precise data on patent enforcement in our country but that the statistics are not being compiled anywhere in government. The number of patent cases that were filed with the U.S. courts from 1989 to 1991 (approximately 1100 per year) and the number of these that came to trial (approximately 86 per year) was all the data that was available

There is no compilation of the nature of the patent cases brought to court, their subject matter and their final disposition - In the interest of strengthening our Patent system, I would suggest that the Statistics Division of the Administrative Offices for the Federal Courts begin compiling these statistics immediately so that when we begin to examine our record of patent enforcement as a nation, we can proceed from real data.

Pronouncements on our patent system that issue from time to time from various quarters are otherwise necessarily anecdotal in nature and lack a solid foundation of data, since the actual court data on the annual disposition of all patent cases does not exist (or at least is not readily available). The data is essential to our economic well-being, since the limited data that is available suggests that patentees are indeed faring very poorly in the system.

inventions, they build better than they knew. . . .
There never yet was a true invention from which the public did not reap infinitely greater pecuniary reward than the inventor."

The celebrants of the first 100 years of the Patent System "were aware of the contribution which the Patent had made to the tremendous growth of the economy since the first Patent Act in 1790" (Donald Banner. Centennial Proceedings of the U.S. Patent System 1891 piv Clark Boardman. N.Y.. N.Y.)

Mark Twain put it this way. "A country without a
Patent Office and good Patent Laws is Just a crab and

"There never yet was a true invention I
from which the public did not reap
Infinitely greater pecuniary reward
I than the inventor."

—Senator O.H. FlaU (Caimectlcac). IMI
can't travel anyway but sideways and backways,"
There can be no doubt that the US, Patent, when
adequately enforced, has been the specific cause of
hundreds of millions of new Jobs over the centuries
since it was created. It has. in fact, been the prime
mover of our manufacturing economy.

Great business enterprises such as AT&T. Dow
Chemical. Kodak. International Harvester. Goodyear and
IBM. to name Just a few. and the many millions of Jobs
they created were all built on patents, the patents of Bell,
Eastman. McCormick. Goodyear. Dow and Hollerith. We
would not have had the legacy of these companies were It
not for the Patent. It is safe to say. as the health of the
U.S. Patent has gone, so has gone our economy. As the
British publication. Iron Industry Gazette, observed at
the turn of the century. "The only thing that has enabled
manufacturers to make so wonderful a progress In the
United States is its patent system."

Mr. Fessenden in his work on patents published In
1821 wrote. "The invention is the work of his hands
and the offspring of his intellect; and after he is allowed
a temporary monopoly, becomes at the expiration of
the patent a valuable donation to society." Sir Ed-
ward Coke wrote. "The inventor bringeth to the com-
monwealth a new manufacture by his invention, for
this reason he should have the patent privilege for his
reward (and the encouragement of others in the
Uke) for a convenient time."

At the moment, the U.S. Patent is not doing well.
Neither is the economy. To paraphrase Mark Twain,
when the Patent Laws are non-gewd. as they are now.
the economy travels sideways and backways.

Gordon Gould. National Inventors Hall of Fame inductee for the laser, had to dedicate most of his adult life to a 25-year court battle to get his laser patent upheld; Robert Keams had to invest 25 years of his life to get his intermittent windshield-wiper patents enforced; Lloyd Conover. a recent inductee into the National Inventors Hall of Fame, endured 25 years of courtroom frustration

III

Kiuly StaU Warmiia fx-
room Wiirtart- aii> '•
iiir jioM ii! i>,utiii sysK-iii'Howmany
NEW ENTERPRISES have h-M1 lost mil
nia.li '>i Mit,i>iriin k 'At-ic djut uxUv. iiicy
vwiuki hii\ f less than eight chances out of 100
that their patents would be enforced. That is
the reality and (hat's the deal the American people
are getting today.

Remove Tilger that the probability is high that
the current process itself may require ;) 0 vi .'
commitment of dedicated effort and sell dental in-
produce a network; Invention, especially in the in-
novation is of the pioneering nature of the innovators
that built America Who will generate these inventions
(and they are more numerous in number than ever) for
the future America and for our children? Can we really
expect someone to make that commitment only to
have the invention appropriated by a waiting predator
at the instant It becomes financially fruitful?

Indeed I suggest that the individual inventor who
spontaneously rises out of the stagnation and spirit of
the American [workforce] creates a new allied invention. an

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To Promote the Progress of Science and
useful Arts by securing for limited
Times to Authors and Inventors the
exclusive Right to their respective
Writings and Discoveries;
United States (Constitution. Article I, Section 8

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NEW BUSINESS ENTERPRISES thai have hirswy) Ariicrta
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When patents cannot be trusted, inventors And they
cannot acquire the finances to bej;ln their businesses.
Investors and banlcers (Ind no basis for risking their
capital on new enterprises whose patents will not be
upheld Ijy the courts. The inventor's patent is the only

asset the inventor has to contribute to a new business.
The U.S. Patent, the engine that has fueled the
American Enterprise system since its inception, seems
to be broken. With the failure of the Patent to engender
successful economic enterprises, gifted students seek
careers outside of science and engineering and the
technological manpower to supply America's inventions

America's inventors would say, "Give
us back the Patent and we will give
you back the American economy."
for the future declines.

Where is the difficulty? Why can't the U.S. Patent
engineer NEW BUSINESSES for America any longer?
Why can't they provide the basis for NEW
MANUFACTURING ENTERPRISES the way they once
did. and without which America sinks irreversibly into
economic decline?

When domestic enforcement of patents fails, the door
is flung wide open to foreign competition. This is what
happened in MRI. America's asset is its innovative tal-
ent. At the very least, if she is to prevail in the competi-
tion in her own market, she should be entitled to fair
protection for her inventions in her own market.

The answer lies in the courts. They are not adequately
enforcing the patents of America's inventors. They seem
to not understand why they need to. Indeed, it is only with
the faintest understanding that they comprehend the pur-
pose and intent of the U.S. Patent, what Congress intend-
ed the Patent to achieve and why it is vital to America.
When the inventor fails to enforce his patent, he is the
least of the losers. The BIG loser is the American people.
They lose a NEW INDUSTRY that would have provided
Americans hundreds of thousands of new manufactur-
ing jobs and new jobs in feeder industries. These jobs are
lost to foreign competitors as they take over the new
product and new industry as is currently happening in

MRI. A patent 'hat is not upheld Is all an aspiring preda
tor needs to clear his path. A few scientists and engineers
(complete with the inventor's software and circuit sche-
matics! hired away from the inventor's company by the
giant predator's higher salaries, which he couldn't do if
patents were enforceable, fmlsh the Job. Moreover, tech-
nology Is so efficient today that all the predator needs to
know is that the inventor has gotten It to work. He can get
almost any competent engineer to work it up after that.
The Inventor has done the most Important part for him.
He has removed the flnancial risk that it might not work.
Tragic as it is for the Inventor to be denied his patent
after 1 ? or more years of toil on his Invention . he is not
the principal victim of the injustice. The American
people are. It Is they who are denied the benefit of the

NEW BUSINESS that his patent would have built and
the multitude of NEW JOBS II would have created. Para-
phrasing Senator Plall. The public falls to reap the Infi-
nitely greater pecuniary reward of the Invention "
Without patents that work, great NEW BUSINESSES
in the tradition of AT&T. Kodak. International Harvester.
Goodyear. IBM and Wright Aircraft, etc cannot be creat-
ed. These companies were speclllly built on the pat-
entsof Bell. Eastman. McCormlck. Goodyear. Hollerith
and the Wright Brothers, etc. and would not have come
into belngand prospered without their patents. Great
manufacturing enlerpriscs like these, once the hallmark
of American Industry, are no longer being created. They
can't be. American inventors no longer can exercise the
TEMPORARY MONOPOLY rights of the Patent to ex-
clude others and to form these enterprises as did Bell.
Eastman. Goodyear. Hollerith and the Wright Brothers.
The courts are not upholding this right. America's In-
ventors want to provide the employment their NEW BUSI-
NESSES would create lor the American people. But they
can't. Without patents that work, inventors are unable to
generate businesses and the American people suffer,
cheated as it were of the employment these businesses
would have provided them. Indeed. America's inventors

would say. "Give us back the Patent and we will give you back the American economy."

Few Americans realize that the great majority of new Jobs created for the public are provided by small companies with fewer than 500 employees. From 1981 to 1988. companies with fewer than 500 employees contributed 11.7 million newjobs to the economy. In this period. America's small companies generated two-thirds of all new employment. From 1980 to 1982. the Fortune 500 companies as a group lost 1.7 millionjobs. The data is clear. Unless NEW JOB-GENERATING COMPANIES can emerge through patent enforcement, employment can only continue itscurrent decline. Only enforced patents and the TEMPORARY MONOPOLIES they provide can

Big established companies . . . have grown less competitive with time principally because their innovative powers have atrophied from over-reliance on their predatory powers. ensure the emergence of these companies and their prospering. Our courts cannot lack the resolve to uphold the Patent and grant our Inventors their rights to TEMPORARY MONOPOLIES on their Inventions. It was the inventor, after all. who brought the new knowledge of the invention into existence, not the predator who insists in court that he will be banned if he can no longer continue his illegal conduct of Infringement.

When one company creates an Invention and the patent system doesn't uphold it. seven companies (as in the case of MRI) strive with each other to divide the one business in seven ways. If the patent were upheld, each of the entities lacking the patent would be forced

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to Invent their own products, obtain their own patents,
and build their own NEW BUSINESSES around their
patents Instead of depending on a business strategy
that relies on pirating other peoples' patents.

The outcome would be SEVEN NEW BUSINESSES
generating employment for the American people Instead
of seven companies fighting over ONE business. Herein
lies the elementary Intelligence of the U.S. Patent system
as It Is supposed to work.

Big established companies would be forced to Invest In
R&D for the benefit of America Instead of lieing able to rely
solely on their predatory muscle to obtain Inventions.
They would either Invent themselves or pay the price in
marketplace competition. They would be forced to reinvest
their revenues In research and we would cease hearing the
Investment community's refrain that our companies In-
vest Inadequately in R&D. The competitive demand on
them would make them far more effective at combatting
foreign competition In our markets than they've proven to
be of late. They have grown less competitive with time prin-
cipally because their Innovative powers have atrophied
from over-rells since on their predatory powers.
This Is why the U.S. Patent system has worked so
well In the past when we have allowed it to. why Ameri-
cans have had the benellt of so many enormously suc-
cessful business enterprises and. In a practical sense,
why we have prospered as a nation.

The cover of every US Patent received by an American
Inventor contains the following declaration: These Letters
Patent are to Grant ... for the Term of SEVENTEEN
YEAI« ... the RIGHT to EXCLUDE others from MAKING.
USING and/or SELLING the said invenUon throughout
the United States." The U.S. Patent and Trademark Office
is here declaring To All To Whom These Presents Shall
Come" the intent of Congress regarding the U.S. PalenI as
first set forth In the U.S. Constitution, ArUde 1, Section 8
which was enacted by Congress on March 4, 1 789.

Indeed, so great was the Importance of the U.S. Patent to America's economic well being Inthemlndsofthe Founding Fathers that II was singled out by them as the only commercial activity warranting specific Inclusion in the U.S. Constitution. Nor did Congress in enacting the U.S. Patent enact a right to ROYALTY. They enacted a RIGHT to E:XCLUDE others from practicing the InvenUon. Article I. Section 8 provided that authority . . . "to promote the progress of science and useful arts, by securing for limited times to authors and Inventors the exclusive rights to their respective writings and discoveries. "

President George Washington deemed the Patent of such great Importance to the American people that he took It upon himself to shepherd the llrst U.S. Patent Act through Congress In 1 790. pleaded for Its passage, and signed it Into Law himself on April 10 the same year. 1 assume that he too was concerned that, despite America's new-found military and political independence, there was still the prospect of continued economic domination of the new American Republic by European manufacturers. He was all too well aware of the Import taxes Imposed by Townshend and the British Parliament on many

A In 1989. Dr Damadian was mductlea mio Ihe National Inventors Hall of Fame, joining ttie ranks ot Ttiomas Alva Edison. Alexander Gratiam Bell, the Wrigtit Brothers, and Henry Ford The Lincoln Edison Medal (below), awarded to those inducted into the Hall, acknowledges the importance ot the U.S. Patent System with a quotatton by Abraham Lincoln: "The Patent System added the luel ot interest to the tire ot genius,"

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manufactured products in addition to the tea that caused the Boston Tea Party. "Indeed, laws were enacted by England prohibiting every species of manufactures in the colonies. Lord Chatham said. 'I would not allow the colonists to make so much as a hobnail for

themselves' " (Cyrus Anderson In The Making of America
John D. Morris and Co.. 1905). America needed to develop
its own independent Industrial base. Washington installed
the U.S. Patent. The nascent American Industries he
expected to emerge needed the Patent and Its power to
EXCLUDE others to protect them, that need is the same
today. Indeed, while foreign countries operate national
trading companies and government banks that finance
their Industries at low Interest rates. American enterprises
must survive entirely on their own resources, with in-

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genuity and Innovation being regarded as the chief asset
of the American system of free enterprise.
Washington and Congress provided the U.S. Patent as
the tool for the commercialization of America's Inven-
tions. Properly enforced government financing and the
trading companies of foreign countries were unnecessary
as long as there were patents. American businesses could
resist the largesse of government financing. Effective pat-
ents could attract all the capital needed for commercializa-
tion. And with the right to exclude others enforced, future
profits could be large enough to justify almost any magni-
tude of R*(D investment in a new invention.

Stripped of the Patent, American companies can't
compete. They lose the principal means America has
been provided to achieve successful commercializa-
tion of her inventions.

So degraded is the current comprehension of the
U.S. Patent today that most have come to understand
It as a patent holder's right to a ROYALTY. The royalty.
In fact, is far afield of the original purpose and Intent of
the U.S. Patent as envisioned by the Founding Fathers
and far afield of the succeeding U.S. Patent Acts enact-
ed by Congress over the centuries.

This was not at all the purpose of the Letters Patent

they enacted for inventors and they would be sorely
grieved to learn that this is what it has become. They
said what they wanted it to be: "the exclusive rights to

their respective writings and discoveries for 'limited
times' (Article I, Section 8, U.S. Constitution) and "the
Right to EXCLUDE others from MAKING, USING OR
SELLING the said Invention for SEVENTEEN YEARS."
The Founding Fathers would be sorely grieved. They
didn't enact a Royalty; they enacted a Temporary Mon-
opoly. Their purpose was not to enrich the inventor
through a Royalty: their purpose was to enrich the
American people by the formation of NEW BUSINESS-
ES, NEW INDUSTRIES and NEW EMPLOYMENT
through the use of the Patents power to EXCLUDE. A
Royalty for the Inventor does not accomplish this pur-
pose. A MONOPOLY that EXCLUDES competitors for a
LIMITED PERIOD does. In granting a Monopoly for a
Temporary Period. Congress provided the U.S. Patent
holder a "Protected Market" for a limited period of time.
In granting a Monopoly for a Limited Period of time.
Congress provided U.S. Patent holders the means to at-
tract capital and achieve the "Protected Markets" they
needed to shield their fledgling businesses from preda-
tors, particularly giant predators, for long enough to
get them established and prosper the American people.
The story of AT&T and Alexander Graham Bell is an
excellent example. Soon after Bell used his invention to
begin his young, new telephone company, he was over-
whelmed by competition from the communication giant
of his time. Western Union Telegraph, Just as FONAR

My Recommendations for Patent Law Reform

I would recommend that for patents
specifically determined by the lower
court to qualify as "Pioneer Patents"
that a "Pioneer Patent" must be heard
by the US Supreme Court if the pat-
entee so requests The participation of

the US Supreme Court was required in order to uphold both Alexander Bell's telephone patent and Samuel Morse's telegraph patent, in both cases against giant companies.

The US Supreme Court for all practical purposes does not take patent cases today. Today's inventors consequently do not have the same judicial relief available to them that rescued the telephone industry for Bell and the telegraph industry for Morse. In other

I would recommend that for patents specifically determined by the lower court to qualify as "Pioneer Patents" that a "Pioneer Patent" must be heard by the U.S. Supreme Court if the patentee so requests.

words, were Bell and Morse having their cases tried today, without access to the Supreme Court, they would fail and their industries would be lost to America in the same way as MRI was lost to America when today's Supreme Court would not hear the MRI patent case.

It would seem from the experience of Bell and of Morse that, in the instance of a "Pioneer Patent," where a major new industry is being founded, the power and prestige of the U.S. Supreme Court may be required to override the host of giant predators that seek to appropriate the new invention,

Regarding the current contemplated changes in the US Patent Law" aimed at accommodating foreign countries who sell in our market and complain that our patent laws make it inconvenient for them to sell American Inventions here. I would not change the laws to make infringement easier.

The First-to-File provision they seek and publication of the patentee's application after 18 months are particularly harmful to the INDIVIDUAL INVENTOR, the goose that has "laid our golden egg." He will be the "First-to-Invent" as always, but his right to patent will be

The First-to-File provision
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1 of the patentee's
application after 1 8
1 months are particularly
1 harmful to the
INDIVIDUAL INVENTOR,
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our golden egg."
largely usurped by giant companies, especially Japanese, who will paper the walls of the US Patent Office with applications at the first rumor of any inventor's breakthrough or, for that matter, prior to any concrete construction of any invention by an inventor.
The INDIVIDUAL INVENTOR built America. It is not in the public interest to make things even worse than they already are for him in order to accommodate foreign competitors who express dissatisfaction over our laws that limit their ability to infringe our INVENTORS' claims.

•Panel (CommeC« Depaflment Advisory Comn^lssion)
Urges Changing U S PalenI Law to FirsMo-File Way
Used World-Wide (The Wall Str60l Journal. Sopt 14.

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struggled. Bell struggled in vain searching for business strategies that would allow him to circumvent the crushing force of the marketplace giant. Western Union. He finally reported to his family that he was closing down the company. His wife's father prevailed on him not to close and give him an opportunity to get the business running. His father-in-law chose as his first priority the attempt to enforce Bell's patent. His patent was eventually upheld through his father-in-law's effort. Bell's right to a Limited Monopoly was enforced and Western Union was EXCLUDED from the telephone business.

Thereafter, uncompromised by competition. Bell and his company enjoyed spiraling profits from his "protected market" which he invested and reinvested in R&D for more products, turning AT&T into one of the most prosperous companies in American history.

The limited monopoly of Bell's patent, enforced as Congress intended it to be enforced, created a legacy for America that is unsurpassed in the way it has prospered America with employment and new inventions for more than 11 decades and which would not have occurred except for the upholding by the courts of Bells Right to Exclude others from making his invention. The AT&T story is an example of what the Limited Monopoly of the Patent achieves for America when the Right to Exclude others is enforced the way it's supposed to be.

While infringing predators like to argue in court, once they have been apprehended by patent holders, that the patent holder seeks a monopoly that the court should grant only after the gravest of deliberations, this is an oft-repeated mischaracterization of the Patent by

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So degraded is the current comprehension of the U.S. Patent today that most have come to understand it as a patent holder's right to a ROYALTY [The Founding Fathers] didn't enact a Royalty; they enacted a TEMPORARY MONOPOLY. Their purpose was not to enrich the inventor through a Royalty; their purpose was to enrich the American people by the formation of NEW BUSINESSES. NEW INDUSTRIES and NEW EMPLOYMENT through the use of the Patent's power to EXCLUDE.

defendant infringers. The Patent is not a monopoly; it is a Temporary Monopoly ("Protected Market") granted for a Limited Period of Time only. i.e. long enough for the U.S. Patent holder to establish his fledgling business before being overrun by big companies and long enough to generate a successful NEW ENTERPRISE for the benefit of the American people.

Moreover, the Patent is new knowledge that did not exist before. It is not an existing business activity that is being granted the Temporary Monopoly. Rather, it is a NEW ENTERPRISE that, up to the point of invention, did not exist. Society was operating without it. The patent is setting aside this new knowledge to be operated as a NEW BUSINESS by its creator for a limited period of time. But the courts have failed. Lacking the resolve to enforce the U.S. Patent holder's right to EXCLUDE others and his right to a TEMPORARY MONOPOLY, they have delivered him a "FORCED ROYALTY" Instead by awarding him only damages for prior infringement but denying him the right to exclude. This inequity especially

characterizes infringers who succeed in protracting litigation until the life of the patent expires. The patentee's right to exclude is lost, and the infringer escapes a ban on the production of his infringing products. The American people have been denied the NEW BUSINESS and NEW EMPLOYMENT he would have created for them had his right to EXCLUDE been upheld.

It seems that when a tiny inventor confronts a giant predator in court after many years of active infringement have passed (and it is inevitable that many years of infringement will have passed before an inventor can get an infringing giant into court), the courts lack the resolve to uphold the Patent and exclude the multi-billion dollar predator from practicing the invention, even when it has been proven that his profits were not legally obtained. The court is more comfortable assessing a damage ("forced royalty") against the infringer than upholding

"A Medical Inventor Beats a Goliath in Court." announced the December 16, 1985 issue of Business Week. A subhead predicted. "The inventor who topped the X-ray will soon see better days / The prophecy failed to anticipate the judge's decision a few weeks later to overrule the jury's decision in the patent-infringement case.

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the Temporary Monopoly Congress Intended by the patent to benefit the American people. By awarding a royalty the court, in effect, grants the inventor a consolation prize, rewards the predator for his predation and prevents the American people from obtaining a NEW BUSINESS and the NEW EMPLOYMENT it creates. It goes without saying that America's inventors will accept royalties as an alternative to getting nothing, but that is not what they want. They would much prefer to use their inventions to create NEW BUSINESS ENTERPRISES to benefit their fellow Americans.

"Give us back the patent." America's inventors would

say, "and we'll give you back the American economy."
In the end, our courts will have to summon the same courage the courts of earlier generations exhibited when they upheld the Limited Monopolies of the inventors that formed AT&T, Kodak, International Harvester, Goodyear, IBM and many others for the benefit of the American people: the same courage that they expect our inventors to demonstrate when they initiate new Inventions, overcome the powerful vested interests that inevitably resist these inventions, and risk their family finances to strike out on their own and establish new businesses.

If America is to recover her ability to form successful new business enterprises, we will need courageous courts to uphold the Limited Monopolies of Patents that Congress provided.

The American system of free enterprise is absolutely predicated on the Temporary Monopolies ("Protected Markets") available to patent holders. I seriously doubt we can survive as a manufacturing nation without this protection our inventors and their enterprises need and deserve. The Patent is central to our manufacturing economy and has been the principal instrument of wealth generation in the American system for over two centuries. We cannot survive the current erosion of its power and keep our system.

In other realms, our courts have exhibited great courage in upholding Congressional mandates such as they have in the areas of Civil and Human Rights. Why should they be reticent in upholding Congress' mandate of the RIGHT to EXCLUDE others from practicing patented inventions when these rights are so vital to restoring prosperity to our companies and to our nation. George Washington set the U.S. Patent in place as the cornerstone of our economy. Our economy, which grew up around it, assumes an effective patent system and indeed depends on this provision for success. Re-

move it and our economy, centered on innovation the way It is. comes tumbling down In the onslaught of predatory foreign competitors eager to commercially exploit our inventions.

In other words, our manufacturing economy has been structured around the assumption that U.S. Patents work and that they will successfully insure America's economy a continuing stream of SUCCESSFUL NEW BUSINESS enterprises— created by the LIMITED MONOPOLY rights that patents grant.

The corollary to this Is. "When Our Patents Do Not I Work. Our Economy Doesn't Work." This. I now believe. Is the principal reason our economy isn't working well ! today. While this is a discouraging report, the flip side Is optimistic. If we want our economy to work, all we need do Is make our PATENTS WORK. Restore to them the power to create the same TEMPORARY MONOPOLY BUSINESSES that built America.

, Trade Deficits

I Successful enforcement of the American patent I holder's right to EXCLUDE others would solve another j major problem. Trade deficits that continue to erode our economy and originate In good measure from foreign enterprises selling American inventions Into our i domestic markets would be efficiently curbed without ! resorting to protective tariffs and the retaliatory trade ' wars they risk. Foreign infringers would be excluded from selling in our market once the Exclusionary rights I of patents were enforced.

j Enforcement of the Temporary Monopoly rights of patents simultaneously solves two other major problems in American enterprise today; the problem of capital formation and the problem of commercialization of new products.

Capital Formation

A major difficulty for American business owners to-

day is access to capital. The cost of capital in America is the highest in the world — and there is no such thing as "patient capital."

The problem of capital is instantly solved if patents are enforced. The risk today for an investor is too great on a start-up company with a new idea. Knowing that the courts do not generally enforce the rights of patent holders to exclude competitors. Investors properly fear that they run the risk that their investment capital may serve only to provide the new company capital to refine its product for the benefit of some large predator.

It goes without saying that if patents instead enjoyed the general reputation that they were enforced rather than ignored and that the companies that held them could genuinely count on the patent's exclusive right to MAKE, USE and SELL their invention for a period of 17 years, the flow of capital into patent-based companies would be limitless. Capital, in fact, would come from all corners of the globe in pursuit of inventors who possessed rights to sell their inventions without competition into the American market for 17 years.
Commercialization

A principal concern of American business is not that American inventiveness is waning, but that a problem exists in the commercialization step of converting inventions into successful business enterprises.

All too frequently, our inventions are commercialized by a foreign business enterprise who then sells the American invention into the American market instead of the American who invented it.

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I believe this problem, too, would readily be solved by patents that worked. The principal impedance to commercialization by inventors is capital availability. The capital that the proper enforcement of Patent Exclusionary rights would attract would enable INDIVIDUAL INVENTORS to commercialize their inventions

which they very much want to do. While the commercialization of the InvenUons of large corporations face the additional impedance of competing corporate priorities. I believe the improved capital formation resulting from enforced patents would help the commercialization of new products in large corporations as well.

Unfair Trade Practices and Industrial Espionage
Proper enforcement of patents will cure another ill in today s industry. Many businesses today, particularly high-tech enterprises, are plagued with the unceasing theft of their industrial trade secrets.

Competitors bribe employees to supply them trade secrets such as product designs and engineering drawings that were paid for with corporate R&D funds. Employees are lured away by competitors specifically to acquire proprietary secrets including software tapes and drawings, or employees willfully copy the parent company's engineering drawings and software source code to set themselves up in competing businesses. Such forces that steal from the capital investments of our companies seriously erode the ability of America's companies to prosper. Malignant forces of this kind, particularly pervasive in America's high-tech enterprises, steal from their R&D capital and seriously undermine the competitive edge their R&D investments were designed to achieve. Proper enforcement of the Exclusionary Rights of patents would solve this problem. Competitors would not be allowed to make the patented product and self-serving employees would have nowhere to sell them. With manufacturing as the central force in our economy, the Patent and the Limited Monopoly it makes available becomes the Prime Mover. If the rights to form LIMITED MONOPOLIES, and not "forced Royalties." are upheld as Congress and George Washington intended, our inventors will have the means to create new manufacturing enterprises that will prosper the nation. If they are not. we will vanish as a manufacturing economy and ultimately as a nation.

I have puzzled over how, through the last 40 or so years in particular, America's courts have lost their ability to protect inventors by granting them the TEMPORARY MONOPOLIES provided by patents. I have concluded that the erosion of the enforcement of the Limited Monopoly rights of patents was in all likelihood a casualty of the West's post-war experiment with communism and the challenges to the rights of property that this ideology promoted during the years it was globally active. I imagine that a court system and a public, made to feel guilty about its ownership of property by the communist ideology, found itself too uncomfortable to grant our inventors the limited monopolies previous generations had granted them. All the same, the experiment

A Dr Raymond Damadian and his wife, Donna, at the 1989 Presidential Inaugural Ball Dr Damadian credits much of his achievement in inventing MR scanning to possible so the gentle and quiet strength of Donna who "kept the our econo- home fires burning" during Dr Damadian's long, often discouraging struggle to see his dream machine "yep" become reality commence its recovery.

I imagine also that coming out of the Second World War, America's large companies had nothing to fear from foreign competition — most of their competitors were economically crippled. Only small emerging domestic companies and their patents posed a competitive threat to well established companies. It was natural enough for big companies to not supply enthusiastic support for America's Patent. Their legal staffs swelled and with them the cost of litigating patent enforcements sailed beyond the reach of most patent holders. However, today there is a new reality. Foreign competitors are back in force and patents and their RIGHT TO EXCLUDE are imperiled. America's giants are being hammered and there is no patent, even for them, to offset the unfair trade practices of their foreign competitors.

In addition to our courts properly enforcing INVENTORS' patent rights by granting them the TEMPORARY MONOPOLIES they are entitled to and that they need to form successful BUSINESSES, there is another measure that should be considered.

It is not uncommon for the litigation of an INVENTOR'S patent. PIONEER PATENTS in particular, to be protracted for 1 or more years [Morse's telegraph— 24 years; Conover's Tetracycline — 24 years; Gould's laser— 25 years; and Keam's Intermittent Windshield Wiper — 25 years (currently a \$2 billion/year industry). Dammallan's MRI— 10 years to date]. In the case of Morse. Conover. Gould and Keams. litigation continued for more than 20 years before being successfully resolved. Indeed, well-financed Infringers fully appreciate the benefits of protracting patent litigation, first in terms of

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exhausting the patentee's finances for litigation and secondly, in running out the clock on his 17-year Exclusionary Period. For example. If the infringer can make the litigation last 17 years, the patent-holders 17 year right to exclude him has been exhausted and the Infringer will have enjoyed a full 17 years of Illegal prac-

Congress can and should amend the patent laws to extend patent life in every case where infringement is found so that the patent term extends for a term of 17 years beginning with the date the court finds an infringement has occurred. This simple expedient would eliminate any incentive to Infringe and would, in effect, give competitors, including foreign intruders, an incentive to scrupulously honor United States patents.

ticeof the invention. If the litigation lasts 10 years, then the Infringer has only seven years of exclusion to face. He may face some damages if the inventor can ever maintain the finances to conclude the litigation but the courts will, in actuality, rarely set them anywhere near equal to the profits the infringer illegally reaped practicing the invention. For example, world-wide sales of intermittent windshield wipers by the automakers have been approximately \$1 .9 billion annually since 1969. or approximately \$43.7 billion total since they were first instEdled. Dr. Keams" total damage award as the inventor of these wipers after 25 years of litigation has been \$2 1 million to date, less than one-one thousandth of what he and his NEW AMERICAN windshield-wiper BUSINESS would have generated for America had he been granted the 17-year right to exclude that his patent provided. From the infringer's point of view. \$43.7 billion in revenues for a \$2! million investment is an excellent return on investment by any standard and more them enough Incentive for him to continue an aggressive policy of infringement.

There is a very simple remedy Congress could incorporate into the Patent Laws. This measure would eliminate any incentive to infringe on the part of established businesses and would Insure that the INVENTOR receives the full measure of EXCLUSIONARY RIGHTS granted by the patent. Congress can and should amend the patent laws to extend patent life in every case where infringement is found so that the patent term extends for a term of 1 7 years beginning with the date the court finds an infringement has occurred.

This simple expedient would eliminate any incentive to infringe and would. In fact, give competitors, including foreign intruders, an incentive to scrupulously honor United States patents. At the same time, the inventor would receive what Congress originally Intended —

an unbroken 1 7-year period to practice his Invention

without competition and to build his business.

The Patent and its RIGHT to EXCLUDE MUST BE ENFORCED. It is the basis of our economy and consequently of our very existence. When the Patent is restored and NEW COMPANIES can be formed because of it. America's economy will be restored. Until the Patent is restored, our economy cannot be restored. The functioning of our economy as it was originally structured was predicated on a functioning patent system. Eighty-six patents coming to trial (and fewer securing enforcement) out of 1097 patent complaints is not a functioning patent system. The MRI patent story is but one example of an ailing system. The laser patent, the tetracycline patent, the intermittent windshield wiper patent and the wind-shear patent are other examples of a system that is failing in its purpose to serve the public need. When the patent is restored. America will finally be able to capitalize, for the benefit of its people, on the vast sums the American taxpayer has invested in research over the past decades.*

These developments wait only on the assurance that the incentives and protections patents provide inventors truly will protect them from the piracy of their inventions once commercial success has been achieved.

The jobs of Americans and the health of the U.S. Patent are tied together. Put bluntly, when America's patents do not work, Americans lose their jobs.

Patents built America. America doesn't WORK without the Patent. It is like a crab moving backwards and sideways as Mark Twain says. The jobs of Americans and the health of the U.S. Patent are tied together. Put bluntly, when America's patents do not work. Americans lose their jobs. The American economy, as George Washington laid it in place, is structured around an EFFECTIVE Patent. Absent the Patent and the economy doesn't work the way it was designed to

and as it isn't working today.

It would seem that the Patent was our economic Birth-right, granted to us by George Washington and by America's first Congress. I am reminded of the story of Jacob and Esau in the Bible. Esau despised his Birthright and sold it to Jacob for a bowl of soup. Jacob, and not Esau, became the father of the nation of Israel as a result.

God blessed America through Washington and America's First Congress and gave us the BIRTHRIGHT of the Patent and the TEMPORARY MONOPOLY that has prospered America. Our nation dare not make the same mistake as Esau and despise its BIRTHRIGHT lest we suffer the same fate as Esau and pass into economic and, ultimately, national oblivion. □

- More than 10 billion dollars annually in military- and university-funded research, vastly greater sums than the investment of any other nation.

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Mr. MOORHEAD. From the way some of the testimony has sounded, it doesn't sound like there's any room in between. Anything that's done is absolutely horrible or absolutely great. I've talked to all kinds of patent concerns, patent holders, and so forth, across America; they've asked me to come to speak many places. I haven't — I've had one or two that were against what we're trying to do, but most of them were in support of it. And your testimony, Mr. Addison, is that not a soul in the world is for it. So it's just absolutely diametrically opposed to what my experience has been and what the first panel has stated.

I'd like to nail down what it is in the bill specifically that you disagree with.

Mr. Addison. Mr. Chairman, the thing that most terrifies — and that is the proper word to use — ^that most terrifies me about these bills or, as a matter of fact, almost any bill which comes forward that relates to intellectual property is the fact that these laws have

worked so well for the American people for so long, and suddenly in the space of 2 to 3 years we have begun to try to change all of these laws to make them harmonise with those of other nations whose patent laws are not nearly so strong and so enforceable as are ours. That is the reason that — it's out of terror, sir.

Mr. MOORHEAD. Well, I wasn't one of the supporters of GATT. So I'm the wrong person to talk to about that, but what we're trying to do is to make things better and not worse. We have no desire to make things worse. I believe in the enforcement of intellectual property, and I'll do anything I can to make it more enforceable, to make it work better. In our legislation we have publication after 18 months. The average patent is issued after 19. The average is 19 months. Now I know that some of the more complicated ones — and probably yours would be. Dr. Damadian, but there still is an average.

Dr. Damadian. I think, Mr. Chairman, it depends on how you compute that average. I mean, there are other estimates that put that average a lot longer than 18 and 19.5 months.

Mr. MOORHEAD. Well, we're doing everything we can to fight for more money for the Patent Office, everything we can to speed these processes up. That's been our intent in our subcommittee, but Dr. Damadian. But — excuse me.

Mr. MOORHEAD. You know, we've put loopholes in. If — it's published after 18 months, but by that time if you haven't heard whether you're going to get the patent eventually or not, you can draw out; if you don't want to publish anything, you don't have to. There are extensions that are available, if you need that, but, you know, it is wrong to let this thing drag out for years and years and years with a patent pending and then be able to nail somebody who had discovered basically the same thing years later that used their ideas and say, hey, we had our idea first. No one knows whether there's an idea there first.

Mr. Addison. Are you speaking of the submarine patent now, sir?

Mr. MOORHEAD. That's right.

Dr. Damadian. Well, Mr. Chairman, I think that's a bit of a red herring, if I might address that. The U.S. Patent Office and the Patent Commissioner, in particular, has the power to control the

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submarine patent entirely within his jurisdiction. He can refuse the continuing application if he believes the process is being abused. He can write new rules on continuing applications to control this extremely rare abuse. He doesn't have to permit a submarine patent. The submarine patent and its rare occurrence are a thin excuse for the global malignancy of H.R. 1733 and H.R. 1732.

Mr. MOORHEAD. But you've got to understand in that respect there is legislation that's in effect on that. What's being sought is a change of the — by your group — is a change in the legislation.
Dr. Damadian. Not on the submarine patent.

Mr. MOORHEAD. Well, that deals — that affects the submarine patent, very definitely.

Mr. Addison. Sir, may I respond to

Mr. MOORHEAD. Surely.

Mr. Addison [continuing]. The submarine patent issue? I believe that if you will investigate it very closely, you will find that submarine patents account for 0.028 percent. That's 28-thousandths of 1 percent of the patent applications that go through the Patent Office, and of the patents, the submarine patents which we've had in the last 15, 20 years, over or approximately 50 percent of those were U.S. Government patents.

Mr. MOORHEAD. Well

Mr. Addison. So it's not the great problem, if you will, that it's being presented as.

Mr. MOORHEAD. Well, then, when extensions are available, where a long delay has taken place in the granting of the patent and it hasn't been the fault of the patent applicant, both under the GATT and under legislation that we have why is there's so much complaint about the 20-year period? What difference does that make if you're going to have a longer period of time on the average?

Mr. Addison. Well, I was — I heard Commissioner Lehman's remarks this morning and was somewhat — I have heard that figure used before, 19.5 months used before, and I have here in my hand my latest patent. It took 4 years and 9 months to prosecute to issuance and it only has one moving part. It is the utmost in simplicity; yet, it took nearly 5 years to get it through the Office. Had we had a 20-year-from-filing term instead of being a 17-year patent, it would have been a 15-year patent.

Mr. MOORHEAD. But it would have been extended if it was entirely the fault of the Patent Office?

Mr. Addison. Sir, the Patent Office controls the delays. The Patent Office is under no specific order to respond to an action that's made by the inventor, to respond to a response, if you will.

Mr. MOORHEAD. Well, if you'll come to us, we'll see that they respond.

Mr. Addison. The Patent Office is bound statutorily. Statutorily, an inventor has a 6-month period to respond to an Office action. Administratively, that period is shortened to 90 days. There are generally two actions that the patent, the application, will go through. It will go through a first rejection and then, perhaps another, if it is not issued, a second and final rejection. Therefore, the total time that could be added on by the inventor without filing continuations, continuations in part, and all of those things, which are, I might add, quite expensive, are within the purview of the

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Patent Office to control. If they responded more quickly to our patent, to our responses to their actions, then the delays would not be

nearly so long and perhaps we could someday see realistic patent issuance in 19.5 months.

However, if those patents are going to issue, if we were to take Commissioner Lehman's figures and assume that the patents were all going to issue in 19.5 months, then I will ask

Mr. MOORHEAD. All

Mr. Addison [continuing]. Then I will ask

Mr. MOORHEAD. They said they all did.

Mr. Addison. We will say that the average — if it averages, that would mean that some would issue in much less time and a few would issue in more. But if we assume that the average time is going to be 19.5 months, why do we go to the additional expense of publishing this, when it would be published IV2 months later in the Official Gazette? We're going to have to have a second publication a month and a half apart, two publications IV2 months apart, when the Official Gazette is published weekly.

Mr. MOORHEAD. I presume that the best argument for that is that there are some that deliberately delay the issuance of their own patents. There are others where the applicant has not completed their forms properly or hasn't given all the information that they need, and there are delays that come about as a result of that.

Mr. KIMBRELL. Mr. Chairman, I'd just like to make a quick comment on that, if I could, which is that we cannot avoid the extraordinary problem of patent litigation, which has become rampant throughout our country. If you want to talk about inefficiencies, if you want to talk money waste, if you want to talk about a burden on inventors, litigation is the primary culprit. Application disclosure, allows an early identification of potential litigation problems. That's one of the key public policy reasons for its existence, as well as providing access to the public to information on technology which is going to help technological development. So these are two key public interest areas that support publication of the application

which are very, very, important. Application disclosure will reduce litigation and will speed technological progress through earlier disclosure of valuable technological information.

Mr. MOORHEAD. Once you file for your patent, you're protected by a patent. If someone copies your patent or art, so to speak, they're subject to a lawsuit. That would happen one way or the other. Obviously, when you get your patent, the information is public. I don't see how you view this as a destruction of the American patent.

Dr. Damadian. Mr. Chairman, I think one of the things that we have to keep in focus that I'm really focused on is a mismatch between the little guy and the giant, multinational corporation, a guy without resources and a guy with infinite resources. Now when somebody is going to challenge that patent at the end of the publication period, at the end of 18 months, if he's a Japanese adversary, Hitachi for example, he's going to bring to bear a sizable legal army, and massive financial resources, with which a patent examiner in the Patent Office simply cannot cope. He's going to have the published invention to aid him in his quest to knock out the patent. He's going to have all the substance that he needs to get his legal

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army to manufacture an interference proceeding that could delay the issuance of the patent by 5 years, and that could bankrupt the individual inventor. An inventor does not have to cope with that threat today, and it is a threat I sincerely believe he cannot survive.

Now, as I said before, I'm an inventor. It took me 15 years to build this MRI. I filed a patent. Why would I disclose that know-how to the world in a patent application if in so doing I ran the risk that at the end of the road I'll have no patent. Why would I do that?

Mr. MOORHEAD. Mr. KIRK, do you have any comment on that?

Mr. KIRK. Yes, I do, Mr. Chairman. First of all, with respect to

publication, let me just come back to that point. In terms of 18-month publication, I think there are two factors at work here. No. 1, the average pendency in the Patent and Trademark Office today, as I understand it from Commissioner Lehman's comment, is 19.5 months. That's an average pendency. It's an average between cases that go abandoned and cases that issue as patents, and that average varies. In the computer technologies, the biotech groups, that average is longer; in some of the simple mechanical groups, a little shorter, but the point is that by publishing at 18 months, all the technology that's in those applications, domestic applications, would be available and people would know what potential liabilities were out there.

But very important to this is that 45 percent, fully 45 percent, of all of the applications in the Office come from abroad, and they would be published approximately 6 months after they reach our shores. So that U.S. companies, U.S. inventors would know 6 months after the application reached our shores that a Japanese or a German firm was trying to get a patent in a particular technology. Now they don't know until the patent issues. We're currently delaying access to foreign technology by 12 months, which our foreign competition do not give up when we file applications abroad.

With respect to the question of pendency in the Office, it is very difficult, I can tell you from practical experience of looking at statements that were made about how long it took for a particular application to go through the Office, to really make any evaluation of the legitimacy of that statement until you look at all of the factors concerning the file in question. I have not looked at any of the files of the gentlemen at this table, but I have looked at files of other companies, in fact, that have made statements about how long it takes.

I saw firsthand one allegation that the Uruguay Round Agreements Act 20-year term legislation was going to cause a company to lose a matter of a couple of years of pendency of patent protection after issuance, because it took 6 years to get through the Patent and Trademark Office. When you looked into the file history of this particular case, you saw that the company filed a first applica-

tion, abandoned it almost 1 year later when they filed a continuation in part application. That was the application they really intended to prosecute.

Now, if we can stop for a moment, that company could have used a provisional application for that first application. The term would

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not have run, and they would have saved a great deal of money because a provisional application filing would only cost \$150 versus \$750 for the regular application. When they started prosecuting this continuation-in-part application, they prosecuted to allowance, but rather than let the case issue, they filed a third application, a continuation application. They abandoned their continuation-in-part and prosecuted the continuation. Then, they did this a second time; they filed a second continuation application and abandoned the first.

So in point of fact, when you looked at this case and you said, all right, if you were interested in getting a quick patent, a quality patent, and you use the Uruguay Round Agreements Act the way it was intended to be used, this company, in fact, would have gained patent term. They would have gotten a longer patent term than 17 years from grant, but you don't know that until you look into the file history.

So a lot of the statements are very difficult to get behind until you look at all of this, but, as Mr. Addison mentioned, the applicant has at his disposal approximately 15 months on average. Let me explain this. There are 3 months to respond to each Office action and the applicant can purchase, in effect, three additional months to make each response. So with two Office actions for each application, an applicant could purchase enough response time to have 1 year's worth of delay right there. Then there's a period of time of 3 months to pay the issue fee. The applicant, again, can pay at the end of that period or at the beginning of the period, the point being that if the applicant wants the case out quickly, then they will respond quickly to the Office action; they will pay the fees quickly; they will get the patent quickly.

Insofar as the Patent and Trademark Office response by the examiner, the examiners do have goals established of when to pick up an amended case. I believe it's a 2-month period to pick the case up. I can't sit here and tell you that in every case that when the response comes back to the first Office action that the examiner will take the case up in 2 months. But after the applicant responds, the examiner has a goal of 2 months to pick that case up and send it back to the applicant and move the process along. The point is there are goals established. Those goals could be reinforced by this committee in terms of giving clear instructions to the Office to ensure there are no unnecessary delays. So it is difficult for me to understand why there should not be a longer more patent term with 20 years from filing, with provisional applications, than there are with 17 years from grant.

On the publication issue, there's one comment I would make. In terms of trade secrets, in terms of what constitutes the technology in a trade secret, if I take this microphone and manufacture it and put it on the market, my competitors can reverse-engineer it, build one like it, and get that on the market. The only thing that's going to stop that is if I have a patent. Most technology can be reverse-engineered. Now there are processes, chemical processes and the like, that you can't reverse-engineer. That is quite true, and those are qualified to be protected as trade secrets if you don't obtain a patent or don't believe you can get a patent of the scope you want.

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But the point is that today many, many companies publish their technology voluntarily. Universities, they publish almost all of their inventions shortly after they file. Publish or perish, as the saying goes. So the technology is out there. What do we get with your bill? After publication, anybody who uses the published technology is running up a bill for a royalty collectible after that patent issues. So today when someone publishes, they receive nothing. Under your bill, when they publish, a potential royalty starts to accrue for anybody that uses the published invention. When the patent issues, then full patent rights are available. You can bring suit, collect the royalties, and stop the person from using the invention.

So, again, it doesn't seem to me that publication would be the same death knell that these gentlemen suggest.

Dr. Damadian. Mr. Chairman, you've asked, I think, a good question: isn't there some middle ground? Does there have to be this? Now there are contentions on one side that 20 years from filing is just fine, and there are others who say

Mr. MOORHEAD. As I say, I didn't vote for GATT.

Dr. Damadian. No, I know.

Mr. MOORHEAD. But I am trying to provide for extensions of that 20 years under the right circumstances. Honestly, it sounded from the testimony like I was opposed

Dr. Damadian. But the point I was going to make is that-

Mr. MOORHEAD. I'm trying to give you more time, if I can get it. If there are problems that are caused by the Patent Office, we don't want you to suffer. We want you to get as much time as you got before.

Dr. Damadian. What I'm saying

Mr. MOORHEAD. We want to make it possible.

Dr. Damadian. Mr. Chairman, if we have 20 years from filing and the Patent Office is contending that the average lifetime to issuance is 19.5 years, we on the other side say we don't think that's right. We think it's longer than that; we want 17 years from issuance. Don't we really have Mr. ROHRABACHER's bill, H.R. 359, that begs the question and says it doesn't matter which side is right or wrong, 17 years from issue or 20 years from filing is longer? Doesn't that settle it and get the middle ground you're seeking?

Mr. MOORHEAD. It has other problems with it than just that. We're not debating Mr. ROHRABACHER's bill, but it has other serious problems besides that.

Mr. KIMBRELL. Mr. Chairman, I'd like to make just a very brief comment, if I could, on a question that I think is very legitimate. Does application disclosure allow for possible interference by large multinational corporations or other bullies in patent decisionmaking?

In this regard, I think it's important to note that there is a protection in the bill that provides only the application is disclosed, not other information about the patent. Now as somebody who has filed for a patent reexamination, I can tell you right now that you need a heck of a lot more than the application to challenge a patent on prior art you need the entire file, and sometimes that isn't enough; you also need a considerable amount of research. This bill provides that no such information shall be made available to the

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public unless the Commissioner so decides. So it does provide protection from any kind of sophisticated legal interference by bullies. Dr. Damadian. The application is plenty, isn't it?

Mr. KIMBRELL. Ask your lawyer.

Mr. MOORHEAD. Dr. Damadian, I want you to know that I understand what you went through. To get in a fight with one of these big court battles is miserable, whether it's with the Government or whether it's with someone who's taking your assets, or regardless of who it is, and I understand that after you've been through a battle like that you're very sensitive to anything, and I would be, too. So I want you to know I totally understand that.

I assume that you have a patent. I haven't looked into your case particularly, but in the Inventors' Hall of Fame you've come up with one of the great inventions of our time, and I think that inventors are the ones that have really made this country as viable as it is. So I don't want anything that I have said or do say to take away from that.

Dr. Damadian. Thank you.

Mr. MOORHEAD. I'm curious, because I've heard a lot of comments about how long it takes to obtain a patent, especially pioneer patents. How long did it take you to obtain that patent and what special problems did you run into with the Patent and Trademark Office in obtaining the patent?

Dr. Damadian. That first patent took 2V2 years. I had no problems with the Patent Office, but it didn't take 18.5 months.

Mr. MOORHEAD. Well, believe it or not, we have sped up dramatically, through providing additional resources, the time that it takes to grant a patent.

Dr. Damadian. Well

Mr. MOORHEAD. This is through-

Dr. Damadian. I'm not sure I've ever received a patent in 19 months, but, you know, I wouldn't want you to hold me to it, but we have some important patents with our company and I don't ever remember receiving one in 19 months.

Mr. MOORHEAD. Have you had any real serious trouble with the Patent Office on anything?

Dr. Damadian. No.

Mr. MOORHEAD. How about you, Mr. Addison?

Mr. Addison. I have had some serious problems with the Patent Office relative to similar art, art that the Patent Office considered relevant, to the extent where it was necessary to take the case through appeals, which is a laborious and expensive process. In that particular case, I was being handled by an examiner, I believe, who was Oriental, and I had an Oriental patent cited against me in opposition, and there was absolutely no similarity, and the appeals court finally decided that, indeed, there was no similarity, and I was granted the patent, but that is this one which

took me almost 5 years to accomplish.

Mr. MOORHEAD. The concept of patent reexamination was conceived to provide a relatively inexpensive proceeding in which the validity of issued patents could be tested against prior patents and publications, which might have been missed during the initial examination and the patent-granting process. While the cost to a patent owner for reexamination might be more expensive than any of

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us would like, I would assume that it provides a less expensive means of testing the validity of an issued patent than would be litigation in the Federal court system. I know we all want the court system as a final backup, but we have on almost every Federal issue a Federal court doing backup needed in the long run, but it is very expensive and they're in a lot of — Dr. Damadian, as you've suggested, I've practiced law and I've had people with patents that have come in, and I know if they don't have much money, that it's very difficult for them to market a good idea. I can relate to your chart because I know how hard it is to get somebody to come in and provide the money. If it's an item that goes into a car, it's difficult to get one of the major car companies that are willing to pay for the idea. They might like to use it, but they really don't like to pay for it very well.

It's my guess that overall most patent owners or people that are involved with a contested matter would rather have it resolved some simpler way than having to spend what could be hundreds of thousands of dollars in the Federal court. I know when I practiced law, there weren't a whole lot of lawyers in town that even wanted to go near the Federal court, and they always charged a lot more than those that practiced in the State court because it was something that was much more difficult and certainly a more costly procedure.

We're trying, honestly, we are trying to make the system better. If you have some specific suggestions, we'll certainly consider this legislation because it is not in concrete, but we are, if we can avoid it, we're not going to make it possible for that .001 percent of the

patents filed to be used to abuse the system in the way some have used the system in the past. We want to avoid that. We want to be fair to everybody. We don't want somebody to develop an idea, and without any knowledge whatever, when they use it, they find out they're violating someone's patent pending. That's the thing we're concerned with.

We'll move forward. We'll do what we can with this legislation. I don't know how many amendments will be adopted, but if you have suggestions, I'll see to it that they're put to the committee — I can't take your condemnation that the whole concept is bad because it's change. You have change constantly. If we weren't trying to change, it would still be taking 6 years to get any patent out of the Patent Office. We have to keep working or we're going to lose our competitive edge as a nation.

I don't think there's anything here that's going to hurt you; I really don't. I think someone's told you that it would, but I don't think there's a thing here that's going to hurt you, but if you know specifically how it will, I want to know it.

Dr. Damadian. Well, I've tried, Mr. Chairman, to tell you. Broad reexamination by third parties means target practice on every patent. How am I going to go ahead and build a business on a patent when I'm going to have to tell my stockholders that anybody can reexamine that patent from any part of the world and I'm not going to be able to defend against it, except an army of lawyers. How do I do that?

Mr. MOORHEAD. Mr. KIRK, would you give us a response to that?

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Mr. KIRK. Yes, Mr. Chairman. I touched on this earlier in response to questions. In order to obtain a reexamination requested by a third party, there has to be an issue present about the validity of one or more claims in the patent. So it is simply not that I can come in with any old information and generate a reexamination. The Commissioner is a check on that. He is a gate, and if it's a baseless attempt to reexamine, then the Commissioner will say,

"Thank you, no, there will be no reexamination of that patent based on this information." That's a final and unappealable answer. So the harassment stops right there.

If, in fact, there is good, solid information that might result in one or more of the claims of a patent being limited, it would certainly seem to us that you would rather have those claims limited to a valid scope that would stand up in any court in the Nation, and you'd rather have that done in the PTO with the expertise there. Notwithstanding the fact that there's some expense involved with it, it's a lot less expensive there than it's going to be in a Federal district court later on, and you would have a much better chance of having that patent upheld by the district court if you go in with a strong patent. So from our standpoint, we think that reexamination is a win/win situation for a patent holder and the public.

Mr. KIMBRELL. Two short points, Mr. Chairman: the Commissioner has to make that decision within 3 months. So it's not as if there's an extended length of time where that would be undecided.

And, second of all, the reexamination process gives the patent holder the right to amend and alter that patent, which not only strengthens the patent, but also provides a very important ability of the patent holder to withstand further litigation or an appeal based on a reexamination. So the reexamination process has often been seen allowing a patent to become stronger due to the process itself.

Mr. MOORHEAD. I'm going to say this again for both of you. If you have specifics on how you think one particular thing or another will hurt you or could be minorly adjusted in any way to help, you know, if you have suggestions for patent legislation which you think would be helpful, if you feel that you've been oppressed in any way or there's something seriously wrong, let us know. We'll do what we can to alleviate it.

I appreciate your coming. I appreciate your testimony, and I'd like to thank each one of the witnesses that have been here this

morning for their testimony and cooperation with the subcommittee. You made a valuable contribution.

I know this is an emotional issue. You've got — I guess there have been full-page ads in every newspaper in my district that have been taken out. I've had patent lawyers and others from my district that have offered to put full-page ads in in response, and I've declined. I don't pay much attention to full-page ads.

But it is an emotional issue. There have been a lot of things said in opposition to GATT and to these bills that just are not true. They just aren't there, and that doesn't mean they're perfect. I'm not telling you I agree with every line or title, that nothing's available for change; I'm not saying that, but you get emotional re-

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sponses and they're general, but they don't tell us what's wrong in all of it. It's just we don't like anything. And it's awfully hard to work with that.

I know you're a brilliant man, Dr. Damadian. You have to be one of the most brilliant men in America to have done what you've done. I value what you said in your testimony. I really do, but I think you know that a lot of this thing has been very, very general and it's hard to do much with general rather than specific.

Does that make sense to you?

Dr. Damadian. I — yes, Mr. Chairman, I understand exactly what you're saying. The only thing is that I attempted to be as, I think, fairly specific. I haven't — I haven't been

Mr. MOORHEAD. We will be going over your testimony completely. We've read it already, but we'll go over it carefully. We're very much interested on this issue that people at least know that we're trying to do the best we can with what we have.

Thank you.

The record will be open for 10 days for further comments and further information.

The subcommittee is adjourned.

[Whereupon, at 1:08 p.m., the subcommittee adjourned.]

PATENTS LEGISLATION

WEDNESDAY, NOVEMBER 1, 1995

House of Representatives, Subcommittee on Courts and Intellectual Property, Committee on the Judiciary, Washington, DC.

The subcommittee met, pursuant to notice, at 10:01 a.m., in room 2337, Rayburn House Office Building, Hon. Carlos J. MOORHEAD (chairman of the subcommittee) presiding.

Present: Representatives Carlos J. MOORHEAD, Howard Coble, Bob Goodlatte, Elton Gallegly, Martin R. Hoke, John Conyers, Jr., Howard L. Berman, and Rick Boucher.

Also present: Thomas E. Mooney, chief counsel; Mitch Glazier, assistant counsel; Jon Dudas, assistant counsel; Veronica L. Eligan, secretary; and Betty Wheeler, minority counsel.

Mr. MOORHEAD. The Subcommittee on Courts and Intellectual Property will come to order.

This morning we meet to take testimony on two bills pending before the subcommittee: H.R. 359 and H.R. 1733. We have received a number of requests to have statements and letters made a part of today's hearing record. I ask unanimous consent that the following statements be made a part of the record: in support of H.R. 1733, a list of 60 U.S. companies and 14 national trade associations.

[See appendix, pp. 393-416.]

Mr. MOORHEAD. In addition, we have the Business Software Alli-

ance; the Pharmaceutical Research and Manufacturers Association; the Generic Pharmaceutical Industry Association; Intellectual Property Owners; Chemical Manufacturers Association; Genentech Biotechnology Co.; and a statement of the Biotechnology Industry Organization, representing over 500 biotech companies, supporting the 20-year term with a recommended amendment to H.R. 1733 concerning delays caused by the PTO.

[See appendix, pp. 417-430.]

Mr. MOORHEAD. A letter signed by five out of the last six former Commissioners of the PTO.

In support of H.R. 359, I have a letter from Congressman Baker requesting that a letter from Mr. Fishman be made part of the record; a statement from the American Council on Education; a letter from Mr. Cuthrell, representing the Oklahoma Inventors Congress; a letter from Mr. Loyer, patent attorney; a statement from Ronald Riley, Alliance for American Innovation. Without objection, so ordered.

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[See appendix, pp. 431-456.]

Mr. MOORHEAD. This morning we continue hearings on important legislation. I would like to take a few minutes to provide some background on why I believe H.R. 1733 is important.

After World War II and during the cold war, the United States used trade policy as a part of a strategy to help rebuild the economies of Europe and Japan and resist Communist exploitation. We led the world in global efforts to dismantle the trade barriers and create institutions that would foster global growth, but now are no longer the sole dominant economic power in the world. We are the world's largest economy and largest trading nation. Our economy, which represented 40 percent of the world's output following World War II, now represents 20 percent. Europe and Japan rebuilt and became tough competitors. The newly industrialized nations be-

came increasingly protective, winning a share of the U.S. market, many times without opening theirs equally.

Although we welcome the products, services, and investment of other nations in the United States, now we must insist that the markets of our trading partners be open to the products, services, and investments of the United States. We will no longer tolerate free riders in the global trading system. We insist upon reciprocity in our trade agreements. This is a critical change in the way we view both trade policy and foreign policy. The road to prosperity is not always smooth. Sometimes our trading partners will have economic problems and we must remember that the success of our economy is inextricably linked to the economies of other nations. Some would have us follow the ostrich approach: If we just stick our heads in the sand, the problems of other nations will simply go away. But history has shown that cutting ourselves off from the world is a sure formula toward a less successful and prosperous country'.

Intellectual property protection has been a significant feature of our trade policy. Negotiating strong intellectual property agreements and enforcing them has taken on new urgency because of the increased importance of our intellectual property industries to our national competitiveness. Our copyright-based industries are growing at twice the annual rate of our economy and employing new workers at almost four times the annual rate of the economy as a whole.

Last February I participated in a press conference at which a report entitled "The Copyright Industries in the U.S. Economy 1977-1993" was released. This report, which contains impressive figures, was prepared for the International Intellectual Property Alliance by Economists, Inc. Let us take a moment to highlight some of these figures because I think they are indicative of just how important the intellectual property industries are to today's economy and to America's economic future.

In 1993 the copyright industries accounted for 3.7 percent of the U.S. gross domestic product. This means \$238.6 billion. Between 1977 and 1993, employment in the U.S. copyright industries more

than doubled to 3 million workers, which is 2.5 percent of the total U.S. work force. Between 1988 and 1993, the U.S. copyright industry employment grew almost four times the annual rate of the whole economy: 2.6 percent versus 0.7 percent. The copyright in-

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dustries contribute more to the U.S. economy and employ more workers than any single manufacturing sector, including aircraft, primary metals, textiles, apparel, or chemicals. In 1993, the U.S. copyright industries achieved estimated foreign sales of \$45.8 billion. Mter automobiles and parts, the copyright industry is the second largest industry in exports.

A global economy offers tremendous opportunities for American workers. Over 11 million workers in the United States owe their jobs to exports. These jobs pay higher wages on the average than jobs not related to trade. Every billion dollars of exports supports 17,000 jobs. Clearly, expanding trade is critical to our efforts to create good, high-paying jobs. The global economy will not disappear. We cannot turn our back on the clock. Even if we could, we must face the fact that the United States has a mature economy and we have only 4 percent of the world's population. Future opportunities for growth in the United States will depend in part on providing goods and services to the other 96 percent. Given this fact, opening markets, expanding trade, and enforcing our trade agreements are important to fostering growth in the United States.

What this hearing is about this morning is whether we go forward and strengthen our inventors and our industry to compete in a global economy or do we roll back the gains that we have already made.

I'd like to spend the next few minutes talking about H.R. 1733 and the newly created 20-year patent term. The old law was that your patent lasted 17 years from the day it issued. The new law, as of June 8, 1995, is that the patent will last 20 years from the date you filed with the Patent and Trademark Office. That commitment was made in substance in the GATT Uruguay Round TRIPS Agreement, as well as in the 1994 bilateral executive agreements

with Japan. A 20-year term has been an agreed-upon point in GATT for at least the past 4 or 5 years, through Republican and Democratic administrations alike. This is common knowledge. The idea of the 20-year term is not new. A 20-year proposal almost identical to the present law was recommended for the United States by President Lyndon Johnson's Commission on the Patent System in 1966 and Secretary of Commerce Mosbacher's Commission on Patent Law Reform in 1992.

I did not vote in favor of GATT implementing legislation for a number of reasons, none of which concerned the intellectual property provisions of GATT. To the contrary, I do know that the copyright and patent provisions of GATT are good for the United States and supported by every major national copyright, patent, and bar association that takes an interest in patent and copyright law. The overall pendency from filing to issuance or abandonment for patent applications decreased from 19² months in fiscal year 1993 to 19 months in 1994. For computers, pendency was reduced from 28.5 months in 1993 to 26.5 months in 1994. In the area of biotechnology pendency was reduced from 22 months to 20.8 months. GATT will add an additional 36 months to cover this examination period. In January and August 1994, the Japanese agreed to make substantive changes in their law to benefit the United States inventors in exchange for the Patent and Trademark Office rec-

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ommending the 20-year term for filing an 18-month publication, a change the United States wanted to make anyway.

The features of the Japanese patent system that create problems for the United States businesses according to the General Accounting Office study released in July 1993 are: One, they do not permit filing applications in the English language. As of this past July, it is now possible for U.S. applicants to file patents in English. Two, the time it takes to obtain a patent is much too long — 5 to 7 years. As of January 1, 1996, if we keep our part of the agreement, examinations will conclude in 36 months. Three, they permit competitors to oppose the issuance of a patent before the patent is issued. This practice will be abolished next year if we keep our side of the

agreement. Four, they permit competitors who develop minor improvements to obtain compulsory licenses for basic technologies developed by U.S. businesses. This practice will be limited. These are the Japanese practices they have agreed to change in exchange for the 18-month publication and reexamination.

To further protect patent applicants, present law would extend the 20-year term of a patent for us to 5 additional years to compensate when an applicant is involved in a proceeding to determine who is the first to invent or an appeal of an examiner's decision in a court proceeding. This protection will further ensure that the patent will not suffer any loss of term. In addition to these protections, present law adds an additional year for what is called provisional patent application. This adds an additional year during which the applicant can develop claims and potentially seek investment for development of new inventions. During this provisional year the inventor retains his right to an early filing date, but the 20-year term doesn't start to run until the nonprovisional application is filed, which amounts to 21 years of effective patent term. Our old term of 17 years, measured from the patent grant, was being abused by a few inventors and interfering with the patent system's objective of stimulating progress in technology. By filing successive continuing applications on the same invention, the original applications remain submerged in the Patent and Trademark Office in secrecy year after year. It's a legal means of intentional delay, perpetrated by the inventor, until the company has grown up around or an existing company begins using the inventor's original idea. Once the patent is granted — sometimes as much as 20 or 30 years after filing — the inventor can demand significant licensing fees for continued use of the now patented process. This usually comes as a brutal surprise to the companies who manufacture in the United States, both foreign and domestic. All foreign countries have the safeguard of measuring the term from filing date. The significance of these submarine patents lies not in the number of such cases, but in the destructive effects caused by such cases.

The U.S. patent system is designed to cause inventors to disclose inventions to, as the U.S. Constitution says, "promote science and the useful arts." In return, patents provide inventors with 20 years' monopoly. Submarine patent abusers do not disclose anything. Just

the opposite, they deliberately keep their inventions secret. Then, after decades of delay, they cause the patents to issue so that they can collect royalties from existing businesses. These submarine patents are intended to be a weapon against legitimate businesses.

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In June of this year, Pat Schroeder and I introduced a bill, H.R. 1733, that would further assure a 17-year minimum for any issued patent that was delayed through no fault of the patent applicant. First, the bill would bring the United States in line with the rest of the world by requiring that all patent applications be published in 18 months. Why have publication in 18 months? First, it will place our domestic inventors on an equal footing with inventors in foreign countries, all of whom have access to published patent applications technology in their own language, 18 months after filing.

Remember, over 45 percent of all applications filed with the PTO are from foreign applicants who file in their own country and whose application is made public in 18 months. Of the remaining 55 percent, over half are also filed in foreign countries. Therefore, between 70 and 80 percent of all patents with the PTO are already made public. Of course, all patents issued in the United States are made public upon issuance. The average U.S. patent takes about 19 months to issue.

Second, 18-month publication will make it more difficult to manipulate the system by use of the submarine patent. H.R. 1733 takes an additional step to protect those who may not want their application published, in that upon request of the applicant, publication will not take place until 3 months after notification by the PTO that the application is denied, giving the applicant time to withdraw his application and use the trade secret route. In addition, what if your patent application is published and your patent doesn't issue until 12 months later? H.R. 1733 has what is called a provisional rights section that allows the patent applicant, once his patent issues, to sue for a reasonable royalty, anyone who may have used his patent after it was published. This is a right that patent applicants do not have today.

For example, we have all seen the notice "patent pending." What does that mean? As a practical matter, a notice of patent pending may scare off some competitors, but if someone uses your patent before it is issued, you have no rights to a reasonable royalty for that use. However, under H.R. 1733's provisional rights provision and in conjunction with the 20-year term patentees are assured of at least 18 V2 years of patent protection regardless of patent pendency. If a provisional patent application is filed or if a publication is requested earlier than 18 months, an eventual patentee could obtain up to 19y2 years or more of patent rights.

When Mrs. Schroeder and I introduced H.R. 1733, we added a provision that would take care of the criticism of the new term, without neglecting what we gain from the 20-year term. What we added is a fourth contingency to the present law that would permit the Commissioner of Patents to extend a patent term for any time lost as a result of delay caused by the Patent Office. If the Government delays, the Government pays. Term extension under this section of the bill is cumulative and up to 10 years can be restored to a patent.

With H.R. 1733, every possible avenue of delay of a patent has been covered. The U.S. system dates from the earliest day of the Republic, and the current law is basically that adopted in 1837. Some changes in our patent system are necessary to comport with the 1990's and the 21st century. The changes proposed by H.R.

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1733 reflect a well-reasoned and informed approach to modernizing U.S. patent law. I believe our hearings this morning will support that conclusion.

And now I recognize our ranking minority member, John Conyers.

Mr. CONYERS. Thank you, Mr. Chairman. I have a copy of your statement, so I want you to know that I support what you've said in it.

I came here first to explain that our colleague, Pat Schroeder, is unable to be here because of a partial-birth abortion ban bill on the floor at this moment. And I now have to add that I will soon not be able to be here because there is a fair chance of defeating the rule on that. Everyone of course knows, as you've mentioned, Mr. Chairman, that Mrs. Schroeder is supporting you in your proposal, H.R. 1733.

I ask unanimous consent that my statement be entered into the record, and because Mr. ROHRABACHER has been waiting for, lo, these several minutes and we've got one of the longest witness lists I've seen at a subcommittee hearing this year, I'll jdedl back the balance of my time.

[The prepared statement of Mr. Conyers follows:]

Prepared Statement of John Conyers, Jr., a Representative in Congress
From the State of Michigan

First, I would like to note that this Committee has a major bill on the floor today, the Partial Birth Abortion Ban. It is because of this serious scheduling conflict that the ranking member of this subcommittee, Pat Schroeder, is unable to be here. That said, I am pleased to support H.R. 1733, the legislation offered by my distinguished colleague, the Chairman of this Subcommittee, Mr. Moorehead. I also join him and Mrs. Schroeder in opposing H.R. 359.

In my view, one of the best features of H.R. 1733 is that by measuring the term of the patent from the date of the patent application filing, this legislation eliminates the incentives to extend patent expiration dates through delays in the Patent Office.

H.R. 359, on the other hand, would reinstate the old patent term by making the term the longer of 17 years from the grant of the patent or 20 years from filing. This would encourage applicants to delay their patents.

Although some argue that inventors should be protected from the date the patent issues because patents are sometimes delayed for long periods of time, a patent seeker is well protected from the date of filing the patent application. Once an inventor has patent pending, he or she can manufacture the invention, obtain licensing agreements and, in fact, due everything that a patent holder can do except insti-

tute a suit for patent infringement.

It is the length of the period of protection that matters, not whether the time begins to run as of the date the patent is issued or the date the patent application is filed.

I am opposed to H.R. 359 primarily because it allows applicants to extend the term of protection to 40 or 50 years by delaying the issuance of the patent. This bill would allow inventors to avoid the Congressional goal of imitating the duration of patents, and thereby, reduce competition.

Other positive attributes of H.R. 1733 are that it guarantees inventors the right to keep their inventions as trade secrets if they are not pleased with the likely patent coverage they would receive and it deals with delays by the Patent Office beyond the control of the inventor.

In addition, H.R. 1733 would permit extensions of up to 10 years for any unusual delay by the Patent Office in issuing a patent.

Because it retains the reformed patent term measured from filing and ensures that patent owners will not receive shorter terms for reasons beyond their control, I support H.R. 1733 and oppose H.R. 359.

Mr. MOORHEAD. Are there other opening statements?

[No response.]

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Mr. MOORHEAD. If not, our first witness this morning is our colleague from California's 45th District. He testified in August 1994 before the subcommittee on two bills, the Senate bill 2368, which contained actually the exact language of the 20-year, 3-month term, and was later adopted in pending GATT legislation. On behalf of the subcommittee, I want to welcome our colleague and we look forward to his testimony.

STATEMENT OF HON. DANA ROHRBACHER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. ROHRABACHER. Thank you very much, Mr. Chairman and

Mr. Conyers, and all the other members of this distinguished committee.

Last year when the GATT implementation legislation was passed it established an uncertain patent term of 20 years from filing.

That word "uncertain patent term" is very significant. I was upset because the GATT agreement did not require us to abandon America's guaranteed patent term, which for 134 years was set at a minimum of 17 years from grant. So we went from a certain and a guaranteed patent term to an uncertain and an unguaranteed patent term. Thus, by misusing GATT's fast-tracked progress, a change of vital importance to our Nation was enacted into law without so much as an up or down vote on the issue. This less than democratic tactic has given us a patent law which reduces the rights certain of every individual American and in the long run threatens our Nation's competitiveness and prosperity.

The United States has always had the strongest patent system in the world and is now the world's leading producer of innovative, breakthrough technology and ideas. That didn't just happen. That happened because we, for all of these years, had a certain type of guaranteed patent protection. And that's why we've had and have today a \$20 billion balance of payments surplus in royalties and license fees.

In the past, innovators were confident that they would have 17 years of patent protection no matter how long it took the Patent Office to issue the document. Venture capitalists were confident, too, but with 17 years of guaranteed ownership of new technology, they could recoup their investment. That led to an avalanche of accomplishment by independent inventors.

I have a chart here which indicates some of the most important inventions of this century have been invented by independent inventors, whether we're talking about the zipper, which is nonimportant, but perhaps things like power steering or air-conditioning, even the ballpoint pen. And when we're talking about

health care issues, magnetic resonance imaging, titanium, penicillin, the vacuum tube, insulin, and the list goes on and on, were invented by independent inventors. The jet engine, FM radio, et cetera — these are important inventions that have given us a dramatic edge in the international competition that we're talking about in this global marketplace. They were invented by independent inventors because they knew they had a guaranteed property right to 17 years of protection.

These ideas have established whole new industries in this country. Currently, the revolution in biotechnology is dependent on pat-

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ent protection. Yet, of course, we know that others would like to steal the product of America's investment into biotechnology, especially foreign interests. No amount of government subsidy will be able to make up for the loss in venture capital that will result in the compromising of patent certainty and patent protection in the United States. Big domestic and foreign corporations, obviously who are users of technology rather than creators, they believe the patent system — they've wanted to weaken the patent system for a number of years. And you can see why. You could see why automobile manufacturers in the United States or even in Japan may not want a guaranteed patent term when it was innovators, independent innovators, who came up with innovations like power steering and automatic transmission. Obviously, these very powerful interests, foreign and domestic, would rather just use those ideas without paying royalties. The issue at hand is eliminating the 17 years of guaranteed patent protection and replacing it with 20 years of so-called protection that depends on Patent Office bureaucrats and the ineffectiveness of outside interference in the process. And I might say, with a complicated formula that we are being asked to accept, the people who will have the most leverage in the patent system in the future will be those people who can hire the best lawyers and pay the most money to effect legal decisions. The issue at hand, as I say, is whether we're going to eliminate the guaranteed patent protection or replace it with 20 years of uncertain patent protection. And we have another chart here that shows how this would have impacted, had the same law been in

place, three of the most important inventions which are crystalline polypropylene, which is basically something that we see in stores throughout the world in the use of bottling. It took 27 years to issue that patent. Under the system that we have replaced — the one we have just created with no up or down vote by Congress — the protection would have been no protection for Phillip's Petroleum, which put a lot of money into investing and R&D to come up with this product, and they made \$300 million on this patent under the system before we changed it.

The laser took 20 years to issue. It would have had no protection under the current system that we've just put into place. And, by the way, both of these had 17 years of protection under the old system. Then, of course, the microprocessor, which took 17 years to issue, and it would have had 3 years of protection under the current system and had, of course, 17 years under the old system. Thank you very much.

Of course, when you decrease the number of years of protection, that means overseas interests don't have to pay royalties during that time period. Remember that. Now even worse, there is a push — and this is a disagreement, an obvious disagreement, but I think it is a lethal disagreement. There is a push that all patent applications need to be published 18 months after filing, which is the essence of 1733, whether or not — and the most important element of this is these applications are going to be filed whether or not the patent has been issued and the ideas are protected. That's the basis of 1733, the Patent Application Publication Act.

Even though many of the bill's cosponsors seem to be unaware that the central purpose of the bill is publicizing patents before

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they are protected, H.R. 1733, publishing any type of patent application before it receives patent protection, would be a heinous crime against America. Anything which publishes the details of an invention before the issuance of a patent is an open invitation for every unscrupulous company in the world, foreign and domestic, to steal our technology. Publications will be open to the possibility of

outside, will open up the possibility of outside interferences in our own patent process, meaning it will take even longer for patents to be issued and that will mean even more of the inventor's time will be taken away. That's been the experience in other countries, and now some misguided people want to bring that system to the United States.

We've heard about submarine patents. The opponents of my bill, H.R. 359, have based many of their arguments on this submarine patent issue which is based on basically villainizing inventors. They claim that inventors are deliberately delaying the process and that's the most important problem facing the patent system today. Well, let me add that most of the inventors I know, and if you talk to inventors that you know, you will find that they have struggled desperately to have their patent issued as soon as possible so they can start getting those royalties and getting some payment back for their work. They have struggled diligently to do this and they have in no way tried to delay their patents. That's the vast majority of all inventors because they are not rich guys. They're usually people who need that royalty money coming in, and they realize with the speed of change in our society, if they don't get that patent issued, they will be left behind because something new will be invented that will take its place.

Such submarine patents may be a problem, but not nearly as calamitous as has been claimed. Bruce Lehman, the head of our Patent Office, testified in August 1994 that he knew of only 627 submarine patents, but, as we've heard today, even if it's a small number, it's a problem. Well, my office found out from his Office, and we've been making this request repeatedly, but we just found out that fully two-thirds of the 627 so-called submarine patents were under government imposed secrecy orders which was no fault, at all, of the applicant.

If submarine patents are a problem, and let me admit that there are many cases of submarine patents where people are manipulating the system and it is a problem, that I have repeatedly, repeatedly said I will be glad to accept into my legislation which keeps the guaranteed patent term, anything that we can do to prevent those submarine patents. In fact, there has been no attempt, from

what I can see, to try to reform the Patent Office to get at the submarine patent issue. Instead, it's being used, basically, as a cover to eliminate the guaranteed patent term. Well, we don't need to punish every American inventor and diminish the property rights of every American to solve the submarine patent issue.

H.R. 1733 basically is like a character in "A Man for All Seasons," the play about Sir Thomas More: in order to get at the devil lurking in the woods, this character was willing to bum down the entire forest. We don't need to destroy our venerable patent system based on a guaranteed patent term just to deal with the submarine patent problem.

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I urge the committee to restore the rights of American inventors by passing H.R. 359 and not to make every U.S. inventor vulnerable by passing legislation that requires the publication of all of his or her ideas after 18 months of application, whether or not that patent has been issued. There are many other issues that we could get into.

What I will do, because I know there are other witnesses here to testify, but there are many people that can talk about and will testify that the 19-month average pendency that we've heard about does not hold up under scrutiny. And the deal we made with Japan, that two unelected officials made with each other, the Japanese officials and American officials, was a major, major catastrophe, and it was what we would call a sweetheart deal made between two people and the interest of the United States was left out. With that, Mr. Chairman, I would open to questions and submit the rest of my statement for the record.

[The prepared statement of Mr. ROHRABACHER follows:]

Prepared Statement of Hon. Dana ROHRABACHER, a Representative in
Congress From the State of California

Our nation's founding fathers knew the importance of inventors and their ideas. Thomas Jefferson was a technologist. You should visit Monticello if you have a

chance to see some of the products of his mind and imagination. Benjamin Franklin is renowned even today for his contributions. They valued knowledge as an end in itself. Thomas Paine, in *The Rights of Man*, said, "Though man may be kept ignorant, he cannot be made ignorant." Knowledge, they knew, was a necessary condition for liberty. These men also knew that the most effective way to guarantee progress was to respect and protect new inventions, so they created a patent system which was second to none. Their vision helped America out-compete its old-world rivals and become the great and prosperous nation we know today. Even after World War II, facing competition from Third World nations paying wages of 25 or 50 cents an hour, we have continued to out-compete everyone throughout the planet. That's because we have maintained our technological lead on the world. It is technology and knowledge that have given us the competitive edge throughout our Nation's history. It is not that our people were necessarily willing to work harder or were so much smarter than everyone else, because many people around the world work very hard and are just as smart as Americans. But if you look at American history, you see a difference. The United States was the country that developed the reaper which revolutionized the harvesting of crops. We took the steam engine, originally developed by the ancient Greeks, and turned it into an engine for progress and prosperity. We developed the telegraph and the telephone.

It's no coincidence that America has been the source of so much invention and that America is the only country in the world to put patent protections into its constitution. We believe in individual freedom, which guarantees all of us the right to control our own destiny and think and speak and worship and raise families as we wish. And we believe that property, including intellectual property, should be respected and protected as a matter of right. Technology and freedom are different sides of the same coin in America, by which we have remained prosperous and become the greatest country on Earth.

Patent protection is absolutely crucial to the success of the United States. The debate in the Congress today over the direction of the patent system will have an enormous impact on this nation's economic future. Billions of dollars of royalties are at stake. More than that, our view of America is at stake. Will we continue to be a nation which rewards and protects the ideas created by Americans? Will we maintain our commitment to progress and to the independent mind? Or will we abandon this ideal and allow inventors to be ripped off by those who simply do not want to pay as much in royalties as they do now?

I, along with a majority of the House, voted for "fast-track" authority for the GATT agreement. This meant that the administration had the right to negotiate

this trade agreement, which would then be voted on as a single vote. It was all or nothing. The implementing bill would be presented to us, it would be one vote, up or down, and we could not vote to amend what was presented to us. This arrangement meant that the trade negotiators could hash out all the details and come up

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with the best agreement they could get for America. Of course, it also implied that nothing would be put into the GATT implementing bill which wasn't required by the actual agreement.

Congress and the American people were lied to, and we were betrayed. The GATT agreement said that each country had to have at least 20 years of patent protection from the time of filing of a patent application. We could put on extensions if we wanted. We could have merely set a term of 20 years from filing or 17 years from grant, whichever is longer. That would have been consistent with the status quo in America for over a century and would have protected inventors and would have been completely consistent with the GATT agreement. In fact, we had such a term for an interim period of seven-and-a-half months until June 8, 1995. In the weeks before June 8, the Patent Office was overwhelmed with tens of thousands of applications from inventors who did not wish to lose their guaranteed 17 years of protection.

I personally feel betrayed that the GATT agreement didn't include a term of 17 years from grant or 20 years from filing. I voted for the GATT fast-track authority. GATT did not require that our country diminish the patent protection enjoyed by our citizens. Yet a 20-year-from-filing term was placed in the bill in hopes of passing this major change in patent law without full debate, without full scrutiny. I was even denied the right to even see the language of the proposed legislative change until shortly before the vote was scheduled. As it turned out, the Administration was forced to stand off and the vote was delayed, which gave us some more time. But GATT passed, with the 20-year-from-filing term which could not be amended out under the fast-track rules, and now that's the law of the land.

Before, with the 17-year-from-grant term, if an American inventor applied for a patent, no matter how long it took the Government to issue that patent, the inventor still owned that patent for 17 years. If the Patent Office took five or ten or fifteen years to issue the patent, it didn't matter, because the inventor and the investor still had 17 years of protection guaranteed to them. That was an important part of our country's commitment to protect and nurture the genius of our people.

The GATT law changes that dramatically. The change is designed to appear to be of little consequence. In fact, it appears to elongate the time of patent protection. Now, if an inventor's patent is issued immediately, he will have 20, not 17 years of full protection. That would be great if patents were issued immediately, but they are not issued immediately. In fact, almost every technological breakthrough patent has taken years and years to be issued by the Patent Office. Under the new law, the microprocessor patent would have received three years, not 17 years, of patent protection. The polypropylene patent, which the Patent Office issued after 27 years of delay, would have gotten zero protection. Many small biotechnology firms are based on one or two key patents which they own but which commonly take six, eight or ten years to issue. The biotechnology companies will be severely hurt by the new term.

What does this mean? Again, it means billions of dollars that should be going into the bank accounts of American inventors and American investors will now end up in the bank accounts of multinational and foreign corporations. It also means that technology that Americans created and developed will be used against us by our competitors since real patent protection will be reduced. It is, in short, one of the greatest ripoffs in history. That's what happened in the GATT implementing legislation and something that, unless we act, the perpetrators of this crime will get away with. Friends, I tell you tonight that they will not get away this ripoff of inventors. We have to admit that some of the people who voted for this and support it probably do honestly believe that it will have a positive effect, in stopping submarine patents and harmonizing our patent laws to those of other countries. It is true that the United States, Japan and Europe have different kinds of patent law. We have different laws to protect other rights as well, freedom of speech, freedom of religion, freedom of the press. There are different laws protecting our rights in the United States, and we pride ourselves that we have stronger protections of our rights than other countries.

However, Bruce Lehman, head of our Patent Office in the United States, has decided that harmonization of patent laws is really an important thing in and of itself. So he agreed to put this change into our patent law. He did this in agreement with the Japanese, who have wanted to make this and other changes in our patent law for many years. His agreement with the Japanese Patent Office had to be enacted by Congress, so he had to find a way to get this major change enacted. So he worked to get it slipped into the GATT bill. What did Bruce Lehman, our negotiator, looking for our American interests, get in return for eliminating certain patent protection in our country? In exchange for it, we got two more months to file a Japanese trans-

lation of a patent application than we had before.

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This deal reflects an almost criminal naivete. To cover up this absurd acquiescence to the Japanese interests, we have seen underhanded tactics being used and misinformation being spread about Capitol Hill. Last August, Mr. Lehman claimed in testimony that there were 627 submarine patents issued 20 years after filing and he said these delays were caused by inventors who intentionally delay the issuance of their patent until the market has matured and their return on investment maximized. Well, we got a report from the Patent Office on those 627 patents. It said that fully 68% of those patents were under secrecy orders and that was the reason they were delayed. That means the government had ordered that the technology in those patents should be kept secret for national security reasons. Of the remainder, some had been included erroneously, a large number had been delayed by Patent Office orders for divisionals, and so on. How many were really "submarine" patents? It is impossible to know, other than it could not be more than a mere handful. Patent Commissioner Lehman has said that the average patent application takes 19 months to be processed. That statistic is misleading, at the least. First, it includes routine abandonments which may take only a few weeks. It also includes inconsequential and trivial patent applications, which never produce royalties. The figure does not include refilings, so it is not relevant to the issue of how long it takes from original filing to actual issuance, which is what we are concerned with today. Most importantly, breakthrough patents almost always take longer than the "average" to be processed, since they are always more novel and complex. Mr. Lehman has never, despite many opportunities, addressed any of these concerns, nor has he recanted his irresponsible statement of last August in which he stated that he knew of 627 "submarine" patents, 2/3 of which turned out, as I just noted, to be under secrecy orders from our government. To this day, the Patent Office hasn't given us the information we need, which is the time it takes for breakthrough patents to be processed from the time of the ancestor filing date. I've asked the General Accounting Office to go into the Patent Office and find out for us. They will find out the answers for us, since apparently Mr. Lehman cannot tell us.

This situation must be resolved and inventors' rights must be restored. I have authored legislation, H.R. 359, to restore the patent rights of the American people. Senate Majority Leader Dole has sponsored the same legislation in the Senate, S. 284, and I commend Bob Dole for his commitment to inventors. He has led the effort in the Senate and is doing a great job in shepherding the bill through a difficult process over there.

H.R. 359 and S. 284 are really quite simple. They establish a patent term of 20 years from filing or 17 years from grant, whichever is longer. That's exactly what the GATT implementing bill should have said. They also contain a clause which will cause the publication of a patent application if an inventor tries to delay the process after five years. Many people out in industry have real concerns about submarine patents and inventors who allegedly rip off corporations by playing the system and filing endless continuations in the Patent Office. So I have bent over backwards to help them out because I am concerned only about maintaining 17 years, of protection for American patent applicants. I have stated time and time again in meetings with congressional leaders and industry representatives that I will put into my legislation anything that will solve the submarine patent problem, as long as we maintain 17 years' worth of protection. I am still waiting for a compromise. Frankly, I have come to suspect that the submarine patent issue is being used as a cover by those who simply want a weaker patent system because they respect big-money multinational corporations more than they do the creative individual. Mr. Lehman typified the attitude when he was quoted in the New York Times saying that his opponents were nothing but a bunch of "weekend hobbyists." Last week, in testimony before a subcommittee of the International Relations Committee, he repeated that remark. No wonder he negotiated away American patent rights with such abandon.

Independent inventors are the creative engine of our economy. It is ironic and sad that IBM opposes a minimum guaranteed patent term, when their company is based on the work of independent inventors. Herman Hollerith, who invented the tabulating machine and started the company that eventually became IBM. It is appalling to see the large automobile manufacturers oppose H.R. 359, when independent inventors have contributed so much to their industry, such as Francis Davis' power steering invention and H.F. Hobbs' automatic transmission. Apparently, these companies would prefer not to have to pay to use the ideas of such brilliant minds. H.R. 359 has 197 sponsors, including myself. It is supported by a broad coalition of groups. The National Venture Capital Association supports the bill, because a minimum guaranteed term will allow them to predict the value of a new invention. Universities support H.R. 359, because they are producing thousands of new, basic ideas which are creating whole new industries in this country. Small businesses

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support H.R. 359, because many of those companies are based on one or two successful patents. Without strong patent protection, they will be spending their money

defending their rights in the Patent Office and the courts instead of developing their ideas in new products.

Biotechnology companies also support a minimum guaranteed term. Most biotechnology patent applications take five to ten years to be processed. A 20-year-from-filing system will disproportionately harm their industry. AMGEN and the industry group BIOCROM are each submitting testimony to this hearing. I urge you to listen to what they have to say.

There is alternative legislation, H.R. 1733, the Patent Application Publication Act. That bill proposes to publish all patent applications 18 months after they've been filed. That's regardless of whether the patent has been issued and the technology protected. And it's whether or not the inventor has tried to delay the issuance of patent. No matter what, every application would be published under H.R. 1733. It should be obvious that this will lead to the stealing of American technology by foreign interests and large corporations here in the United States. Who would want us to let the world know all of our secrets of our technological creativity before the patents have been issued to protect them?

Well, this was another Japanese demand that Bruce Lehman agreed to in order to fulfill his ideological commitment to harmonization between our countries. Under H.R. 1733, we're in effect going to hand a huge neon sign out in front of the Patent Office that says, "Come and steal our technology. Here is something of value; come and copy it." H.R. 1733 must be defeated. Its advocates fully realize the effect publication will have. The bill is officially called the Patent Publication Act of 1995, but in letters to Members of Congress, the other side uses innocuous terms to describe the bill, such as calling it Patent Term Extensions and sometimes not even mentioning publication at all. The bill's provisions for patent term extensions are unworkable and bureaucratic. Also, the bill relies on the idea that the Patent Office will take responsibility for any delays they cause and grant the appropriate extensions. Such an approach is simply naive.

Both the 20-year-from-filing term and 18-month publication of patent applications diminish patent protection. Together, they eliminate an important competitive advantage American has enjoyed for over 200 years, the strongest patent system in the world. More than that these changes are a direct attack on property rights, intellectual property rights which should not be infringed. I wouldn't want the government to take away our land or your possessions. I also wouldn't want the government taking away your intellectual property.

We are entering a new technological age, and our government is destroying our greatest asset, the creative genius of our people. We are giving it away for some feather-headed notion that we are going to have global harmonization of patent rights and that is going to make us all love each other and we can operate in good will-

Imagine if we told the American people that we wanted to have harmonization of individual rights of our citizens to pray and speak as we please, and we had some feather-brained government official making a deal with Singapore giving those rights away. "By the way, the American people are just going to have to give up these rights. They are too individualistic. We need a new global concept of human rights to make sure wherever you go, people have the same human rights level." The American people would never stand for that.

It is up to us to carry on the tradition of Jefferson and Franklin and the creative minds which gave us the Constitution and individual liberty and strong intellectual property rights. They talked about freedom. They talked about the dignity of the common man. They said that we would be a society so prosperous that even the common man could own the product of his labor, and could live in peace and harmony with his family. Tyranny would not reign in American because we believed in freedom and individual rights. Part of freedom and individual rights is the right of people to control their own creations. It is a precious right and as important to our society as any of the other rights we have enjoyed for so long.

Now we have an unelected official. Patent Commissioner Bruce Lehman, making deals with the Japanese which will diminish the rights of the American people. We are supposed to accept his fait accompli. I know, that with your help and faithfulness, this tragedy will not stand. Thank you for allowing me to testify before this distinguished subcommittee.

Mr. MOORHEAD. Thank you.

Professor Mark Lemley of the University of Texas School of Law, who will be testifying this morning, did a study to evaluate the

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likely effects of the new 20-year patent term on U.S. patent holders. That's the only study that I know of that's been made concerning the comparison of the two systems. In that they collected and

analyzed data from over 2,000 recently issued patents. From 197 litigated patents, his study determined that overall patentees will benefit from the new 20-year term. On average, patentees can expect to gain around 1 year of additional term depending upon the assumptions made. The study indicates that submarine patents are a small but not insignificant percentage of the total patents issued and that submarine patents suffered the brunt of the burden of the imposed new law.

This study was published last June. Have you had a chance to review the study and, if so, what is your opinion?

Mr. ROHRABACHER. No, no, I haven't, Mr. Chairman. But could you tell me who paid for the study?

Mr. Moorhead. The study came out just this last year.

Mr. ROHRABACHER. But what was the interest group that paid for the study?

Mr. MOORHEAD. Professor Mark Lemley.

Mr. ROHRABACHER. But, who, is there anyone who paid for the study?

Mr. Lemley. No one paid for the study. It was totally independent.

The University of Texas pays my salary. [Laughter.]

Mr. ROHRABACHER. Well, I will accept that, Mr. Chairman. But I do know that there are some very powerful interest groups.

Mr. Berman. Oh, come on, don't smear him.

Mr. ROHRABACHER. No, I'm not smearing him. The bottom line is he says no one paid for his study. But you know and I know that we have been in hearing after hearing where there are individual professors that have done studies for special interests, and I was trying to determine whether or not that this was the case. This was

not the case here.

If the professor found that the average patent will gain 1 year, Mr. Chairman, all I have to say is the average patent makes absolutely — is totally irrelevant to the decision as to whether or not we will eliminate a guaranteed patent term for all American patents. The average patent could be the stripe on the bottom of a toothpaste tube. What matters is the breakthrough technologies in which, I've just shown you, that three of the major breakthrough technologies that we have just shown you a chart on would have lost all of their patent protection. These major patents take a longer time to get through the process and they would lose handily. And there will be witnesses that will testify to that on our panel who, I'm afraid, in terms of the people, have just as good of credentials as our professor.

Mr. MOORHEAD. I have a question that you might be interested in. You've criticized the provisions of H.R. 1733 that would restore time lost in the Patent Office. What if the Patent Office published a list of deadlines for it to respond to the applicant's actions and then compensated the applicant for any time it takes in excess of the deadline?

Mr. ROHRABACHER. I have been open

Mr. MOORHEAD. An absolute guarantee.

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Mr. ROHRABACHER. OK. I have been open to discussing different — in fact, I have been pleading with various people in the industry, and everybody knows that all around town that every time I give a speech on this, I've said let's come up with a compromise and try to find a way in which that 17 years of patent protection is absolutely guaranteed.

Mr. MOORHEAD. But you didn't answer; you're not answering my question.

Mr. ROHRABACHER. Right, I'll be open to talk about it, sure, but

my main goal, my main goal is to make sure that those 17 years of guaranteed patent protection are not taken away. Unfortunately, when you set up a complicated formula, rather than by changing the system where it was very simple, it was understandable and enforceable 17 years — when you change that to a system that basically we're trying to organize a very complicated process that will result in 17 years of protection, the people who have most of the money for lawyers, the people who have money to influence the system, basically have the edge. The poor, independent inventor who is operating on his own is left out in the cold because he can't hire the legal representation needed to get through the system. And that's the difference, although I'm open to any compromise that will guarantee the 17 years.

Mr. MOORHEAD. The gentleman from California, Mr. Herman. Mr. Berman. The chart that you showed is an interesting one and I would be interested in hearing from the opponents of your proposal, their response to those assertions.

Mr. ROHRABACHER. These are just three examples.
Mr. Berman. I understand. I understand.

Mr. ROHRABACHER. There are so many examples where people have invented things — it's taken them — where they've struggled to get through the system, and it's taken them 8 and 10 years.
Mr. Berman. Let me ask you a couple of things. First of all, I've only been on the subcommittee for about 10 of the last 12 years, so I don't know much about patents. [Laughter.]

I've managed to not specialize in that area. Mr. Boucher and Mr. MOORHEAD know a lot more. Tell me a few things here. When you file your application for a patent, can you start getting royalties for the use of your product?

Mr. ROHRABACHER. That is uncertain.

Mr. Berman. It is certain whether you are allowed or not?

Mr. ROHRABACHER. It may be possible, but most people will not respect patent pending until — most people will not invest in a tech-

nology or respect a situation until that patent has been issued because they realize that there are all kinds of people challenging — there may be another invention that the Patent Office has to decide on. It's a very uncertain situation.

Mr. Berman. But to the extent

Mr. ROHRABACHER. I believe, yes, it is possible.

Mr. Berman. It is possible?

Mr. ROHRABACHER. Yes.

Mr. Berman. And that would provide — I understand there are many complicating factors in all of this. Let me ask you one other question. When a patent is issued — let's say a patent is filed; another patent is filed by someone else, a similar kind of thing a year

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later. The patent issues on the first application. To the extent the second one is found to simply duplicate the first, does that wipe out the second patent? In other words, if you're first in time in filing your application, when that patent is issued

Mr. ROHRABACHER. It depends on who invented it first. We've got

Mr. Berman. It depends on who invented it first, not on who filed it first?

Mr. ROHRABACHER. By the way, my bill goes to none of these issues.

Mr. Berman. No, I'm trying to understand. I'm trying to understand. You've talked— if it's true, then it would concern me, that essentially this GATT effort, this implementation legislation which you are trying to change rewards not the best inventors, but the people who can gimmick the system the best to get their patents relatively early, because by going from a guaranteed term to a pe-

riod of time after the application is filed, the ones who can get that issuance earlier would get a greater period of exclusivity of return.

Mr. ROHRABACHER. Well, I'm just saying that the system, by taking it from a time certainty of 17 years and making it the 20 years of uncertain time and making the clock start ticking, what you've done is you've complicated the process so much that for people who lack the means to have legal representation, you've basically put them at the mercy of, one, an ineffective bureaucracy if the bureaucracy is ineffective and, two, outside interests that may want to try to manipulate the system, especially if you have an 18-month publication which permits outside interests to know exactly what you are up to, and then they can then plot a strategy of interferences which is commonplace in Japan.

What we have done is basically, by making this change, we have conformed our process to that in Japan. And there is a reason why in Japan they don't come up with new innovations — because people are beaten down by the system there, and their system is designed in a way that permits that.

Mr. Berman. Let me ask my question.

Mr. ROHRABACHER. Yes, sure.

Mr. Berman. I'm trying to understand if there's a — you're spinning out tales of untoward influences and agendas that are anti-American in a certain sense because they're not allowing the protection of invention and of American technology, and all of that. I'm trying to understand, is there some economic motivation why people would want to play around with when their patent is issued so that they can increase the time in which they have the exclusive rights for compensation, keep prices higher, keep consumers from getting, people getting access more quickly? I'm just wondering, is there a countervailing argument here?

Mr. ROHRABACHER. Yes, there is. And it's the submarine patent argument which I believe that there's an honest disagreement between myself and the chairman on the relative importance of that, as compared to the loss of rights that will take place by changing

the fundamentals of our patent system. There is a profit motive today, or at least under the old system, to basically try to string out your patenting if you believe that your innovation and your new technology will be so in use after 10 years or 15 years that

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that 17-year period will be more profitable to have your patent in effect. And that's what the submarine patent is all about. That is true in some cases.

I am certainly willing to work with anybody in this body to try — and I have pleaded with the industry — to say let's come up with a compromise. We can reform the patent process. We can reform the way the system works in the Patent Office to prevent people from doing that. But to take away the patent certainty, what we've done is open a whole new can of worms that basically will see what I believe will be billions of dollars' worth of royalties that should be staying here in American pockets or going to American pockets from Japanese and foreign bank accounts, that will no longer be the case because their term will be shrunk. It will take an extra 5 or 10 years to get through the process.

Mr. Berman. My time has expired. Let me just finish with a rhetorical observation, response. Although I would like to hear the critics of your bill address the issue of those kinds of inventions, I'm just wondering the extent to which one interpretation of what I see up there is that the laser, the microprocessor, some other things, because there was no particular motivation under the old law, were kept out of the hands of American industry and American people because they took 27 years to issuance, 20 years to issuance, 17 years to issuance. How much quicker might we have had the laser or the microprocessor had this post-GATT system been in place rather than

Mr. ROHRABACHER. I understand, I think that's a very good question, and I will say this: we have a rapidly changing scene in the field of technology. And before I knew people who were struggling to get their patents issued as soon as possible, even when the rate of technological change was much slower than it is today, today

when we have a rate of technological change that is so rapid many of the problems of the submarine patents no longer apply because inventors are deathly afraid that if they delay the issuance of the patent at all, they will be left behind totally. In fact, who cares if their patent is 17 years if something comes up 5 years from now that is more effective? So they want to get that patent issued right away.

Mr. Berman. I just was — I know we're running out of time and we've got all these witnesses.

Mr. MOORHEAD. Thank you. The gentleman from North Carolina,

Mr. Coble.

Mr. Coble. Thank you, Mr. Chairman.

Dana, good to have you with us.

Mr. ROHRABACHER. Yes, sir.

Mr. Coble. This matter has generated a lot of interest on this Hill and I guess around the country. Let me go back a ways with you Dana. On June 13 of this year on the House floor, it was either at a 1-minute or a special order, you said that the 20-year term was "snuck into the implementation legislation even though it was not required by the GATT Treaty."

Mr. ROHRABACHER. That's correct.

Mr. Coble. Now there are two parts to this statement. First, the matter about it being snuck into the implementation legislation — the 20-year term, as you probably know, was an issue that was

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being discussed in the GATT negotiations as far back I think as 1988.

Mr. ROHRABACHER. That's not correct.

Mr. Coble. Well, I think it is correct. Then let me finish; then I'll be glad to hear from you. I'm confident that is correct. We can disagree agreeably about that subsequently, though. It seems to me it was neither controversial nor new. Now you testified, Dana, at a joint hearing with the Senate — Mr. Chairman, I think in this very room; I'm not sure about that, but in any event, before this subcommittee on August 12, 1994, on the language contained in S. 2368, which was the language that was subsequently adopted 3 months later by the House on November 29 with a vote of 288 to 146, almost a two-thirds majority, and it passed in the Senate with a vote of 76 to 24 on December 1, 1994.

Now on that very day I mentioned previously, June 13, 1995, you went on to say that you were "denied the right to even see the language until shortly before November 29, 1994." Now Dana, did you not, in fact, testify on that language 3 months earlier?

Mr. ROHRABACHER. That's correct. That does not mean that that was going to be included in the bill. We were making requests of the administration as to whether or not this would be included in the bill. We were refused, my office was refused our request to see a copy of what this implementing legislation was going to be like. This couldn't or would not have been in this bill. This was a decision made at the last minute, whether or not this would be in the bill. In fact, the President went so far as to cut a deal with Senator Dole saying, well, we'll leave it in the bill, but if Congress acts on it we will agree; we won't oppose what Congress does. This could have been taken out of the bill at any moment. We were not informed about it.

Mr. Coble. Well, let me move along.

Mr. ROHRABACHER. And just to answer your first point, I have a letter from Cla3^on Yeutter I will submit for the record stating that this was not an issue of negotiation when he was our head negotiator.

[The information follows:]

HoGAN & Hartson L.L.P.,
Columbia Square,
Washington, DC, August 17, 1994.
Hon. Dana ROHRABACHER, ,
House of Representatives, Longworth House Office Building, Washington, DC.

Dear Dana: Thanks for sending over all the intellectual property materials subsequent to our conversation a couple of weeks ago. My apologies for not having responded sooner, but I've just been traveling too much, as usual.

I did check the final working of the Uruguay Round Agreement on intellectual property, and it is as you suggested. I have also followed the discussion of your proposal that we protect inventors for twenty years from filing or seventeen years from grant, whichever is longer. That seems very logical to me, and I see nothing in the Uruguay Round Agreement that would preclude such an outcome.

To put all this in historical perspective, we had a very hard time getting the subject of intellectual property protection on the Uruguay Round agenda when we debated all these issues at Punta del Este, Uruguay, in 1986. But it was one of our five primary objectives for that international meeting and, as you may remember, we succeeded in getting all five on the negotiating agenda. Those who were benefiting from the piracy of American intellectual property (and there were many) objected vehemently, but that is why we fought so hard to have this be a critical element of the Uruguay Round agenda.

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During my tenure as USTR, I do not recall any Uruguay Round discussion of the desirability of our changing the U.S. patent system to harmonize with those systems that protect on a filing basis rather than a grant basis. There are many more nations in the former category than the latter, of course, but that does not necessarily indicate that the former is preferable. There may well have been some discussions of this nature at the "working level" of the negotiations, but none at the ministerial level that I can remember. Therefore, I assume that this emerged as an issue of importance during the final stages of the Uruguay Round.

I suspect, Dana, the USTR (presumably in cooperation with Commerce, since that department has most of the administrative responsibilities in the intellectual property area) made commitments in the Uruguay Round that we would gradually move our system into conformity with that of the systems based on "filing" protection.

Though no such explicit commitment is included in the Uruguay Round Agreement, my guess is that you would find at least an implicit commitment somewhere. If that be so, hopefully we obtained a quid pro quo on other intellectual property language, or perhaps elsewhere in the negotiations. If my hunch is correct, that would explain why the Executive Branch has not been enthusiastic about your proposal for a combination of a grant component and a filing component.

I doubt there is anything here, Dana, that you haven't already known or surmised, but I thought the historic perspective might be of some value to you.

Sincerely,
Clayton Yeutter.

Mr. Coble. Well, as to whether you were denied the right to even see the language, that may be subject to interpretation, but I don't believe, Dana, that you were denied that right because you addressed it when you appeared before us.

Let me go to the second matter. The second part of the statement is that the 20-year minimum was not required by GATT. A change in our patent term was in fact required by GATT. To comply with GATT, as best I recall, we had to provide a 20-year minimum from filing. We could, however, have gone further and provided 17 years from issuance, whichever would have been longer, but we did not do that. Now I think, Dana, to say that no change was required, I don't believe that's correct.

Mr. ROHRABACHER. As per my conversation with the people who are negotiating for us, Mr. Clayton Yeutter, and before the current administration, I will just say that the language was written specifically to permit the United States to adopt a policy that would not require us to change the fundamental patent law. That's why it was written to say that at the very least we have to offer a minimum guarantee of 20 years from filing. It didn't say that you have to have that as your standard. Otherwise, it would have been written in a totally different way. We were not required by that legislation, and as it was purposely negotiated to give us this option, and I know it's easy to interpret the other way, but clearly, there's a purpose behind those wordings that give us, America, that leeway. In other words, we could have passed GATT and been part of the

GATT process without changing our fundamental patent law. And that was intentional on the part of our negotiators.

Mr. Coble. Well, not unlike the gentleman from California, Mr. Berman, my time is rapidly elapsing. Let me touch on one more thing, Dana.

Again, on your June 13, 1995, appearance you said "every technological breakthrough that has changed the lives of mankind that had been based on patents issued to Americans has taken years and years, sometimes more than a decade, sometimes more than 15 years to issue." I'm not — well, strike that. I started to say I'm not sure I agree with you. I am sure I don't agree with you, but we

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can talk about that at a later time. But I'd be glad to hear from you on that.

Mr. ROHRABACHER. Well, all I'll say is that if not every invention, every breakthrough invention, if not every one, the vast majority that I have seen, and I will be very happy to have a list that my opponents will come up with — see, this only took 2 years to get through, and this is a breakthrough technology — we'll have our list. But the fact is the list is so long on one side where it takes longer than 3 years to get through, that it is clear that there is a substantial loss of patent protection for major breakthrough technologies by changing the basic patent law.

We have basically lived with the same patent law for 134 years. And we take it for granted that America is the most innovative country in the world. We say, oh, that's part of our culture. You can't change the fundamental law and expect that America is going to remain the innovative country that it was. We have changed the basic rules for this. We have conformed to Japan. We have harmonized to Japan. This is going to change the way things work in the United States of America, and for people who think that it's not, we can watch 10 years from now and see what happens. It's not just coincidence that Americans are the most innovative people and we've come up with all of these inventions. It's because

we had that type of a patent system. Now, unless I am successful, unless we turn this tide back, we will not have that same patent protection and we will not be the same America.

Mr. Coble. We'll continue this, Dana. I'm sure, Mr. Chairman, that my time has expired. I thank the chairman.

Mr. MOORHEAD. The gentleman from Virginia.

Mr. Boucher. Thank you very much, Mr. Chairman.

Dana, welcome today and thank you for sharing your views with us on this subject of genuine interest to this subcommittee.

Let me just get the benefit of your ideas with regard to a couple of approaches that we might be able to take that potentially would address the problem that you have raised.

Would there be any benefit, in your opinion, if we went to a first-to-file system? Today patents are calculated based on who invented first, and the person who is the first inventor is entitled to acquire the intellectual property interest. Suppose we decided to do what the rest of the world does and take that to a first-to-file system?

Mr. ROHRABACHER. I'd have to take a look at it. It's not something I feel strongly about right now. I'd have to study the issue.

Mr. Boucher. So you don't really have a firm view as to how that would affect the

Mr. ROHRABACHER. I might after I studied the issue but I just haven't studied that particular issue enough to give you an answer.

Mr. Boucher. In Chairman MOORHEAD's bill there is a requirement that the patent applications be published after 18 months following their filing. It is argued, as I understand it, by the proponents of that by having that information made public at that time there would be an expansion of the prior art data base to the benefit of many parties, and that that would also be potentially an effective way to prevent surprise and preclude the conduct of the submarine patent holders.

Mr. ROHRABACHER. Right, the people would be surprised

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Mr. Boucher. Do you have any views with regard to that?

Mr. ROHRABACHER. Sure, the people who'll be surprised will be the inventors when they see people all over the world who have every little bit of information they have about their own creative endeavors; now it's in the possession of people who are their economic adversaries. And, there would be a whole new industry created if this 1733 passes as it is now. You will have an industry of all these lawyers who are out of work in Washington now; they'll be hired on by all of these companies all over the world to go to the Patent Office, pick up the publication, and fax it to the various companies in Indonesia, Thailand, Japan, and that will be a great industry. They'll make a lot of money doing it, and any new ideas that start springing up in the United States will be subject to grand theft. It'll be our inventors who will be surprised.

Mr. Boucher. So your concern, stated in one sentence, is that if you went to an 18-month publication rule, that would simply encourage pirating of American innovation?

Mr. ROHRABACHER. I do not understand how anyone can take a look at the idea of publishing an application for a patent, disclosing all of the information about innovation and technological ideas that are being developed by the United States — I don't see how anyone in their right mind, basically, I'm sorry to be so blunt about it, can think that people will not turn around and use that information for their economic benefit against us.

Mr. Boucher. Well, let me explore that with you a little bit. In the United States, if the information is pirated and put into practice and the technology is produced by someone other than the inventor, under our current law even in the absence of the issuance of a patent, the person to invent first would have the intellectual property interest and would, therefore, have a cause of action against anyone who expropriated those ideas.

Mr. ROHRABACHER. In this country, that's right.

Mr. Coble. So the 18-month publication rule with regard to this country should not be problematic. Do you agree with that?

Mr. ROHRABACHER. I would think it would be problematic, but if someone had enough money to enforce his rights by hiring the right kind of legal counsel, well, then that person can probably secure his rights because he or she has the money necessary to do it. The independent inventor doesn't have that money. Overseas it's a disaster.

Mr. Boucher. That's the bigger problem that you would foresee, is the fact that people overseas would take American innovation based on the 18-month publication and then put that technology into the market?

Mr. ROHRABACHER. They'd run with it.

Mr. Boucher. OK. Let me ask you one additional question, and then I'm going to yield to my friend from California who has some followups.

When you were answering Mr. Berman's question concerning the submarine patent holder, the person who sort of purposely delays for a period of time having his patent issued so that he could claim the benefits of the intellectual property interest many years down the road after the technology has been put into practice by others, you had indicated an interest in taking steps, and perhaps having

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provisions inserted in your bill, or Mr. MOORHEAD's or some combination of those two, that would prevent that practice from occurring. Did I correctly interpret your comments?

Mr. ROHRABACHER. I have no desire to protect people who are engaged in what is called submarine patent manipulation. That is not the purpose of my bill. I have since day one begged people to come up with compromises, with changes in the way the Patent Office

functions, for example, to try to confront this issue. And I have received no responsible offers in terms of the type of reform that we could make other than simply saying, "No, we're going to just eliminate everybody's patent right to a guaranteed 17 years of patent protection. That will solve the problem and so forget about reforming the system." I am open to any reforms that take place over here at the Patent Office and their procedures that will prevent the kind of abuse we're talking about.

In America we are not supposed to punish the people who are innocent by eliminating their guaranteed patent protection in order to get to the guilty by people who are manipulating the system. Let's change the system and reform it. I'm open to that. I'm anxious to get on with that job.

Mr. Boucher. Well, I want to thank you for that offer. I think that at the core of all of our concerns is the abhorrent practice of the submarine intellectual property owner surfacing well down the road, and we all want to make sure that doesn't happen, and your offer to work with us as we seek to address that is most welcome, indeed. I'll be glad to yield to the gentleman from California.

Mr. Berman. One question. In all your comments I'm a little confused. Do only foreigners steal American inventions?

Mr. ROHRABACHER. No, in fact

Mr. Berman. Do Americans ever steal it?

Mr. ROHRABACHER. Yes, they do.

Mr. Berman. Why is this always the "foreigners" are going to take our technology rather than an inventor who did something who is losing his right to get compensated for it?

Mr. ROHRABACHER. I will have to admit that it upsets me a lot more when a foreign company steals technology that was invented in the United States than when a American company tries to take advantage of a situation.

Mr. Boucher. One is stealing; one is taking advantage of it?

[Laughter.]

Mr. ROHRABACHER. Well

Mr. Boucher. Want to have longer sentences for foreigners?

Mr. ROHRABACHER. It's stealing in both cases, but in one case we have a legal avenue to protect ourselves. When we open this up, when we publish this to the world, about all these new ideas that we're trying to develop, many of our people are going to have absolutely no legal avenue to protect themselves against a company over in Thailand or in China or in Japan. They just won't have the resources or the legal avenue to do it. And so with an American company, I mean here's a guy who invented the windshield wiper, the intermittent windshield wiper, went to the major automobile companies, they said pooh pooh, and a few years later they stole it. And then there was a legal case; it took a long time for this man to get his due and he got his due. While overseas, that man was

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trying to bring some overseas company to the point where they would have to pay him would be in a very difficult situation.

Mr. Berman. The whole purpose of GATT was to get meaningful remedies against foreign interests, to get protections for intellectual property abroad so that there would be remedies against foreigners. The whole tradeoff in all of this was to get some meaningful kind of protection abroad.

Mr. ROHRABACHER. We've increased the level of protection, but if you're going to sit back and rely on that, and we're going to make all of our people vulnerable based on agreements made by some of these countries, and many of them are dictatorships, the bottom line is we're going to see our technology ripped off as never before. As I say, it's an open invitation to the thieves of the world to grab America's ideas and use them for their own benefit.

Mr. GOODLATTE. Will the gentleman yield?

Mr. Boucher. I'll be pleased to yield to my Virginia colleague.

Mr. Goodlatte. I thank the gentleman for yielding.

I'd like to follow up on the gentleman from California's point as well. Every other major industrialized country in the world follows this procedure of publishing

Mr. ROHRABACHER. There are only two other areas; it's Japan and Western Europe.

Mr. GOODLATTE. Western Europe is pretty major. [Laughter.]

Mr. ROHRABACHER. But it is not every country in the world. Mr. Goodlatte. I think Western Europe probably contains most of the other major industrial countries of the world that follows this. Now if their inventors, their companies, their individual inventors are being ripped off left and right by this system, by all of the other foreign countries if you will, why haven't they abandoned that process?

Mr. ROHRABACHER. Because in other countries they do not consider the rights of the individual the way we do in the United States of America. That's why most of the innovation happens in the United States of America. You look with what the Europeans have come up with find what the Japanese have come up with in these last 30 or 40 years and you'll find the Americans are leading by a long shot; it's not a close race even. It's not even close.

Mr. Goodlatte. Reclaiming the gentleman from Virginia's time, the fact of the matter is that while we certainly are a leader in innovative technology and inventions, and we certainly want to protect that, it seems to me that there are far other reasons for that than this difference in our patent laws. The German, the French, the British, the Japanese, have come up with a wide variety of areas of innovative technology, and to me, to suggest that it isn't our tax system, our productivity of our workers, other elements of the attraction to this country

Mr. ROHRABACHER. You're stretching it now.

Mr. Goodlatte [continuing]. Of people from other parts of the world as to the reason why we are a leader in this field and to point to this simple difference between publication is

Mr. ROHRABACHER. Well, it's not a simple difference in publication. We're talking about publication and we're talking about a guaranteed term versus an uncertain term.

Mr. Goodlatte. Well, let me

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Mr. ROHRABACHER. And I will say that what you're talking about is a fundamental

Mr. Hoke. Could I ask the gentleman from Virginia to yield for a moment?

Mr. Boucher. Mr. Chairman, let me do this if I may. Perhaps I should yield back my time and you can recognize each of these gentlemen on their own.

Mr. Hoke. Could I ask just for one moment?

Mr. Boucher. Sure.

Mr. Hoke. I just want to — perhaps the real reason that we have, in your view, been immensely more innovative and creative in terms of these technologies is that we actually have been, because of the publication rules of these other countries, stealing their technologies in advance and that's why we've gotten a leg up. Would you care to comment on that?

Mr. ROHRABACHER. I don't make light of this issue, and that question is making light of the issue.

Mr. Hoke. It isn't really making light of the issue.

Mr. ROHRABACHER. Can you give me an example of where we stole technology from overseas?

Mr. Hoke. It really takes your argument and

Mr. ROHRABACHER. Can you give an example of what you're talking about?

Mr. Hoke. It really takes the concern that you've got and puts the shoe on the other foot. If that's the case, then that is presumably what American manufacturers have been

Mr. ROHRABACHER. I will answer your question. Right now it seems to me that my colleagues, who I respect dearly, are bending over backwards to find some other explanation for America's greatness other than our fundamental law. The fact is that the Constitution of the United States includes patent protection. It is in our Constitution. This is something our Founding Fathers understood. Our Founding Fathers understood that technology and freedom would grant the average American a life much better than anyone else had ever dreamed in the world.

Today we are changing the fundamental law dealing with technological innovation. If we were dealing with other rights, the rights of speech, or religion, there would be no questions making light of, well, maybe America's character wasn't developed because we have such protections of speech and religion. There would be none of that, because no one is going to harmonize the rights of speech and religion and assembly and other constitutional rights with those of another country, thus diminishing the rights of Americans.

Mr. GOODLATTE. Let me

Mr. ROHRABACHER. But what we have here is a fundamental law that has protected our citizens, our creative citizens' right to property, the property they have invented, and we're trying to change it. That will change the essence of America's position in the world.

Mr. GOODLATTE. Let me say to the gentleman that you and I share one thing in common, and that is we want to have a good, sound, strong patent system that protects U.S. inventors. I admire your efforts to make sure that somebody who is creative and who

is inventive does get a period of time in which to reap the benefit of that. As a system of reward, we give them a monopoly for a pe-

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riod of time in which to recover something for their costs, their time, and so on.

I'm concerned, however, on the other side that we also not have a system that can be gained in such a way that you can reap benefits for a far longer period of time. Everyone in this room has bought many, many products that on the product it says "patent pending" on it. Many of the products that take a period of time to have a patent issued are sold during that time, either by the inventor of the product or to another company for royalties.

So when you have — and I can't speak to any of the particulars of these, although I do know that Phillip's Petroleum, the first one you cite there, is a supporter of Chairman MOORHEAD's legislation, H.R. 1733. But each one of these, they're all quite old in the fifties and sixties, but each one of them or others could be situations in which individuals reaped more than 17 years, far more, maybe 27 years plus 17 in the case of polypropylene. That has the effect of slowing down innovative technology and it has the effect, possibly, depending on one's point of view, of going too far in terms of creating a monopoly and rewarding an inventor for too long a period of time. So I am concerned about that aspect of the current system and of your legislation.

Mr. ROHRABACHER. If there are abuses in the system, if someone is abusing someone else's rights, if free speech is being abused in this country, the last thing we do is change the essence of laws protecting freedom of speech. What you do is look at the abuses of freedom of speech, and what we have done here now is instead taken a certain right which is a certain patent right that Americans have had for 134 years and made it an uncertain right, because it has to go through the bureaucracy and the processes and lawyers are involved, et cetera, and some people have less and some people have more, depending on how they can work the system.

Mr. GOODLATTE. It's uncertain right now, however, because if you're out to stretch out the process, you don't know how long you are going to succeed in stretching it out.

Mr. ROHRABACHER. Right now if you are trying to stretch out the process, I am in favor of making the reforms that are necessary to prevent that. But you do not have to change and alter and diminish the fundamental rights of 17 years of guaranteed protection to do that. There's been no attempt, no attempt at all.

By the way, the inventors aren't the only ones affected. If I could make one short point, we're also talking about the investor. You know, it takes a lot of money sometimes for people to develop these technologies. The investors that we have have always known that they've had 17 years to reap their reward from the investment that they've made. You're not only affecting the inventor when you eliminate that certain term of 17 years, you're telling the investors that you may or may not have 17 years at the end. And there's no amount of government subsidy for R&D that's going to make up for making the patent term uncertain.

Mr. GOODLATTE. But when somebody invests in one of these things, one thing they want to know right away is how quickly you're going to get that product to market because that's where they're going to get their rewards. So, that is where they can iden-

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tify how quickly they are going to get to market and how long a period of time after it gets to market relative to when the patent is filed that they will be able to reap some reward.

Now let me say another thing about Chairman MOORHEAD's bill that answers many of the concerns that you've addressed that actually exist in current law, and that is that during this patent pending time there is not full protection; you can get a cease and desist order, for example, but you cannot under current law sue for royalties. The chairman says that after that 18-month publication date, you will then be able to sue for royalties, giving you an added pro-

tection in this country, elsewhere in the world that you do not have under current law.

Mr. ROHRABACHER. Well, under provisional patent rights that are being offered, that in the end the claim must be based on a patent that is identical, a claim that is identical to the final patent — now we're talking about with patent pending, people go through these changes, and this is what I don't think a lot of people understand: when you file for a patent, you go through many different changes and the Patent Office actually requires you at times to change your patent application for them to pass on it at that stage. And these things take 6, 7, 8, 9 years at times because the Patent Office itself is trying to do a good job and they are trying to do their best job. This isn't even just bureaucratic inertia. This might be conscientious decisionmaking on the part of the bureaucracy. So if you end up with a change in your patent application or your patent from that time, and somebody else is using that original information but it's identical to the one that is issued, then you don't have that patent protection under what Mr. MOORHEAD is suggesting.

Mr. GOODLATTE. Well, let me also suggest that "patent pending" has an additional power to it. You know that if you're looking at going in and competing and that patent does issue a few months later or a few years later, then you're facing much more serious consequences for having infringed the patent. But I think he does enhance that by giving that an additional protection that allows you to sue under your patent pending.

Mr. ROHRABACHER. Yes, if you have the money to sue and to protect yourself, that's fine with domestic companies; with foreign companies it's almost an inconsequential compared to the benefit that they're going to get by having the total details of technological ideas that you have been developing.

Mr. Boucher. Would the gentleman yield for just a minute?

Mr. GOODLATTE. Sure.

Mr. Boucher. Just on that question, Dana, you suggested that your major problem with the 18-month publication is that that would spread the information around the world, that companies in

other countries would pirate the technology and use it. But in those other countries the patent right extends from filing, and the first to file gets the right. So why couldn't the U.S. inventor at the time, or just prior to the time, that he is required to publish in the United States, at 18 months, simply file his patent application internationally and get guaranteed patent protection in all of those countries?

Mr. ROHRABACHER. I'm not sure how long that process would take as, again, I'm not an expert on the first-to-file option. And I

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will look at it and ask advice from people who understand that, but it might be a very expensive proposition to file in another country. It may be some inventor might not have that. So I'm just not certain of that answer.

Mr. Boucher. Let's take a look at that because I think we are going to hear fi*om the proponents of 18-month publication that that is the answer, that simply filing around the world gives you the guaranteed first right to intellectual property protection.

Mr. ROHRABACHER. I will have take a look at it. Again, I haven't studied that

Mr. GOODLATTE. The gentleman makes a good point. The chairman's already pointed out that the vast majority of inventors do that right now to assure their protection, and under the current set of circumstances, because they have to publish it in Japanese or whatever other language, it then surfaces at 18 months in a foreign country and somebody who has the language advantage

Mr. ROHRABACHER. I'm not certain how much it costs to file a patent in Japan, for example. I'm not sure what the costs are that are entailed. If we basically are saying to our own American citizens that you've got to incur the extra expense of filing in other countries at the same time before you will get the protection that is afforded you as an American, I'd have to see how much it would cost, and also I don't necessarily feel comfortable about basically in-

suring our own protection by making sure someone has filed in a foreign nation. We have 14 percent of all inventors today file their patents in Japan and there has to be some reason for that.

Mr. GOODLATTE. I've well exceeded my time, Mr. Chairman.

Mr. MOORHEAD. The gentleman from Ohio.

Mr. Hoke. Thank you, Mr. MOORHEAD.

Actually, the questions that I had really follow the observation that Mr. Boucher had and some of the earlier comments of Mr. Goodlatte, and I think rather than ask a question, I just want to make one observation to recap it. And that is that I think the concern that you have regarding the change in the patent law is a very narrow set of factual circumstances that go to the case of the individual inventor or corporate inventor in the United States who chooses only to file his publication or patent application in the United States. Because once, if a person, if an individual inventor in the United States makes the decision to file internationally, then by law those applications outside of the United States will in almost every circumstance be published

Mr. ROHRABACHER. That's correct

Mr. Hoke [continuing]. And not only be published, but be published, in fact, in the native language of the particular country.

Mr. ROHRABACHER. That is correct.

Mr. Hoke. And so I think it's important for us to remember, as we think about this change and these two different pieces of legislation, that we're talking about a very narrow

Mr. ROHRABACHER. If that's a question, if I could answer, it would be

Mr. Hoke [continuing]. That we're talking about a specific set of facts that go to the case of the American corporation or inventor choosing only to file the patent application for protection in the

United States and not to seek protection for their invention abroad.

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Mr. ROHRABACHER. If I could answer that — there are only two other areas that have really been what we're talking about patent law that is applicable here. We're talking about Japan and we're talking about Western Europe. And by changing, by basically harmonizing our law with that of Japan, what we are doing then is eliminating the one safe haven left for the creative individual. The one thing that we've prided ourselves on, because we will be exactly like Japan and the reason why, the reason why

Mr. Hoke. OK, I'm reclaiming my time. I'd really like to get to the rest of the testimony and I suspect that they're going to speak to that issue specifically. Thank you, Mr. Chairman.

Mr. MOORHEAD. Thank you. I want to thank the gentleman from California, Mr. ROHRABACHER, for his testimony.

Mr. ROHRABACHER. Thank you, Mr. MOORHEAD.

Mr. MOORHEAD. I ask unanimous consent that the following letters be made a part of the record following Mr. ROHRABACHER's testimony: a letter dated July 24, 1995, from the White House Conference on Small Business, signed by the nine Chairmen of the Technology and Innovation Section, indicating that the Technology and Innovation Section of the Conference voted overwhelmingly not to support H.R. 359; Mr. KIRK's letter to the editor of the New York Times; and, three. Secretary Brown's letter to Mr. ROHRABACHER dated July 15, 1995, representing the administration's views that it has significant problems with H.R. 359.

[The letters follows:]

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The White House
Conference on Small Business
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July 24, 1995

The Honorable Dana ROHRABACHER
U.S. House of Representatives
Washington, D.C.

Dear Representative ROHRABACHER,

Your recent "Dear Colleague" letter suggests that the White House Conference "strongly recommended that the U.S. retain the guaranteed patent term contained in the Dole/ROHRABACHER bill, H.R.359."

That is incorrect.

The Technology and Innovation section of the Conference considered the issue and voted overwhelmingly not to support H.R.359.

The delegates to the Technology and Innovation Section included those businesses involved with patents and invention. Domestic patent law was in this section's agenda. We who chaired that section wish to advise you that the delegates support GATT and specifically oppose the provision to allow patent terms to be based on date of issue because it eliminates the incentives to process the patent application expeditiously by the applicant. Time is critically important to small business concerned with technology development and commercialization. We do not wish to return to a system that creates incentive for examination delays by anybody. We voted not to support H.R.359 because it rewards delay by the applicant and it moves us away from an international standard.

As for International Trade, the Conference wished to correct any impression that international trade was unimportant. We wished to convey a strong message to Congress that trade issues are very important to small business. We therefore supported every resolution dealing with International Trade. Many of us did not expect and did not notice that an inappropriate sentence regarding domestic patent issues had been tacked on to an International Trade resolution. That is perhaps why resolution 115 is also contradicted by resolution 121.

We do appreciate your interest in small business. We hope that you will be able to meet with us and support our desire for speedy patent examinations and our need for effective international intellectual property protection at reasonable cost. ^ ~ ' V-

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January 18, 1995
The Editors
The New York Times
New York, New York

Dear Sirs:

Last week, I was asked by Times reporter, Sabra Chartrand, to explain how the Uruguay Round Agreements Act (URAA) will change U.S. patent law, particularly the term of patents. Regrettably, my explanation of the new method for measuring the term of U.S. patents was not completely reflected in the "Patents" column on January 16, and has given rise to reports by others that are totally inaccurate. I want to assure you and your readers that the provisions of the URAA will not effectively shorten the terms of U.S. patents, nor has the Administration changed its position on this matter.

As reported accurately in the Times, the vast majority of the inventors, without altering their current practices, will benefit from a longer term of patent protection under the new system. Some inventors who took advantage of delays permissible under the old system, however, will have to alter their practices to accommodate the changes if they wish to maximize their benefits under the new system. These changes will penalize those who engage in delaying tactics in the future. At the same time, however, the changes will add elements to the law such as provisional applications and relief for delays not caused by the applicant, to ensure that most inventors can actually receive a longer term of protection than the present 17 years. Moreover, the URAA contains special provisions to allow inventors with pending applications to transition to the new system with no loss of patent term. As one can easily see and as I stated, inventors who are not aware of the changes and who do not take advantage of the safeguards in the URAA may lose some term. That is why, as the Times column reported, we are conducting seminars throughout the country, preparing a video tape of the seminars, and taking other steps such as setting up a telephone hotline, to inform current and potential users of the patent system about the changes.

We continue to believe that measuring the patent term from the filing date will increase the term of protection for most inventors, will promote early disclosure of technology, will facilitate obtaining protection abroad for Americans, and will eliminate the possibility of abusive "submarine" patents. I trust that Ms. Chartrand would also not appreciate her condensed report of this complex matter being cited as a source for inaccurate statements by others.

Sincerely,

Michael K. KIRK
Deputy Assistant Secretary of Commerce and
Deputy Commissioner of Patents and Trademarks

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The Honorable Dana Rohrabacher
House of Representatives
Washington, D.C. 20515

Dear Congressman ROHRABACHER:

Thank you for your letter regarding H.R. 359, a bill that would amend the Uruguay Round Agreements Act (the Act) (Pub. L. No. 103-465). As I have indicated previously, I appreciate that we have different views on your proposal. I believe we can work toward a common goal of a patent system that effectively protects the interests of all patentees, without making possible abuses that have caused serious problems for American inventors and industries in the past.

In your letter, you reference the letter sent by Ambassador Kantor to Senator Dole last November 23. As Ambassador Kantor said:
We believe that if Congress reconsiders the issue next year it will reach the same conclusion reached by the Administration and the Judiciary Committees ... on the Uruguay Round Agreements Act bill. Nevertheless, if the Congress does revisit the issue and reach the conclusion that a change in accordance with your proposal should be made,

the Administration would not oppose legislation to achieve that .

From this language and his arguments in support of the patent term provisions in the Act, it is clear Ambassador Kantor was not suggesting that the Administration would refrain from commenting on the merits of legislation while it was pending before Congress. Thus, I believe that actions taken by the Patent and Trademark Office (PTO) in pointing out the problems that H.R. 359 would create are consistent with the Administration's commitment to Senator Dole. In his letter to Senator Dole, Ambassador Kantor identified many reasons why the patent provisions of the Act would provide significant benefits for American inventors, businesses and the public. One of these was that most

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The Honorable Dana Rohrabacher

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patentees would enjoy a longer period of exclusive rights under a 20 year from filing patent term than they would under the former 17 year from grant system. The basis for this statement has not changed. The average pendency of applications before the PTO is now approximately 19 months. Using these figures, under the new system patentees will routinely enjoy a period of exclusive rights that lasts more than 18 years. The Act also provides several procedures patentees can use to maximize their patent term, including the "provisional application" procedure. By taking advantage of this option, an inventor will obtain the benefits of an early filing date and can defer the commencement of the term of a patent for up to one year. The Act further provides that the term of any patent will be extended where prosecution has been prolonged for reasons beyond the direct control of the applicant. For example, if an applicant must appeal a decision to the Office's Board of Patent Appeals and Interferences or to a Federal court, the Act provides an extension of up to five years. Similarly, if the application enters an "interference" proceeding or cannot issue for reasons of national security, the term will be extended up to five years. These grounds for extension are in addition to the current provisions for restoring term to compensate for Federal premarketing regulatory delays.

The Administration has pointed out the serious problems that would be created by a patent term that would last the longer of 17 years from grant or 20 years from filing. The most significant of these is that such a system would

eliminate the incentive for applicants to process their applications promptly. This, in turn, would reintroduce the prospect of delays in patent issuance and would reduce the certainty needed by the Nation's inventors, researchers, and investors to direct timely research and development efforts. These delays and the associated uncertainty will discourage Americans from investing in the research and development that is essential to compete in today's high-technology markets, and place American firms at a competitive disadvantage in the global economy.

A shortened patent term, such as that proposed in H.R. 359, would also enable patent applicants to once again manipulate the system by intentionally delaying their grants. Thus, it would reintroduce the problem of "submarine" patents referred to in Ambassador Kantor's letter. While H.R. 359 attempts to address this problem by providing for public inspection of applications after five years, inspection alone will not mitigate the adverse consequences of delays in issuance that are characteristic of submarine patents. In other words, inspections may let businesses know there is the possibility of a submarine

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The Honorable Dan Rostenkowski
Page 3

patent issuing, but they will not prevent the market dislocation caused by the award of a patent to an inventor who has intentionally delayed the grant of rights.

The Administration worked hard to ensure that the patent provisions of the Act served not only the interests of individual patent owners but those of the public. Our patent system was designed to reward inventors with a finite period of exclusive rights in exchange for prompt disclosure of their inventions. By implementing a 20-year patent term, we not only lengthened the period of exclusive rights we will be providing to inventors, but also served the public interest by setting a time certain where patent rights will end. This is one reason why the patent term changes in the Act were strongly supported by a broad cross section of the patent user community, including the National Association of Manufacturers, the Intellectual Property Owners, the Software Publishing Association, the American Electronics Association, the Pharmaceutical Research and Manufacturing Association and the American Intellectual Property Law Association.

Tfans, in view of die signiflcanT problems that H.R. 359 vraald create for
Amesrican inveotoTB and indnsty, wt wtO eentnum to advocate the advantages
of a TO^earpatam tenn measured sot^Jtom the date cfjUbif;. Despite diis,
as I noted above, I am mlwwyt interested in suggestions oa how to inqirove the
patent system, 4iM-iiM<i" g how FTO operations can be changed to ""m^*""**
practices diat could lead to delays during patent exandnation. You shonld note
that the Office has already tskm steps alongchese lines by issuing new
examination giuddines for biotechnology inventioiis. These guidelines have
been praiaed by the biotaehnolagy indnsty as oqb way to redoce the tixAe it will-
take to con^lete examinatioo of biotechnology spplificatioas. If yon believe
there are odier pracdces of die Office, or situatinns that can develop during
examination, that could lead to an unintentional loss of pateot term, we would
be pleased to work widi you to arrive at an equitable sohithoa.
We have been informed by die 0£5ce of Management and Budget duit
there is no objection to die submission of this report from the stam^Kunt of the
Administratian*s cibiectives.

Sincerely,

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Mr. MOORHEAD. I would also like to point out that these are
major inventions that you have here. They would, undoubtedly, if
they wanted protection overseas, they would file both in the Euro-
pean patent office and Japan, They'd both be published

Mr. ROHRABACHER. I'm uncertain of that.

Mr. MOORHEAD. They would be. As far as the time limit is con-
cerned, I don't know why each one took so long, but I do know that
if it was no fault of their own that the delay took place under the
new legislation, that they would end up with 31 years: the 10-year
extension, the 1 year that's provided originally, and the 20 years.
So they would get 31 years.

Mr. ROHRABACHER. If the Patent Office is responsible and if ev-
erything works as it should, you may be right.

Mr. MOORHEAD. They would have a substantial period of time that they were covered, but I'll have to check into it to find out why they took so many, many years.

Mr. ROHRABACHER. Mr. Chairman, these are only three examples. There are many, many other examples. You will hear witnesses later on in this hearing who will describe many other inventions that took much longer than the 3 or 4 years we're being told it takes to issue a patent.

Mr. MOORHEAD. There's one more question someone wanted me to ask. On June 26 of this year, on the House floor was said the following: Changing the patent term will have a dramatic impact in the long run on the standard of living of the people. The facts are that it will be another 4 years before we know patents are issuing with less than 17 years, and if that's the case, the subcommittee has 16 years to correct such a problem. Do you have any facts, statistics, or data of any kind to support your statement?

Mr. ROHRABACHER. Because we're not just talking about royalties; we're also talking money that is dedicated and invested by people who are investing in research and development. Although your challenge is correct in the sense that it will not affect the inventor for another couple of years directly, but it will affect people who are inventing, inventors of current technology, the process of developing new technology with R&D is already being affected by this change. When you have people who are being asked to invest in the development of new technology they are no longer, at this moment, they are not being given the same guarantees that they were given 2 years ago. Two years ago they could say "Well, you would have a guaranteed 17 years to make your money back, no matter how long it takes to get through the process." Those investors now have a totally different proposal being given to them. So it's already affecting investment in the United States and after about a year or two we'll see that and be able to calculate it.

Mr. MOORHEAD. Well, thank you very much again, Dana. I appreciate you coming. I want to say that I've left this part of the discussion wide open as far as time because I wanted you to have all

the time you possibly needed here.

Mr. ROHRABACHER. Mr. MOORHEAD, I appreciate your

Mr. MOORHEAD. On to our two panels, the first panel, basically supporting my bill, the people on the panel will be limited to 5 minutes. Those supporting Mr. ROHRABACHER's bill, they're going to get 6 minutes. [Laughter.]

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I'm going to lean over backward on this thing and be absolutely fair.

Mr. ROHRABACHER. Mr. Chairman, thank you very much, and I appreciate the debate we've had over the last year and I appreciate your job as chairman. It's a rough job, and when you've got passionate Members like me, it's even more difficult. So, thank you, Mr. Chairman.

Mr. MOORHEAD. Our first witness on the next panel will be Mr. James L. Ferguson, an inventor and president and founder of Optical Shields, Inc., located in Menlo Park, CA. Mr. Ferguson holds over 100 U.S. patents, including the liquid crystal display, or LCD, and has licensed more than 40 domestic and international companies. Over 5 million LCD units are produced as parts of watches, calculators and medical equipment to name a few products. Over 100,000 jobs are attributable to products produced and sold related to Mr. Ferguson's inventions. It's a pleasure to have you here, Mr. Ferguson.

Our next witness is Prof. Mark Lemley of the University of Texas School of Law where he teaches intellectual property and computer law. He is the author of two forthcoming textbooks and numerous articles on the related subjects. Of specific importance to these hearings, Mr. Lemley authored an article empirically evaluating the benefits to patent applicants under either 17 years from issuance or 20 years from filing patent term. He received his bachelor's degree from Standard University and his law degree from Boalt Hall School of Law at the University of California at Berkeley.

Welcome, Professor Lemley.

Our next witness is Mr. Tom Buckman, an inventor and vice president of patents and technology at Illinois Tool Works. His prior experience includes being an aerospace engineer at the Manned Spacecraft Center for NASA, a patent examiner at the U.S. Patent and Trademark Office, and a patent attorney. Welcome, Mr. Buckman.

Our next witness is Mr. Bill Budinger. He is also an inventor and the CEO and founder of Rodel, Inc., a small business in Newark, DE, which manufactures products used by the semiconductor industry in the manufacture of integrated circuits. He holds more than three dozen patents. He is a founding board member of the Delaware Innovation Fund and serves as a member of the White House Conference on Small Business. Welcome, Mr. Budinger. Our next witness is Mr. Edward Stead, the general counsel, secretary and vice president of Apple Computer, Inc. He heads the Apple legal practice. Mr. Stead is involved in some of the most ground breaking technology issues facing the computer industry today, including the protection of intellectual property and licensing. Welcome, Mr. Stead.

Our next witness is Mr. Roger L. May who is the assistant general counsel of intellectual property at Ford Motor Co. Before joining Ford, Mr. May was in private practice and served as an examiner at the U.S. Patent and Trademark Office. He is a member of the Technology Committee of the Center for Public Resources and the Michigan Patent Law Association. Welcome, Mr. May.

Our last witness on today's first panel is Mr. Stephen H. Barram, an inventor and CEO of Integrated Services, Inc., of Lake Oswego,

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OR. He served as a delegate to the 1995 White House Conference on Small Business and is involved in several trade organizations. He is responsible for overseeing product development, consumer relations, business transactions and the general operations of ISI. Welcome, Mr. Barram.

We have your written statements. I ask unanimous consent to be made a part of the hearing record and I ask that each of you summarize your statements in 5 minutes or less. I ask that members of the subcommittee hold their questions until all of the witnesses have finished their statements.

And we will begin with Mr. Ferguson.

STATEMENT OF JAMES L. FERGASON, PRESIDENT, OPTICAL SHIELDS, INC.

Mr. Ferguson. Thank you. I am pleased to talk today. I'm an independent inventor. I presently have 23 U.S. pending applications. I have four patent cooperation treaty applications with U.S. designations. I have 3 European patent convention applications and 27 other foreign filings. I am here to speak about the importance of publication and term measured from the date of filing. I believe that both of these are very important, particularly publication.

Patents are, I regard, as a social contract in which we are out there to start new businesses and build new technology. I believe that with publication we are able to more accurately assess the need for investment and whether somebody is going to come out of the woodwork and disrupt our investment. I think that 18 months is maybe a little bit too long. Ideally, I would like to see a patent system where you filed in the morning and got the patent issued at noon and published that night.

I think patents are — I have to go to Japan for information now and pay for translations. I pay for my own patents and therefore it's very costly for me to do that. By knowing what's coming and knowing what's going to happen, I can know how to spend my money, which patents to emphasize, and also I have never observed publication as being a problem.

I regularly file PCT patents which are published in 18 months. I've been ripped off", but it's never been rip-off in terms of the 18-month publication.

Thank you very much.

[The prepared statement of Mr. Ferguson follows:]

Prepared Statement of James L. Ferguson, President, Optical Shields, Inc.

I am pleased to be here to speak as an independent inventor and innovator in the field of Uiquid crystals. I have over 100 U.S. patents with corresponding cases of some in over 40 countries, resulting in over 500 patents world wide. My inventions make possible the flat panel liquid crystal display (LCD), the LCD calculator and the LCD watch. Currently, I have 23 U.S. pending applications, 4 patent cooperation treaty applications with U.S. designations, and 3 European patent convention applications with more than 10 designees and 29 other foreign filings.

I have worked in the field of liquid crystals for over 38 years beginning in 1957. I have been an active inventor since 1958 with my first patent issued in 1963 which was assigned to Westinghouse Electric. During my years of inventing I've seen many changes in the treatment of patents; and I believe we have been evolving toward a system which could, with proper trade agreements, allow for the filing of a single patent with world wide coverage. I feel that we often lose sight of the fact that patents are a direct benefit for the public in that they exist to allow for the

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flow of information. There should be a minimum negative impact on the discoverer or inventor for disclosures so that he or she is not motivated to hold the information secret but, on the contrary, is induced to spread the information as widely as possible.

I first started understanding differences in patents in other countries by working on Canadian and European patents and have now filed patents in over 40 countries world wide. I have seen the market for high tech goods spread from a highly localized U.S. market to world wide markets in which the U.S. is a minority player. When I started out in the late 1950s, a U.S. patent was enough to insure a reasonable outcome on an invention. That is no longer true. Each year it becomes more important to obtain foreign patents. As a matter of fact, in the first company I founded, ILIXCO, we made the first successful commercial LCD (liquid crystal display) for watches and calculators. We sold the patent package of seven controlling patents, which included Europe and Japan, for a cash payment, half the U.S. royalties and 30% of the world wide royalties. Under that arrangement, over 80% of our income was from foreign royalties.

The importance of the two bills that we are testifying on is that one, H.R. 359, is a step backward and H.R. 1733 is a step forward. As a point of fact, those of us who file in other countries through PCT have our applications published in 18 months and we are subject to a 20 year term in most countries.

I have been forming small businesses to exploit my inventions since 1970. These businesses have required venture capital, corporate investment or some other source of cash. One of the problems is the risk involved in starting a business of this type. The success of the business is at risk because we can not know what the prior art is and if a patent will surface which could put us out of business. In further support of H.R. 1733, I can search the Japanese files and know within eighteen months if someone else has filed on a similar invention. However, in the U.S. these files are in Japanese and I have to wait for an English translation or wait until the case issues and that can be disastrous. For a large company, it is usually money but for a small company, it can mean survival. In the industrial park where my current laboratories are located, I have a neighboring business (E.T.S.) who is selling transformers and baUns. The main business was taken over by Asian Companies. The owner developed a new product for local area networks with a unique feature. After a patent search, he filed a patent and introduced the new product. After good acceptance in the market, a patent issued to someone else which covered the feature after SVz years pendency. We worked together to hold off bankruptcy while he retooled. This is an example of a small company who has a vital interest in publication. Although in some cases the delays in prosecution is a strategy, in many cases it just happens administratively; but the cause of the delay doesn't matter to the small company. This is why most groups that I am associated with strongly support publication. H.R. 1733 addresses the importance of providing provisional rights which are an essential part of procedures for publishing applications. The inventor must have a right to compensation from competitors who learn about the invention after the published application.

As to the matter of the patent term, I have a personal interest in the patents I own so they should have as long a term as possible and my competitor's patents should have as short a term as possible. It is desirable to know with some degree of certainty that the length of time that an inventor has to bring an idea to market is adequate, or if a competitor can deny the inventor market access, or what royalties must be paid. This certainty comes from using a term of 20 years from the date of filing. The 20 year term measured from filing of the first application removes the incentives for delay and provides incentives to commercialize inventions promptly. Patent protection exists for the mutual benefit of the inventor and the public.

In effect, I think this law will cause much more precision in drafting claims since it becomes very desirable to be able to protect the property back to the date of publication. However, the requirement that a claim in the patent must be identical to a claim in the published application should be changed to allow for the claims to be substantially identical.

One issue of importance is the allowance of extra term for administrative delays including interferences, appeals and regulatory requirements. I support the extension of the 20 year term for any unusual administrative delays that are not caused by the applicant. I also support an increase in the total duration of the extensions of a patent to 10 years to insure proper patent protection. I have had many delays which increased the time a case spent in the patent office but almost none of these would have shortened my 17 year term for more than 6 months to a year. By measuring the patent term from the earliest filing date, H.R. 1733 provides the incentives to avoid delays and bring the product to market. The benefits to commercialize the inventions will benefit U.S. industry and the public while protecting

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the inventor's rights, the technology and will provide more products and jobs. Therefore, I support H.R. 1733.

In conclusion, I want to move forward to make inventor rights strong and to maximize the flow of information without violating our social contract to provide new products in an open manner. The patent system of the seventies made it possible for large companies to infringe with impunity and enforcement of a patent was much more a function of the judge than the relevant merits of the patent. We are now in the good new days of an evolving patent system and the more that both society and inventors benefit from patents, the more secure patent rights will become for everyone.

Mr. MOORHEAD. Thank you.

Mr. Lemley.

STATEMENT OF PROF. MARK A. LEMLEY, SCHOOL OF LAW,
UNIVERSITY OF TEXAS AT AUSTIN

Mr. Lemley. Mr. Chairman and honorable members of the subcommittee, good morning.

Representative ROHRABACHER has raised significant concerns about the effect that the new 20-year term will have on patentees in this country. Last fall I commissioned a study which, as far as I know, is the only comprehensive detailed study of the actual effect of the 20-year term on American patentees. The study was submitted to this committee in June and submitted for publication. It will be published this month in the American Intellectual Property Law Association Quarterly Journal, and you have a copy attached to my testimony.

I want to highlight briefly just five major findings of this study because I think they're important to this debate. First, the average patent owner wins under the new 20-year term. They gain rather than lose protection. Under the most realistic set of assumptions, they gain an average of 426 days or 14 months of protection over the 17-year term. Even under the most pessimistic assumptions, they gain 253 days or 8 Viz months.

Second, it's not just the average patent owner who gains. The vast majority of patent owners win under the new law. Under the most realistic set of assumptions in my study, 87.1 percent of patent owners in the United States gain term under the 20-year term. Even under the most pessimistic assumptions, 76.8 percent, over three-quarters, gain term. This is not, on balance, hurting American inventors.

Third, only a tiny percentage of patent owners in this country risk significant losses, losses of 2 or more years of protection under the new term. Under the realistic assumptions in my study, only 2.2 percent of patent owners would lose 2 or more years of protection. Even under the most pessimistic assumptions, only 5.3 percent of all American patent owners would lose 2 or more years. And I might note there that even those numbers do not take into account the various term extension provisions that have been enacted into the new law to protect against delay due to interference, delay due to appeal, and they do not take into account H.R. 1733 and the proposed additional provisional protection that Chairman Moorhead has authored. In fact, therefore, the numbers, I would expect, would be significantly less even than the small percentage of peo-

ple who lose under the new law.

Fourth, for nearly half of the patents that lose a significant protection — 48 percent of them — the cause of delay was the applicant

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him or herself abandoning and refiling the application in the Patent Office three or more times during the course of prosecution. These are not delays that are inherent in the patent process, these are not delays that are the fault of the Patent and Trademark Office, these are delays that the patent owner or applicant can do something about, can shorten or reduce the total delay. And, finally, there is no evidence that I have seen that suggests, as Representative ROHRABACHER did, that the most important patents are the ones that take longer in the Patent and Trademark Office. It's not possible to study that question directly because there's no measure anywhere of what the most important patents are, but I did study litigated patents — the patents that people care enough about actually to take to court to enforce. And what I've discovered is that there is no difference between the litigated patents that actually enforced, that are held valid by the courts, and those that are found to be invalid. They take on average almost exactly the same amount of time. Indeed, some valid litigated patents, patents that were of sufficient importance to invest the money in enforcing them against infringers, issued in the Patent Office in as little as 8 months.

So, what little evidence we can find suggests that it is simply not true that all breakthrough inventions or all important patents spend a significant amount of time before the Patent and Trademark Office. I think that this data suggests that the need for H.R. 359 is not nearly as great as has been suggested by some individuals, and I hope it will be of use to the committee.

[The prepared statement of Mr. Lemley follows:]

Prepared Statement of Prof. Mark A. Lemley, School of Law, University of Texas at Austin

Last year, Congress enacted the most significant set of changes to the patent laws since the 1952 Patent Act. The most important of the new provisions changed the length of time the law gives protection to patent owners (the "patent term"). Under the old law, patent owners received a fixed term of protection of seventeen years from the day the patent was issued by the Patent Office. Beginning with applications filed June 8, 1995, the patent term extends from the day a patent is issued by the Patent Office until twenty years from the day the patent application was filed with the Patent Office. In practice, this means that the actual length of time a patent owner gets protection will vary from case to case, depending on how long the application process takes.

benefits of the new law

The immediate occasion for the change in patent term was United States adherence to the Uruguay Round of the General Agreements on Tariffs and Trade (GATT). Article 33 of GATT's section on Trade-Related Aspects of Intellectual Property requires that member nations protect patent rights for a period of at least twenty years from filing.

There are two primary benefits to retaining the twenty-year term as it is currently written. First, the current law implements an executive agreement between the Patent Offices in the United States and Japan. In return for changes in U.S. law, the Japanese Patent Office agreed to several procedural changes designed to make it easier for American inventors to obtain a patent in Japan. For example, the Japanese Patent Office agreed to accept patent applications written in English, and agreed to abolish its practice of allowing third parties to oppose patent applications before the patent issues.

Second, and more significant, the new twenty year term helps to address the problem of United States patents that are issued long after an application is filed. These delayed patents are sometimes referred to as "submarine patents," since they "surface" unexpectedly, and can take an entire industry by surprise.

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The danger of submarine patents stems from the fundamental nature of the United States patent system. The first inventor of a product is entitled to a patent. The term of protection begins to run when the Patent Office issues the patent. That may be years after the invention was made even under the best of circumstances, since the inventor must reduce the invention to practice, draft and file a patent applica-

tion, and then go through the process of patent prosecution. During that time, others may have come up with the same idea, and started to make and sell products based on that idea. Because patent applications are kept secret in this country, those independent developers are unlikely to have any idea that there is a patent application in the Patent Office which would cover their invention.

When the first inventor obtains his patent, he gains the right to exclude all others from making, using, selling, offering for sale or importing the patented invention within the United States during the term of the patent. This means the patent owner can exclude from practicing the invention not only those who copy it from him, or who subsequently develop it themselves, but also those who developed the invention on their own and have been practicing it during the period of patent prosecution. There is no "prior user" right in patent law to protect those subsequent inventors, even though they may have invested a great deal of time and effort in commercializing the invention before the patent issued. In order to minimize the disruption to these businesses when a patent issues, it is obviously desirable to issue patents as quickly as possible.

Unfortunately, the old seventeen-year patent term gave inventors no incentive to speed their application through the Patent Office. The patent statute currently allows patent attorneys to automatically extend the deadlines for their filings by up to six months each, simply by paying a late filing fee. In the past, busy patent attorneys regularly took advantage of this provision, frequently waiting the full six months before responding to any office action. Since under the old law the patent owner was guaranteed seventeen years of protection in any event, they had no incentive to accelerate the prosecution process.

Furthermore, some patent applicants intentionally delayed the processing of their applications in order to be able to take the industry by surprise, announcing a new patent for which all the participants in a mature market must then obtain a license. These applicants were able to take advantage of a curious feature of the patent laws — the fact that it is virtually impossible for the Patent Office to finally dispose of an application except by issuing a patent. While the Patent Office rules provide for "final" rejections, applicants are free to abandon their application and refile it with amendments, starting the application process over again. Taking advantage of this procedure, some patent owners have kept their applications in the Patent Office for up to 40 years. When these applications finally issued as patents, entire industries that had been built around the technology in the intervening four decades were at risk of being shut down if they did not take a license to the new patent.

Delay in the processing of patent applications is troubling because it disturbs the settled expectations of American industry, which may have come to rely on a technology only to discover that it is proprietary. While intentional efforts to delay the application process are more disturbing, delay can have serious consequences for industry even if it is not intentional.

The new twenty-year term should reduce delay in the processing of patent applications. First, patent applications will now encourage their attorneys to act swiftly to prosecute their cases, because they know that every day of delay means one less day of patent protection once the patent issues. Thus, it is reasonable to expect that patent attorneys will be pressured to file responses to office actions more quickly under the new law than they were under the old law. Similarly, attorneys may be less willing to abandon an existing application in order to file a continuation application, since the resulting delay will mean less patent protection for the client. Finally, those inventors who intentionally delay their patent applications will pay the price for their actions, losing part or even all of their patent term.

BALANCING THE BENEFITS AND COSTS OF THE NEW LAW

Not all delay in prosecuting patents is within the control of the patent applicant. Some is attributable to delays with the Patent Office. Because of this, some people have voiced the concern that patent owners will lose protection through no fault of their own under the new law. This is, I believe, the animating force behind H.R. 359, which would restore the old patent term of seventeen years from the date of issue as a minimum level of protection. Unfortunately, restoring this minimum protection would also restore the incentives to delay patent prosecution that I have just discussed. Applicants could once again slow the examination process in order to ob-

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tain a "submarine patent," secure in the knowledge that they will receive seventeen years of protection regardless of how long they delay their prosecution.

In balancing the benefits and costs of the new law, it is important to have hard evidence about whether the new twenty-year term will really hurt patent owners. If it does, those costs should be weighed against the benefits of the twenty-year term just discussed. On the other hand, if it turns out that patent owners are helped rather than hurt by the twenty-year term, the strongest argument in favor of H.R. 359 loses its force.

In an effort to evaluate the effects of the twenty-year term, I studied 2,081 recently issued United States patents. These patents were randomly selected from across all areas of technology. The results of my study are presented in detail in the attached article, entitled "An Empirical Study of the Twenty-Year Patent Term," which appears in volume 22 of the American Intellectual Property Law Association Quarterly Journal. *

In brief, the data show that the average patent owner gets significantly more protection under the twenty-year term than under the old law. To be precise, the average patent owner in my sample receives 253 days more protection under the new law than they would under the old law. Furthermore, because it is reasonable to expect delays in prosecution to be reduced somewhat as the new law takes effect, the actual benefit to patent owners should be even greater — an estimated 426 days more protection under the new law.

These benefits are widespread among patent owners. Based on actual prosecution times, 76.8% of the patent owners in the sample studied would gain patent protection under the new law. If the anticipated reduction in delay is taken into account, 87.1% of all patent owners are expected to gain protection under the new law. Furthermore, only 5.3% (if we use past data) or an even smaller 2.2% (if we assume some reduction in prosecution time) of all patent owners will lose more than two years of protection under the new law. In nearly half of the instances in my study in which a patent owner lost significant term under the new law, that patent owner had abandoned and refiled his or her application three or more times during the course of patent prosecution.

The results are largely the same across industries. It is true that the average time a patent spends in prosecution varies by industry. However, with one possible exception, in each of the industries I studied (mechanical, chemical, electrical, software, and biotechnology), patent owners were unambiguously better off under the new law than they were under the old law. The single exception was the biotechnology industry, where a small sample size prevented any statistically significant conclusions regarding the effects of the new law.

CONCLUSIONS

The benefits of the twenty-year term are relatively clear. It will reduce delay — both purposeful and incidental — in the prosecuting of patent applications. By doing so, it will promote certainty in innovation and manufacturing, and thus encourage American companies to invest more and more quickly in developing and commer-

cializing new technology.

As it turns out, the costs of the twenty-year term are minimal. The vast majority of patent owners significantly benefit from the new law, and that result holds true across a wide range of industries. The efforts of H.R. 359 to "restore" patent term are unnecessary for the vast majority of patent owners, and they come at the cost of American industry and the American people.

' Except as noted below, all of the data presented here are statistically significant at a 95% or higher confidence level.

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An Empirical study of the Twenty-Year Patent Term Mark A. Lemley 2

Last year, Congress enacted the most significant change in the patent laws in over forty years. The decision by the United States to adhere to the General Agreement on Tariffs and Trade (GATT) necessitated certain changes to U.S. patent law in order to bring it into compliance with the new world standard. ^ The most important of the new provisions required the United States to change the length of time it gives protection to patentees (the "patent term"). Under the old law, patentees received a fixed term of protection of seventeen years from the day the patent issued. That fixed term has been changed to a variable term not to exceed twenty years. Beginning June 8, 1995, the patent term will extend from the day a patent is issued by the United States Patent and Trademark Office (PTO) until twenty years from the day the patent application was filed with the PTO . 4

1 Copyright 1995 Mark A. Lemley.

2 Assistant Professor, University of Texas School of Law. I would like to thank Toni Moore Knudson for her invaluable assistance in collecting and analyzing the data for this study, and Lois Boland, Larry Goffney, Rose Hagan, Bruce Hayden, Mike KIRK, Nancy Linck, Bill Martin, Erin O'Hara, Rene Tegtmeyer, and two anonymous reviewers at the Journal for their helpful

comments. Any errors that remain are, of course, my own.

3 Agreement on Trade Related Aspects of Intellectual Property Rights, Including Trade in Counterfeit Goods of the General Agreement on Tariffs and Trade, 33 Int'l Legal Materials J. 1, 83-111 (Marrakesh, Morocco April 15, 1994) . The intellectual property aspects of GATT are generally referred to as GATT TRIPs.
^ The new twenty-year patent term was required not only by GATT, but also by a bilateral treaty between the United States and

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This new patent term has engendered considerable controversy. A number of inventors have complained that the new patent term may reduce patent protection, because some applications spend a number of years in "prosecution" before the PTO. (Under the old law, delay in processing an application did not hurt the patentee, but under the new rule each day spent in prosecuting the patent is a day of protection lost.) Further, members of certain industries claimed that the new law disadvantaged them in particular, because applications in those industries took longer than average to process. Both industry representatives and the PTO offered certain data to prove that the new law either would or would not hurt patentees. Based on the complaints of some inventors. Rep. Dana Rohrbacher and Sen. Bob Dole have introduced a bill in Congress to return to the seventeen-year fixed patent term.^

Hard data on the effect of the new twenty-year patent term is sorely lacking. The purpose of this study is to evaluate in a

Japan. See Michael Blommer, Washington Letter . AIPLA Bull. 430 (May-June 1994) ; Proposals to Implement New Patent Term and Provisional Application Are Issued . 49 Patent, Trademark & Copyright J. (BNA) 149, 151 (Dec. 15, 1994).

Transition rules provide that for all patents in force on June 8, 1995, and for all applications already on file on that date, the patentee can elect the longer of seventeen years from issuance or twenty years from filing as the patent term. 35 U.S.C. § 154(c)(1) (1995); see Kenneth J. Burchfiel, U.S. GATT

Legislation Changes Patent Term . 77 J. Patent & Trademark Ofc. Soc'y 222, 228 (1995) (discussing transition rules).

5 The bill would retain the twenty-year term, thus complying with GATT, but it would give patentees the longer of seventeen years from issue or twenty years from filing. This requires abrogating the executive agreement with Japan.

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neutral and systematic way the likely effects of the new law. To this end, I have collected and analyzed data from 2,081 recently issued patents and from 197 litigated patent cases. I use this data to examine three questions regarding the new law: (1) whether the new law gives more or less protection on average than the old law; (2) whether certain -industries receive less protection than others under the new law; and (3) whether there is any relationship between the length of time a patent spends before the PTO and its success in subsequent litigation.

I conclude that on average, and for most industries, the new law gives more protection to patentees than the old law.

However, there is some question as to whether the biotechnology industry will receive less protection under the new law. I conclude that there is no significant relationship between the length of time a patent spends in prosecution and whether it will be judged valid in the courts. Finally, the study produces some interesting data about the problem of "submarine patents."

I. Background

A. History of the Patent Term

Patents first came into common use during the Renaissance, when the Venetian Senate granted an exclusive ten-year term of protection for "new and ingenious devices."⁶ Patents found their way into Anglo-American jurisprudence by the early seventeenth

6 Mandich, Venetian Patents (1450-1550) . 30 J. Pat. Ofc. Soc'y 166, 177 (1948). For a general history of patent statutes, see Robert P. Merges, Patent Law and Policy 1-10 (1992) .

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century, and most of the American colonies granted their own patents prior to independence.[^] Because state patents caused conflicts over inventorship, the United States Constitution gave control of the patent system to the new federal government. [^] The first patent statute was passed by Congress within weeks after it convened. ⁵ That statute granted an exclusive term of protection of 14 years. ^{1°} The seventeen-year term contained in the 1952 Act^{^^} was a compromise between those who argued for continuing the fourteen year term (itself a holdover from colonial days) and those who preferred a longer term of 21 years. ^{^2}
The appropriate term of patent protection has been the subject of debate in both academic and political contexts. A number of economists have pointed to the radically different conditions governing innovation in different industries, which arguably justify differential patent protection. ^{^3} others,
[^] Merges, *supra* note , at 6.

S Art. I, sec. 8, cl. 8 gives Congress the power to "secure to authors and inventors for limited times the rights to their respective writings and discoveries."

⁹ Patent Act of 1790, Ch. 7, 1 Stat. 109-112 (April 10, 1790).

¹⁰ *Id.*

¹¹ 35 U.S.C. § 154 (prior to 1994 amendment).

¹² Bruce N. Bugbee, *The Genesis of the American Patent and Copyright Law* (19 67).

The patent laws do provide extended terms for certain other inventions, chiefly in the pharmaceutical industry. See 35 U.S.C. §§ 155-56.

¹³ Richard C. Levin et al. *Appropriating the Returns from Industrial Research and Development* . 3 *Brookings Papers on Econ. Activity* 783, 818 (1987) (identifying appropriability conditions over a range of 100 industries, and concluding that "[s]ince the

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notably Louis Kaplow, have suggested problems with such an industry-specific system. ^{1*} Kaplow writes:

[A]ny attempt to apply more case-specific rules would

further complicate the already difficult problem facing the courts. In addition, the more one attempts to vary the patent life and the rules of exploitation industry by industry and case by case, the less compelling becomes the justification for rewarding invention through a patent system at all. In theory, direct reward systems are preferable because they avoid the monopoly costs associated with a general patent system. A central reason for reliance on a patent system is that it is thought to be too difficult to determine the appropriate level of reward fairly and accurately on a case-by-case basis. ^^

In practice, some aspects of the old law were industry-specific. Various industry groups fought for — and in some cases received — special protection in the form of an extended patent term.^^ But the fundamental baseline of the 1952 Act was a seventeen-year term across industries.

impact of legal protection of intellectual property depends on the strength of other appropriability mechanisms and varies widely among industries, focused efforts to solve problems in specific markets would be more prudent than a broad attempt to upgrade protection."). See generally P.M. Soberer, *Industrial Market Structure and Economic Performance* 453-63 (1980) (identifying natural lead-time advantages which vary widely by industry) ; Thomas M. Jorde & David Teece, *Innovation. Cooperation and Antitrust: Balancing Competition and Cooperation* . 4 *High Tech. L.J.* 1 (1989) (classifying industries into "strong" or "weak" appropriability regimes) .

14 Louis Kaplow, *The Patent-Antitrust Intersection; A Reappraisal* . 97 *Harv. L. Rev.* 1813, 1844 (1984).

15 *Id.* at 1844.

16 The seventeen-year term of the 1952 Act could be extended indefinitely in the case of process and composition of matter patents to compensate for delays in regulatory approval by the Food and Drug Administration or other regulatory agency, 35 U.S.C. §§ 155, 156. The term was extended by statute for a period of five years in the case of one particular company which had faced regulatory delays. 35 U.S.C. § 155A.

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B. The 1994 Revisions

Ultimately, the patent-term revisions enacted by Congress took neither an across-the-board nor an industry-specific approach. As a result of two different sets of international negotiations, Congress changed United States law in late 1994 to make the term of a patent extend from the date it is issued until 20 years from the date the patent application was filed. ^^ This new twenty-year term took effect with applications filed on or after June 8, 1995, although a transition rule gives those with patents in force or applications pending as of that date the benefit of the longer of the seventeen-year or twenty-year term. ^^

The new term was required by both GATT TRIPs, a multilateral agreement entered into by over 100 nations on April 15, 1994, ^^ In the Nineteenth Century, when the patent term was 14 years. Congress or the Commissioner of Patents periodically agreed to extend the term of an individual patent to 21 years, if the patentee could make a showing that he or she had not obtained sufficient remuneration during the original patent term. For a more detailed discussion of this issue, see Forman, 22 AIPLA Q.J. (forthcoming 1994).

17 H.R. 5110 and S. 2467, signed December 8, 1994 by President Clinton. The bill became P.L. 103-465.

For a general discussion of the TRIPs amendments, see Karen Tripp & Linda Stokley, Changes in U.S. Patent Law Effected by the Uruguay Round Agreements Act — The GATT Implementation Legislation . 3 Tex. Intell. Prop. L.J. 315 (1995).

IS Lawrence Rosenthal, The TRIPs provisions of the Uruguay Round Agreements Act, now approved by Congress, will bring about significant changes as U.S. patent law goes global . Nat'l L.J., Dec. 26, 1994, at B4 .

19 GATT TRIPs, Art. 33 provides that "[t]he term of [patent] protection available shall not end before the expiration of a

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and by a bilateral agreement between the United States and Japan. 20 Under the new rule, the length of protection a patentee receives will no longer be fixed in advance, but will be a function of the length of time a patent spends in prosecution before the PTO. With some exceptions, 21 the patent term will be twenty years, minus whatever time is spent in prosecution. 22 This is consistent with the prevailing international standard. 23 period of twenty years counted from the filing date." Because it is impossible to predict how long prosecution of a patent will take, the old patent term of seventeen years from issue left open the possibility that patent protection would terminate less than twenty years from filing. Thus, compliance with GATT required a change in the U.S. patent term.

20 The Japanese and United States patent commissioners agreed in January 1994 to seek changes in the laws of both countries designed to simplify patent prosecution and accommodate the concerns of both nations. The United States agreed to replace the old seventeen-years-from-issue term with a twenty-year-from filing term, and to introduce legislation to publish patent applications 18 months after they are filed. The latter legislation was introduced by Senator DeConcini as S. 2488, but did not pass in the 103rd Congress. Similar legislation has been reintroduced in the 104th Congress as H.R. 1733. Bill Would Provide Early Publication of Patents . 50 Patent, Trademark & Copyright J. (BNA) 114 (June 1, 1995).

For its part, the Japanese Patent Office agreed to accept patent applications written in English, and to abolish pre-grant patent opposition proceedings in the JPO. Id. ; Proposals to Implement New Patent Term and Provisional Application Are Issued . 49 Patent, Trademark & Copyright J. (BNA) 149, 151 (Dec. 15, 1994) .

21 Patentees whose applications are delayed due to a successful appeal, an interference proceeding, or as the result of a secrecy order are entitled to extensions of their patent term of up to five additional years. United States Patent & Trademark Office, Proposed Rules to Implement 20-Year Term and Provisional Applications , 59 Fed. Reg. 63951 (Dec. 5, 1994). For data on the average delay due to interferences, as well as the frequency of interference proceedings, see Ian A. Calvert & Michael

Sofocleous, *Interference Statistics for Fiscal Years 1992 to 1994*. 77 J. Pat. & Trademk. Ofc. Soc'y 417, 418-19 (1995).

22 See Rosenthal, *supra* note , at B4 .

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C. The Current Controversy

The change to the twenty-year patent term was controversial at the time it was introduced. The Patent and Trademark Office, 2" the American Intellectual Property Law Association^^ and the Intellectual Property Law Section of the American Bar Association^^ all supported the bill; members of the biotechnology industry^^ and some lawmakers^S opposed it. One of

23 See *id* . The GATT implementing legislation also made a number of other significant changes in the United States patent laws which are beyond the scope of this Article. For discussion of some of those provisions, see, e.g. . Kenneth J. Burchfiel, U. s. GATT Legislation Changes Patent Term . 77 J. Patent & Trademark Ofc. Soc'y 222, 224-230 (1995); Michael J. Houlihan, Provisionals and Early Publication An Outsider's Perspective . AIPLA Bull. 342 (March-April 1995) ; Andrew J. Patch, Provisional Applications and 35 USC 102 fe) in View of Millburn. Hilmer and Wertheim . 77 J. Patent & Trademark Ofc. Soc'y 339 (1995) .

24 Joint House/Senate Judiciary Subcommittee hearing, Aug. 12, 1994 (testimony of Commissioner Lehman) . __^ —

25 AIPLA Bull. 381-83 (March-April 1994) (statement of AIPLA Board of Directors in favor of S. 1854).

26 See Teresa Riordan, A federal magistrate rejects decades-old infringement claims against an auto maker . N.Y. Times, June 26, 1995, at C2.

2"^^ GATT Bill Clears House With Manor Intellectual Property Law Reforms . 49 Patent, Trademark & Copyright J. (BNA) 95 (Dec. 1, 1994) ("the 20-year term has faced some vocal opposition, particularly from the biotechnology industry. Those critics say that the Patent and Trademark Office's processing of patent applications is very slow, and that biotech applications can take more than three years to process.").

28 Representatives Helen Bentley and Dana ROHRABACHER opposed the 20-year term on the grounds that it was "demanded by Japan"

and would allow "big Japanese and multinational corporations . . .
. . . to steal the patent rights of American inventors." Joint
Subcommittee hearing, *supra* note

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the primary issues driving the 20-year term was the problem of
"submarine patents." ²⁹

Submarine patents are applications filed by inventors who
keep their application pending in the PTO for a long period of
time. ³⁰ Sometimes this delay on the part of the inventor is
intentional — by delaying the issuance of their patent, these
inventors hope to take the industry by surprise, announcing a new
patent which all the participants in a mature market must
license. Delay resulting from multiple abandonment and refileing
need not be intentional to cause problems, however. Because the
owner of the submarine patent will be able to claim priority to

²⁹ Submarine patents are not the only issue in this debate, of
course. For example, some economists have suggested that pioneer
inventions recoup their initial investments relatively early in
their patent term, and that it is only marginal inventions which
require the full patent term to become profitable. See Scherer,
supra note , at 447-48; Williaun Nordhaus, *Invention, Growth
and Welfare* 76-82. If this is true, extending the patent term
will arguably encourage only a few new inventions, and those of
marginal significance. There is some evidence, however, that the
value of patents over time may differ by industry. For example,
because of regulatory delays, patents in the biotechnology and
pharmaceutical industries may be more valuable at the end of
their term than at the beginning. The same is unlikely to be
true of software patents.

On a more practical note, problems of proof and discovery
arise when patents are litigated decades after the invention was
made. The inventor and her contemporaries may have died or
become unavailable, and documents are likely to be lost or
destroyed.

³⁰ For a discussion of how this can be accomplished, see *infra*
notes - and accompanying text. See also Donald S. Chisum,
The Harmonization of International Patent Law . 26 *J. Marshall L.*

Rev. 437 (1993). For examples of patentees intentionally delaying issuance of their own patents, see William L. Martin, Jr., *Tort Reform and Patent Litigation: An Industry Perspective*, paper presented at "Emerging Business Disputes Along the Information Superhighway" conference, Houston, Texas, May 5, 1995, at 14-16.

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his initial application, he will presumably be able to demonstrate that he was the first inventor of the new technology. Under the patent laws, the patentee has the right to prevent all others from making, using, or selling the invention; it does not matter that the defendant developed the technology independently or before the patent issued. 31

The problem of submarine patents is particularly troublesome in industries characterized by rapid innovation, since even a modest delay in prosecuting the patent can result in catching an entire industry unawares. ² Further, current law allows the patent applicant to change his patent claims during prosecution to keep up with subsequent technological developments in the area. [^]

There are a number of examples of submarine patents throughout the history of the patent laws.³⁴ one early example is George Selden's patent on the automobile. Selden, a patent

31 See 35 U.S.C. § 271,

32 See James W. Morando & Christian H. Nandan, *Silent Enemies*. Recorder, May 4, 1994, at 10 (for this reason, "[t]he submarine patent may be particularly problematic for software.").

33 E.g. *Texas Instruments v. U.S. Int'l Trade Comm'n*. 871 F.2d 1054 (Fed. Cir. 1989); *Kingsdown Medical Consultants v. Hollister Inc.*. 863 F.2d 867 (Fed. Cir. 1988) ("nor is it in any manner improper to amend or insert claims intended to cover a competitor's product the applicant's attorney has learned about during the prosecution of a patent application.").

34 For cases discussing submarine patenting, see, e.g., *Bott v. Four Star Corp.*, 848 F.2d 1245 (Fed. Cir. 1988); *Application of Henriksen*. 399 F.2d 253 (C.C.P.A. 1968). While these cases hold

that submarine patents are not illegal, one federal magistrate has described a plaintiff's use of submarine patents as "abusive." *Ford Motor Co. v. Lemelson*. 50 Patent, Trademark, & Copyright J. (BNA) 219 (D. Nev. June 16, 1995).

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lawyer and some time inventor, filed an application in 1879 for a prototype automobile which he never commercialized, and which by all accounts did not work very well. He kept his application pending in the PTO for the next sixteen years, finally receiving United States Patent 549,160 in 1895. Under the patent laws as written at the time (and in effect until 1994), Selden's right to exclude others from making automobiles ran from 1895 until 1912. Selden used his patent to gain control of the infant automobile industry, until in 1903 Henry Ford began selling cars without a license. Selden sued Ford for patent infringement, and Ford finally prevailed on appeal in 1911.³⁵

Today, the most famous holder of "submarine patents" is Jerome Lemelson. Lemelson holds nearly 500 United States patents on an astounding range of inventions. Among his patents are United States Patent No. 5,177,645, which issued Jan. 5, 1993 on an application originally filed June 14, 1955 (a pendency of 38 years); United States Patent 5,351,078, which issued Sept. 27, 1994 on an application originally filed Dec. 24, 1954 (a pendency of nearly 40 years); and United States Patent No. 5,283,641, which issued Feb. 1, 1994 on an application originally filed Dec. 24, 1954 (a pendency of 39 years). Indeed, Lemelson has at least 15 patents that issued between 1978 and 1994 which stem from a single application on December 24, 1954.³⁶ He has a number of

35 William Greenleaf, *Monopoly on Wheels* (1961) ; Martin, *supra* note .

36 See *Mitsubishi Elec. Corp. v. Lemelson*. No. SHCV93-142-LHM, Complaint filed Feb. 8, 1993 (CD. Cal. 1993).

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other patents which were pending in the PTO for twenty years or more. ■'^

One of the major advantages of the new 20-year patent term -
- and one of the reasons it was pushed by the Japanese companies,
who had been involved in ongoing litigation with Jerome Lemelson
over many of his submarine patents — is that it weakens or
destroys the incentives to engage in submarine patenting.
Because each day a patent spends in prosecution under the new law
results in one day less protection after the patent issues, .
applicants have an incentive to move their applications through
the Patent Office as quickly as possible. In the extreme cases,
some current patentees would receive no protection at all were
the twenty-year term in force. ^8 jn less extreme cases,
patentees simply receive less protection if they delay the
application process. Because submarine patents can seriously
disrupt an industry and impose significant costs on firms that
independently developed their own technology, -^^ the abolition of

3'7 Id. at 10-12 (collecting patents) .

38 For example, none of the Lemelson patents discussed above,
see supra note , would have received any protection under the
twenty-year term. Further, data reported by the PTO in 1994
indicate that at that time, there were 673 currently pending
applications which were filed more than twenty years before.
AIPLA Bull. 95 (Oct. 1994) . None of those patents would receive
new protection under the new law, were the transition rules not
in force.

35 See Morando & Nadan, supra note , at 10-11; but cf. Dana
ROHRABACHER & Paul Crilly, 8 Harv. J.L.S Tech. 263, 268 (1995)
(objecting that Lemelson 's "side of the story" has not been
heard, and suggesting that the forty-year delay might be the
fault of the PTO) .

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submarine patents was touted as one of the major benefits of the new law."⁴⁰

Because the change to the 20-year term was part of the implementation of GATT, it was voted on in a special session of Congress as a "fast-track" package, to which no amendments were allowed. Thus, Congress had to either accept or reject GATT as a whole. In December 1994, it chose to accept GATT. However, that did not end the debate. On the first day of the 104th Congress, Rep. Dana Rohrbacher introduced H.R. 359, which would reject the U.S.-Japan executive agreement and restore the seventeen-year patent term as a minimum level of protection.⁴¹ Senate Majority Leader Bob Dole has introduced a companion bill (S. 284) in the Senate.⁴² Proponents of these bills argue that they are necessary to protect United States patentholders against the erosion of their patent terms;⁴³ opponents (including the

40 Other legislation is currently pending in Congress which would require publication of patent applications 18 months after they are filed, H.R. 1733, and allow third parties to oppose published patent applications before the patents issue, H.R. 1732. See House Subcommittee Considers Bills on Reexamination and Early Publication . 50 Patent, Trademark (Copyright J. (BNA) 174, 175 (June 15, 1995). Both of these bills would also help to deal with the problem of submarine patents by alerting the industry to pending applications which could affect them.

⁴¹ Bill Would Amend GATT Legislation To Provide 17 or 20 Year Patent Term . 49 Patent, Trademark & Copyright J. (BNA) 259 (Jan. 12, 1995). Specifically, the Rohrbacher-Dole proposal would give patentees the longer of seventeen years from issue or twenty years from filing.

⁴² 49 Patent, Trademark & Copyright J. (BNA) 335 (Feb. 2, 1995).

⁴³ See Dana ROHRBACHER & Paul Crilly, The Case for a Strong Patent System . 8 Harv. J.L.S Tech. 263 (1995).

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American Electronics Association⁴⁴ Intellectual Property Owners, ⁴⁵ representatives of the computer and pharmaceutical

industries, and several former heads of the PTO)¹⁶ point to the problem of submarine patents and the loss of Japanese concessions under the bilateral agreement. The bill remains pending in Congress.¹⁷

Important to the debate over the wisdom of the twenty-year term is whether it will help or hurt patentees. If the new term hurts patentholders, there may be some who oppose it for that reason, notwithstanding its beneficial effects on users, subsequent inventors, and the public. On the other hand, if the new term helps patentees on balance, then there is probably no need to further enhance patent protection at the expense of the public by restoring the seventeen-year term. Unfortunately, reliable data on the effects of the new law are scarce. In support of his bill, Representative Rohrbacher cited a "study" by a New York law firm, that allegedly picked thirty patents at random from the Official Gazette and found that the average pendency period was 6.7 years.¹⁸ If this number is correct, the

¹⁶ See Martin, *supra* note 1, at 6.

¹⁷ S 17 IPO Washington Brief # 11 (Aug. 7, 1995).

¹⁸ 49 Patent, Trademark & Copyright J. (BNA) 335 (Feb. 2, 1995).

¹⁹ Teresa Riordan, Key change under GATT has enormous meaning for strategies to maximize patent protection. N.Y. Times, June 12, 1995, at C2.

²⁰ ROHRBACHER & Crilly, *supra* note 1, at 266; Bill Would Amend GATT Legislation To Provide 17 or 2 Year Patent Term. 49 Patent, Trademark & Copyright J. (BNA) 259, 260 (Jan. 12, 1995).

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average patentee will lose more than three years of protection under the new law. By contrast, statistics offered by the PTO itself suggest that the average pendency time is less than two years.²¹ If this number is correct, the average patentee actually gains over one year of protection under the new law. Obviously, accurate data on the effect of the new law is critical to an informed legislative decision on the Rohrbacher and Dole bills. The balance of this Article attempts to present

accurate data from a large sample of patents.

II. Length of Average Patent Term

To determine whether patentees as a class benefit from or are hurt by the new law, I have studied a number of recently issued patents. These patents were issued in 1994, and are governed by the transition rule giving them the longer of seventeen years from issue or twenty years from filing as a term of protection. Based on the prosecution history of these patents, I have determined when each of those patents would
*^ Jay Dratler, Jr., Intellectual Property Law § 4.06[1], at 4-105 n.21 (1993) (citing PTO sources reporting average patent pendency of 19.9 months); see also AIPLA Bull. 97 (Oct. 1994) (average pendency in Group 1800 governing biotechnology was 20.8 months) ; A Walk Through Group 2 3 00 . presentation to AIPLA Subcommittee on Electronic and Computer Law (Oct. 1994) (average pendency in Group 2300 governing electronics was 27.8 months). The PTO statistics suffer from the flaw that they do not include the time from the first filing of a continuation application, but count only the period of time spent in prosecuting the most recent application. See ROHRABACHER & Crilly, supra note , at 265-66.

5° The term prosecution history refers to the entirety of the application process involving the applicant and the United States Patent & Trademark Office (PTO) .

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expire under the twenty-year term, and compared that to their expiration date under the seventeen-year term. This data addresses the arguments of some parties that the new law disadvantages patentees in general. In formal terms, I have tested the following hypothesis:

Hypothesis 1 : On average, patentees receive a longer term of protection under the old law than under the new law.

Data and Analysis . The data used to test this hypothesis were taken from 2,081 United States utility patents issued on December 27, 1994.⁵¹ This sample represents all the utility patents issued on that date, across subject matter classifications, to

avoid biasing the sample in favor of a particular type of invention. The sample does not include design patents, which were not affected by the new 20-year term.⁵² ^or does it include

51 The patents studied appear in 1169:4 Official Gazette of the U.S. Pat. & Trademark Ofc. (December 27, 1994). This volume was randomly selected for study purposes. United States Patent numbers 5,375,261 through 5,377,358 inclusive were studied. (The PTO does not issue patents for every number) . This volume represents the patents issued in one week, or approximately 2% of the number of patents issued each year in the United States. These patents represent a broad cross-section of patents issued in numerous different industries.

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Design patents have a 14-year term. 35 U.S.C. § 173,

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plant patents. 53 Appendix A presents a sample page of the complete data set.^{^^}

To determine the length of protection afforded under the new act, I identified the first United States filing of the application, or of a parent, grandparent, or other related application to which the patentee claims priority. The new patent law provides that the earliest filing date claimed by the applicant will be the date on which the twenty-year term begins running. 55 That date is listed as the "1st US Filed" column in Appendix A. 56 The length of time a patent spent in prosecution is listed in the "1st US Time" column of Appendix A. This number

53 Plant patents are protected under two different statutes: the Plant Protection Act, 35 U.S.C. §§ 161-164, and the Plant Variety Protection Act, 7 U.S.C. §§ 2321-2582. Plant patents under the PPA are affected by the new term, while PVPA patents are not.

54 The full data set, numbering approximately 75 pages, is on

file with the author.

55 35 U.S.C. § 154(a)(2) (1995).

56 Where the application did not claim priority to an earlier application, the "1st US Filed" column is blank, and the "This App Filed" column was used as the filing date. Where the application does claim priority to an earlier-filed application, the nature of the application process is indicated in the "Delay Code" column. In that column, "C" represents a continuation application, "CIP" represents a continuation-in-part application to which priority has been claimed, and "D" represents a divisional application. 35 U.S.C. §§ 120-21. In some cases, patentees claimed priority to multiple prior applications. Those applications are listed in order (e.g. "D+D+D+CIP" means three divisional applications, followed by a continuation-in-part application) .

Note that the foreign filing date is provided for informational purposes only, as foreign filing dates do not count against the twenty-year term under the new law. 35 U.S.C. § 154(a) (3) (1995) .

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was calculated by measuring the length of time (in days) between the first United States filing of a related application and the date on which the patent was issued.

Calculation of the patent term under the old law seems straightforward — it should be seventeen years, or 6,209 days.

In fact, however, the total patent term under the old law was complicated by the PTO practice of issuing "terminal disclaimers" in certain rare cases. ^^ The effect of such a terminal disclaimer is to shorten the term of a particular patent to less than seventeen years. Where a particular patent would get less than seventeen years protection under the old law, I have indicated that fact by identifying the terminal disclaimer date in the "Disci Date" column of Appendix A. The total length of protection for each patent under the old law is given in the "Patent Length" column of Appendix A.

57 Terminal disclaimers are issued in "obviousness-type double patenting" cases — that is, in situations in which the same inventor has already received a patent for a similar invention, which would render the instant application obvious. In those situations, the PTO issues the second patent, but declares that it will expire on the same day as the first-issued patent. The patentee is required to "disclaim" the end or terminal portion of the patent term. See Burchfiel, *supra* note , at 225-26.

Terminal disclaimers should not play a major role in patent practice under the new law. The problem of obviousness-type double patenting generally arose when a patent application was divided into two or more separate prosecutions, so that one patent could issue while the other was still in prosecution. Because under the new law any applications which claim the same United States priority date will automatically expire on the same day, the need for terminal disclaimers should decrease. They will be required only in an obviousness-type double patenting case arising from two separate filings of similar applications by the same patentee on different days, but within one year of each other. Any such situations are not captured by my study, but their effects should be statistically insignificant.

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Tabltt 1

Summary of Data from the Patent Data Set

Category Statistical Measure

All patents Number sampled

Average

Median

Maximum value

Minimum value

Standard deviation

95% confidence interval +/-

let OS Time

Patent Lenoth

(in days)

(in
days)
2081
864
6188
701
6209
8124
6209
174
3843
553
137
+/- 24
6
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In order to compare the effect of the old and new laws, I determined the mean time spent in prosecution, and compared the remaining protection available under the new law with the mean term of protection afforded these patents under the old law. The aggregate data are presented in summary form in Table 1.
[insert Table 1 here]

The mean number of days of patent protection afforded under the old law is 6,188.58 The mean number of days of patent protection afforded under the new law is 7,305 days (20 years) minus the mean time in prosecution of 864 days, 59 or 6,441 days. The average patentee therefore receives 253 additional days of protection beyond the old patent term.

In addition, several factors not accounted for in the data suggest that patentees will receive even greater protection under the new law. First, the new law permits the filing of a "provisional application" up to one year before the filing of an actual patent application. The provisional application is filed without claims, and is not examined on the merits by the

58 Table 1, "Patent Length" column, "Average**" row.

59 Table 1, "1st US Time" column, Average" row.

^{^o} The new law provides for extensions of the patent term beyond twenty years in cases where the application is on appeal or in interference during prosecution. 35 U.S.C. SS 154(b). This study has not taken account of these term extensions, which should add to the benefits patentees receive under the new statute.

61 35 U.S.C. S 111(b) (1995).

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PTO. While it counts as a filing date in priority disputes with other inventors, and for purposes of avoiding prior art, the provisional application date is not considered in calculating the twenty-year term. ^{^2} Thus, patentees who end up filing multiple applications can take advantage of this provision to gain up to an extra year's worth prosecution time not counted in the 20-year term. ⁶³

Second, the nature of the new law should change incentives among patent lawyers. Time spent in processing patents is a function of two factors — the length of time an application spends at the PTO waiting for the Examiner to file an office action, and the length of time the application spends in the patent attorney's office awaiting a response to that office action. The patent statute currently allows patent attorneys to automatically extend the deadlines for their responses by up to six months, simply by paying a late filing fee. ^{^*} Busy patent attorneys regularly take advantage of this provision, frequently waiting the full six months before responding to any office action.

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35 U.S.C. § 154(a)(3) (1995)

⁶³ See also Lois E. Boland, The View from the Patent and Trademark Office . 22 AIPLA Q.J. (1994) (suggesting that

applicants can file a nonprovisional application, convert it to a provisional application during prosecution, and then convert it back to a nonprovisional application, taking advantage of the additional year granted to provisional applications) .

64 37 c.F.R. § 1.136; see 35 U.S.C. S 41(a)(8) (setting fees for extensions) .

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Under the new law, delay by patent attorneys imposes significant costs on the client. Every extension of time the patent attorney gets not only means a late filing fee, but fewer months of patent protection. It is therefore reasonable to expect that patent attorneys will be pressured to file responses to office actions more quickly under the new law than they were under the old law. Similarly, attorneys may be less willing to abandon an existing application in order to file a continuation application, since the resulting delay will mean less patent protection for the client. ^^ The result in both cases should be that patent pendency times decrease. ^^

Further, the new law provides that patentees whose applications are delayed due to a successful appeal to the Board of Patent Appeals and Interferences or the United States Court of Appeals for the Federal Circuit may extend their patent term to compensate for this delay, up to five additional years of patent term.^^ Many Examiner rejections that resulted in the filing of continuation applications under the old law may result instead in

⁵ See Burchfiel, *supra* note , at 227.

[^] Of course, the time a patent application spends before the Examiner will not decrease because of the new law. Indeed, it is possible that the pendency time in the Examiner's office will even increase, as patent attorneys reduce their own delays and therefore file responses with greater frequency. This is particularly likely in the transition period to the new rule, when attorneys will have to contend with an existing backlog of delayed files as well as keeping the new files current. (One patent attorney refers to this current tiae crunch as "being

GATTed").

^^ See supra note

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appeals under the new law, so that the patentee can take advantage of the new patent term.^{^^}

There is no good way of estimating the cumulative effect of the provisional application, the prompt filing incentive, and the term extension provision. Forced to select a number, I have settled on a net 20% reduction in pendency time as a conservative estimate of the cumulative effect of these provisions. ^{^^} Using that number, the pendency time under the new law in the patents studied would be expected to drop from 864 days to 691 days. By this measure, the mean number of days of patent protection afforded under the new law is 7,305 days (20 years) minus the mean time in prosecution of 691 days, or 6,614 days. The average patentee therefore receives 426 additional days of protection beyond the old patent term under this assumption.

Further, the data in Table 2 may help to measure the number of patentees who lose significant protection under the new law.

[insert Table 2 here]

Table 2 identifies the number of patents in the sample whose patents spend more than x years in prosecution. The

^{^S} See Burchfiel, supra note , at (suggesting that more applicants will appeal under the new law) .

^{^^} The 20% reduction figure I have selected has been criticized by one reviewer who believes pendency times will not drop that significantly, and by several reviewers who believe pendency will drop more than 20%.

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Tabl* a

Distribution of Prosecution Time*

WlimtMr 9* P<t:>nf In <<<eh Ofoorv that I<<<u<d Within Kach Tim<< p.ir<>>rf
< Actual >

Ymmrm

< 1 yr.

1-2 yrm.

2-3 yr<<

3-4 yr*.

4-5 yr>>

> S yra.

TOTAL

0<nT<d

72

506

175

75

33

13

874

Chwiiigai lltrriigai Ufi^tsb

25 23

230 233 2

147 187 9

92 94 4

46 33 1

64 33 9

Softwar* IsiMI

2 120

38 969

32 509

25 261

10 112

12 110

604

603

25

119

2081

w.ikhr of paf nf in lach Cafoory that Immand Within Each Ttw Parlod
(With 20% gt<IUrti9n 8ttWBtAi

G^nTal

205

Y«ara

< 1 yr.

1-2 yra. 485

2-3 yra

3-4 yra

4-5 yra

> 5 yra.

125

46

8

5

Chamical llactrlcal Blotach

67 63 1

283 301 8

128 155 6

62 51 1

36 21 3

28 12 6

9 335

46 1069

37 408

15 159

8 65

4 45

TOTAL

874

604

603

25

119

2081

196

distributions set out in Table 2 are also represented in Figures 1 and 2.

[insert Figures 1 and 2 here]

Out of the total sample of 2,081 patents, 1,598 (or 76.8%) gain patent term under the new law, because they were issued in less than three years. If we apply the estimated 20% reduction in pendency time noted above, 1,812 of the 2,081 patents (or 87.1%) would gain term under the new law. Of those patents that do lose patent term, only 110 (or 5.3%) lose more than two years of patent protection. Again, if we apply the estimated 20% reduction in pendency time, the number of patents losing two or more years of protection drops to 45 (or 2.2%). It is evident that the vast majority of patentees in the sample benefit from the new law, and only a small percentage suffer the loss of a significant portion of their patent term.

A Side Note on Submarine Patents . As noted above, the problem of submarine patents was a major concern of Congress in passing the twenty-year term. I have attempted to estimate the number of patents in the sample that might be considered "submarine" patents. In this article, I offer one possible proxy for

"submarine patents" — applications that were abandoned and
refiled three or more times before issuance. This is not a
measure of the intention of the patentee. It is impossible to

^° See supra notes - and accompanying text.

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determine why a patentee refiled an application repeatedly, particularly over a broad sample size.^ ^ Rather, I have focused my attention on patents which were delayed during prosecution because of repeated abandonant, regardless of the intent of the patentee .

I have analyzed the 2,081 patents studied to identify the number with these characteristics; the results are presented in

Table 3.

[insert Table 3 here]

Under the refiling test, 58 of the 2,081 patents (2.8%) could be classified as submarine patents. Further, Table 3 indicates that 15 of the 31 patents (48%) that would have lost four or more years of protection qualify as submarine patents under this measure.

Conclusion . On average, patentees unequivocally benefit from the new law. If we assume that pendency time will not change at all as a result of the new law, the average patentee still gets 253 additional days of protection under the new law. Furthermore,

^ ^ Multiple refilings are both overinclusive and underinclusive as a means of identifying patentees who intentionally delay prosecution of their patents. Not only may some patentees legitimately abandon and refile several times in the course of prosecution, but some patentees may engage in submarine patenting without having to refile numerous times. I wish to emphasize that I have selected this measure as a statistical proxy for

submarine patents, and I do not mean to suggest that any of the patentees in the sample necessarily intended to produce submarine patents.

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Table 3

Submarine Patents and Loss of Patent Term

Multiple Refilings Patents Losing Patents Meeting

Category f Submarine Patents) 4 ■»• Years of Term Both Criteria

General 14 4 1

Chemical 29 18 9

Electrical 15 9*5

Totals 58 31 15

Biotech 5 6 4

Software 2 2 1

201

more than 75% of the patentees in the study benefit from the new law. Under the more realistic assumption that pendency times will decrease somewhat as a result of the new law, the effect of the law will be to give the average patentee an additional 426 days of protection, and more than 87% of all patentees in the study would benefit. Clearly, then, it is wrong to suggest that the effect of the twenty-year patent term will be to decrease patent protection overall. Hypothesis 1 must be rejected. ^2 Furthermore, it is evident that the "study" relied upon by Rep. Rohrbacher is seriously flawed. A larger sample size suggests that average pendency data are much closer to the numbers offered by the PTO, even when the time measured is considered from the first United States filing. Indeed, contrary to the New York study's suggestion that the average pendency time approaches seven years, my data indicate that only 1.5% of all patents spend seven or more years in prosecution, ^^ and nearly half of those are suspected "submarine patents."^^ The conclusion that the twenty year term is bad for patentees in

general appears to be unwarranted.

² Because I have studied only a sample of all patents, predicting what will happen with patents outside the sample requires the use of statistical tools. Table 1 indicates that with a 95% confidence level, the average patentee in the general population will get a minimum of 229 additional days of protection (the 253 average additional days of protection, minus the "95% confidence interval" of 24 days shown in Table 1) .

³ Table 3, Time and Both columns. Total row.

^{^^} As noted above, these conclusions are all statistically significant at the 95% confidence level.

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III. Differential Treatment of Industries

A second claim made by opponents of the twenty-year patent term is that it discriminates against certain industries or classes or patents, because prosecution in those industries or classes takes longer than in other areas. To determine whether this is the case, I have divided the patents studied into industry groups and subgroups, and compared the mean prosecution times within each group. In formal terms, I have tested the following hypotheses:

Hypothesis 2a : There is no statistically significant difference between the mean prosecution times for any of the subgroups studied.

Hypothesis 2b : No subgroup is worse off on average under the new law than they were under the old law.

Data and Analysis . The data set used for this study is the same group of 2,081 patents studied above. I divided the patents by subject matter in two different ways. First, I divided all 2,081 patents issued into one of three categories ("General", "Chemical", and "Electrical"), according to the classification used by the PTO itself. Second, I have attempted to isolate patents within two specific industries of particular interest: biotechnology and software.

The summary data for the division into General, Chemical,
and Electrical groups is presented in Table 4.

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Table 4

Summary of Data for General, Chemical and Electrical Patents

Category

Number of Patents

(in

thousands)

days)

Patent Length

(in days)

General patents

Number sampled

874

Average

727

6192

Median

616

6209

8124

6209

Minimum value

174

4599

Standard deviation

462

115

95% confidence interval

◆/-

31

8

Chemical patents Number sampled 604

Average 1001

Median 804

Maximum value 4439

Minimum value 180

Standard deviation 618

95% confidence interval \pm 49

6168

6209

6209

3843

204

16

Electrical pats. Number sampled

Average

Median

Maximum value

Minimum value

Standard deviation

603

926

795

7491

209

560

95% confidence interval \pm 45

6203

6209

6209

5523

58

5

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The methodology for calculation within each group is identical to that used in testing hypothesis 1. There were 874 patents within the "General" group. Under the old law, the general patents had an average term of 6,192 days.^{^^} The average time spent in

prosecution was 727 days,⁵ giving the average patent in the General group a total of 6,578 days of protection under the new law. If the assumption made above regarding reduced pendency times under the new law⁶ is applied here, expected prosecution time drops to 582 days, giving the average patent in the General group 6,723 days of protection under the new law.

There were 604 patents within the "Chemical" group. Under the old law, the chemical patents had an average term of 6,168 days.⁸ The average time spent in prosecution was 1001 days,⁷ giving the average patent in the Chemical group a total of 6,304 days of protection under the new law. If the assumption made above regarding reduced pendency times under the new law⁸ is applied here, expected prosecution time drops to 801 days, giving the average patent in the Chemical group 6,504 days of protection under the new law.

⁵ Table 4, General group. Patent Length column. Average row.

⁶ Table 4, General group, 1st US Time column. Average row.

⁷ See supra notes - and accompanying text.

⁸ Table 4, Chemical group. Patent Length column. Average row.

⁷ Table 4, Chemical group, 1st US Time column. Average row.

⁸ See supra notes - and accompanying text.

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There were 603 patents within the "Electrical" group. Under the old law, the electrical patents had an average term of 6,203 days.⁵ The average time spent in prosecution was 926 days,⁶ giving the average patent in the Electrical group a total of 6,379 days of protection under the new law. If the assumption made above regarding reduced pendency times under the new law⁷ is applied here, expected prosecution time drops to 741 days, giving the average patent in the Electrical group 6,564 days of protection under the new law.

Table 5 presents the results of the test of Hypothesis 2a for the division of patents into general, chemical, and electrical groups.

[insert Table 5 here]

Comparing the mean prosecution times between each group, it is evident that different groups of patents will in fact receive significantly different patent terms under the new law.^{^^} Thus, hypothesis 2a must be rejected for these patent groups. However, Hypothesis 2b is valid for the general, chemical and electrical groups. For each of those groups, patentees

^{^^} Table 4, Electrical group. Patent Length column. Average row.

22 Table 4, Electrical group, 1st US Time column. Average row.

S3 See supra notes - and accompanying text.

^{^^} Table 5, 1st US Time column. While the difference between the mean prosecution times for the electrical and chemical groups was not statistically significant, both groups differed significantly from the general group.

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T«bl« 5

Hypothesis Tssts for Ocnoral, Ch«Bic«l and Eloctrical Patsnts

t-Test at 95% confidence level

reject hypothesis if: $t < -1.96$ OR $t > 1.96$

Hypothesis

? v«lM«

t value

Result

(gen. x) - (chem. x)

»

603

-8.59

reject

(gen. x) - (elec. x) ■ 549 -6.84 reject

(chem. X) - (elec. x) « 747 1.74 cannot
reject

207

receive significantly longer terms of protection under the new law than they received under the old law. Patentees in the "General" category receive an additional 386 days of protection on average^{^^} (531 days if the assumed drop in pendency time is considered) . Patentees in the "Chemical" category receive an additional 136 days of protection on average^{^^} (336 days if the assumed drop in pendency time is considered) . Patentees in the "Electrical" category receive an additional 176 days of protection on average^{^^} (361 days if the assumed drop in pendency time is considered) .

Further, the data in Table 2 help to measure the number of patentees in each group who lose significant protection under the new law. Table 2 identifies the number of patents in each group whose patents spend more than x years in prosecution. The distributions set out in Table 2 are also represented in Figures 3 through 8 .

S[^] Again, the relevant question is what the data in the sample predict for patentees in the real world. Table 4 indicates that with a 95% confidence level, the average real-world patentee in the general group will get a minimum of 355 additional days of protection (the 386 average additional days of protection, minus the "95% confidence interval" of 31 days shown in Table 4).

S[^] Table 4 indicates that with a 95% confidence level, the average real-world patentee in the chemical group will get a minimum of 87 additional days of protection (the 136 average additional days of protection, minus the "95% confidence interval" of 49 days shown in Table 4) .

2[^] Table 4 indicates that with a 95% confidence level, the average real-world patentee in the electrical group will get a

minimum of 131 additional days of protection (the 176 average additional days of protection, minus the "95% confidence interval" of 45 days shown in Table 4) .

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[insert Figures 3-8 here]

Out of the total sample of 874 general patents, 753 (or 86.1%) gain patent term under the new law, because they were issued in less than three years. If we apply the estimated 20% reduction in pendency time noted above, 815 of the 874 patents (or 93.2%) would gain term under the new law. Of those general patents that do lose patent term, only 13 (or 1.5%) lose more than two years of patent protection. Again, if we apply the estimated 20% reduction in pendency time, the number of general patents losing two or more years of protection drops to 5 (or 0.6%).

Out of the total sample of 604 chemical patents, 402 (or 66.6%) gain patent term under the new law, because they were issued in less than three years. If we apply the estimated 20% reduction in pendency time noted above, 478 of the 604 patents (or 79.1%) would gain term under the new law. Of those chemical patents that do lose patent term, 64 (or 10.6%) lose more than two years of patent protection. If we apply the estimated 20% reduction in pendency time, the number of chemical patents losing two or more years of protection drops to 28 (or 4.6%).

Out of the total sample of 603 electrical patents, 443 (or 73.5%) gain patent term under the new law, because they were issued in less than three years. If we apply the estimated 20% reduction in pendency time noted above, 519 of the 603 patents (or 86.1%) would gain term under the new law. Of those electrical patents that do lose patent term, 33 (or 5.5%) lose more than two years of patent protection. If we apply the

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estimated 20% reduction in pendency time, the number of chemical patents losing two or more years of protection drops to 12 (or 2.0%) .

The second category of patents for which I tested Hypotheses 2a and 2b are patents in the biotechnology and software industries. Unlike the groups tested above, the PTO does not identify "biotechnology" or "software" patents in any recognizable way. I have reviewed each of the 2,081 patents in the survey, and identified those patents which appear to fit within these two categories. ⁸ In the sample, I identified 25 biotechnology patents[^] and 119 software patents. ⁰ The summary

⁸⁸ This process is necessarily imperfect, and in any event is open to interpretation. The list of patents I have classified in each category is on file with the author. While it is reasonable to expect some disagreement over which particular patents should be included in each group, there is no reason to expect that my choice should systematically bias the data in some way.

⁸⁹ In deciding whether to classify a patent as a "biotechnology" patent, I focussed on patents relating to the identification, production or use of gene sequences. I did not include medical devices, medical treatment processes, or pharmaceutical inventions within my definition.

^{^^} The identification of software patents is complicated by the rather perverse rules regarding patenting software. While software itself is patentable, see *In re Alappat* . 33 F.3d 1526 (Fed. Cir. 1994) (en banc), the PTO and the courts have historically required patentees to recite some non-software structure or process as part of the software claim. See, e.g. . *Diamond v. Diehr* . 450 U.S. 175 (1981) . The result is that most software patents appear in "disguised" form, as devices or methods for accomplishing a particular goal.

In identifying software patents, I limited myself to those patents whose inventive components were implemented in software. I did not include patents which recited significant physical structure limitations apart from a computer or related device. Nor did I include inventions relating to semiconductors or integrated circuits.

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data for both the biotechnology and software patents appears in Table 6.

[insert Table 6 here]

Under the old law, the biotechnology patents had an average term of 6,077 days.⁹¹ The average time spent in prosecution was 1,599 days,⁹² giving the average patent in the biotechnology group a total of 5,706 days of protection under the new law. If the assumption made above regarding reduced pendency times under the new law⁹³ applied here, expected prosecution time drops to 1,279 days, giving the average patent in the biotechnology group 6,026 days of protection under the new law. Under the old law, the software patents had an average term of 6,206 days.⁹⁴ The average time spent in prosecution was 1,063 days,⁹⁵ giving the average patent in the software group a total of 6,242 days of protection under the new law. If the assumption made above regarding reduced pendency times under the new law⁹⁶ is applied here, expected prosecution time drops to 850

91 Table 6, Patent Length column. Mean row.

92 Table 6, 1st US Time column. Mean row.

93 See supra notes - and accompanying text.

94 Table 6, Patent Length column. Mean row.

95 Table 6, 1st US Time column. Mean row.

96 See supra notes - and accompanying text.

32

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Table 6

Summary of Data for Biotechnology and Software Patents

Category

Statistical Measure

Biotech patents Number sampled

Average

Maximum value

Minimum value

Standard deviation

95% confidence interval +/-

1st us Time

Patent Length

(in days)

(in

days)

25

1599

6077

4439

6209

375

4690

1027

375

+/- 424

155

Software patents Number sampled 119

Average 1063

Maximum value 3295

Minimum value 209

Standard deviation 551

95% confidence interval +/- 101

6206

6209

5915

27

5

Other patents

Number sampled

Average

Maximum value

Minimum value

Standard deviation

1937

842

8124

174

534

95% confidence interval +/- 24

6188

6209

3843

135

6

218

days, giving the average patent in the software group 6,455 days of protection under the new law.

Table 7 presents the results of the test of Hypothesis 2a for the division of patents into biotechnology and software groups.

[insert Table 7 here]

Comparing the mean prosecution times between these groups and catchall "other" group of non-software or biotechnology patents, it is evident that both groups of patents will in fact receive significantly different patent terms than other types of patents under the new law.⁵ Thus, Hypothesis 2a must be rejected for these patent groups.

Testing the validity of Hypothesis 2b for the biotechnology and software groups is more difficult. This is true for two reasons. First, the small sample size of biotechnology patents (25) makes it difficult to draw statistically valid conclusions regarding the universe of biotechnology patents. Second, our assumption regarding the drop in patent pendency time under the new law has a significant effect on the results for both industries. Patentees in the "biotechnology" category would receive 371 days less protection on average under the new law if

⁵ Table 7, 1st US Time column. On the other hand, the data do not allow us to reject the hypothesis that biotechnology patents and software patents have the same average term under the new law.

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Table 7

Hypothesis Tests for Biotechnology and Software Patents

t-Test of First US Time data at 95% confidence level

reject hypothesis if: $t < -1.96$ OR $t > 1.96$

Result

reject

Hypothesis

a value

t value

(Other X) -

(bio.

X)

=

991

-3.79

(other X) - (soft, x) =

529 -4.44 reject

(bio. X) - (soft. X) = 3758 0.65 cannot
reject

220

change in pendency is not considered, ^^ but only 51 days less protection if the drop in pendency time is considered. ^5
Patentees in the "software" category receive an additional 36 days of protection on average under the new law, 100 but receive 249 days if the drop in pendency time is considered. ^0^
The data in Table 2 help to measure the number of patentees in each group who lose significant protection under the new law. Table 2 identifies the number of patents in each group whose patents spend more than x years in prosecution. The

distributions set out in Table 2 are also represented in Figures 9 through 12.

98 Table 6 indicates that this number is not statistically significant at the 95% confidence level. That is, it is not valid to draw a conclusion one way or another from the sample data regarding how biotechnology patents in the real world would fare under this assumption. This is because the difference in the number of days of protection (371) is less than the confidence interval for the biotechnology patents (424 days) .

59 Table 6 indicates that this number is not statistically significant at the 95% confidence level. That is, it is not valid to draw a conclusion one way or another from the sample data regarding how biotechnology patents in the real world would fare under this assumption. This is because the difference in the number of days of protection (51) is less than the confidence interval for the biotechnology patents (424 days) .

100 Table 6 indicates that this number is not statistically significant at the 95% confidence level. That is, it is not valid to draw a conclusion one way or another from the sample data regarding how software patents in the real world would fare under this assumption. This is because the difference in the number of days of protection (36) is less than the confidence interval for the software patents (101 days) .

101 Table 6 indicates that with a 95% confidence level, the average real-world patentee in the software group will get a minimum of 148 additional days of protection if the 20% reduction in pendency time is considered (the 249 average additional days of protection, minus the "95% confidence interval" of 101 days shown in Table 6) .

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[insert Figures 9-12 here]

Out of the total sample of 25 biotechnology patents, 11 (or 44%) gain patent term under the new law, because they were issued in less than three years. If we apply the estimated 20% reduction in pendency time noted above, 15 of the 25 patents (or 60%) would gain term under the new law. Of those biotechnology patents that

do lose patent term, 9 (or 3 6%) lose more than two years of patent protection. If we apply the estimated 20% reduction in pendency time, the number of biotechnology patents losing two or more years of protection drops to 6 (or 24%) .

Out of the total sample of 119 software patents, 72 (or 60.5%) gain patent term under the new law, because they were issued in less than three years. If we apply the estimated 20% reduction in pendency time noted above, 92 of the 119 patents (or 77.3%) would gain term under the new law. Of those software patents that do lose patent term, 12 (or 10.1%) lose more than two years of patent protection. If we apply the estimated 20% reduction in pendency time, the number of chemical patents losing two or more years of protection drops to 4 (or 3.4%).

A Side Note on Submarine Patents . Using the criteria developed in Section 11,102 j have attempted to estimate the number of patents in each subject matter category that might be considered

1°2 See supra notes - and accompanying text.

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Biotech Patents

Time Spent in Prosecution

1

1

< 1 year 1-2 years 2-3 years 3-4 years 4-5 years > 5 years

Figure 9

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Software Patents

Time Spent in Prosecution

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< 1 year 1 -2 years 2-3 years 3-4 years 4-5 years > 5 years

Figure 11

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"submarine" patents. I have analyzed the patents studied in each of the five subject matter categories discussed in this section (General, Chemical, Electrical, biotechnology, and software) to identify the number with these characteristics in each industry. The results are presented in Table 3.

For general mechanical patents, under the refiling test, 14 of the 874 patents (1.6%) could be classified as submarine patents. Further, Table 3 indicates that 1 of the 4 general mechanical patents (25%) that would lose four or more years of protection qualifies as a submarine patent under this measure.

For chemical patents, under the refiling test, 29 of the 604 patents (4.8%) could be classified as submarine patents. Further, Table 3 indicates that 9 of the 18 chemical patents (50%) that would lose four or more years of protection qualify as submarine patents under this measure.

For electrical patents, under the refiling test, 15 of the 603 patents (2.5%) could be classified as submarine patents. Further, Table 3 indicates that 5 of the 9 electrical patents (56%) that would lose four or more years of protection qualify as submarine patents under this measure.

For biotechnology patents, under the refiling test, 5 of the 25 patents (20.0%) could be classified as submarine patents.

Further, Table 3 indicates that 4 of the 6 biotechnology patents (67%) that would lose four or more years of protection qualify as submarine patents under this measure.

For software patents, under the refiling test, 2 of the 120 patents (1.7%) could be classified as submarine patents.

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Further, Table 3 indicates that 1 of the 2 software patents (50%) that would lose four or more years of protection qualifies as a submarine patent under this measure.

Conclusion . Critics of the twenty-year patent term are correct that some industries fare better than others under the new law. However, that criticism loses much of its force if it turns out that everyone benefits from the new law, and the only question is by how much. With regard to the first division of patents into General, Chemical, and Electrical patents, this does turn out to be the case. None of these groups is disadvantaged under the new law — they are all better off on average than they would be under the old seventeen-year term. Further, a large majority of the patentees in each group gain patent term, and only a small percentage risk losing two or more years of protection.

The question is more difficult to answer with respect to the biotechnology and software industries. If we assume that pendency time will not change as a result of the new law, for both the biotechnology and the software industry, the outcome is indeterminate — that is, it is not possible to predict with reasonable confidence that patentees will be either better or worse off under the new law. If, on the other hand, we make the arguably more realistic assumption that pendency time will be reduced as a result of the new law, the software industry is unambiguously better off under the new law; for the biotechnology industry, the outcome remains indeterminate. While only a small percentage of software patents (1.7%) would lose four or more

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years of protection under the new law, nearly a quarter of

biotechnology patents would lose significant protection. ^^

There are also differences in the number of potential submarine patents by industry. Biotechnology and chemical patents have a high percentage of patents with multiple refilings. If these statistics are in fact indicative of submarine patents, it may be that reduced pendency time in the biotechnology industry is an appropriate response to the problem. In particular, it is significant to note that the majority of the biotechnology patents that would lose four or more years of protection also qualify as "submarine patents" under this measure. ^^

IV. Patent Term and Litigation Success

There is a rather impressive academic literature on the theoretical problem of determining optimal patent life.^{1*} Generally, this literature is premised on the assumption that the term of a patent will be fixed — at 14, 17, 21, or x number of years, 106 or perhaps at a different term for each different

103 Again, the small sample size in the biotechnology area dictates that these results be read with caution.

104 It is also worth noting that the PTO recently responded to the concerns of biotechnology patentees by introducing a series of measures designed to reduce pendency time in Group 1800. See AIPLA Bull. 319-20 (March-April 1995).

105 See supra notes - and accompanying text (discussing patent life).

106

See Kaplow, supra note , at 1821.

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industry. ^^ The new variable twenty-year term offers the possibility of a new approach to the problem of determining optimal patent life. In this section, I attempt to determine whether there is some reason to prefer (or oppose) a patent term which is dependent on prosecution history.

One of the most startling facts to a layperson about the current patent prosecution system is that it is virtually impossible for an Examiner to finally reject an application. Persistent applicants have the ability under PTO rules to amend their applications, and to abandon and refile continuation (or continuation-in-part) applications, as many times as it takes to get the patent issued. ^^ This is how certain patentees can create "submarine" patents, which surface many years after the application is filed. Further, since patent Examiners have a limited amount of time to spend on each application, and since they are rewarded based on the number of files they finish processing, 109 there is an obvious incentive for Examiners to allow rather than reject questionable applications in order to get the application off their desk.

As a result of the structure of the PTO examination system, therefore, it is reasonable to suppose that patents with a long 10^ See supra note (collecting authors discussing this approach) .

108 See Martin, supra note , at 14-16 (discussing the practice of abandonment even after allowance, and giving examples) ; see also 35 U.S.C. § 132 (providing for re-examination of applications after rejection by Examiner) .

105 Martin, supra note , at 12-14; Simson L. Garfinkel, Patently Absurd . Wired, July 1994, at 105.

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prosecution history are of dubious validity — that they result from wearing the examiner down rather than from an examiner's change of heart about patentability. I have therefore tested the following hypothesis:

Hypothesis 3a : Patents with a long prosecution history are more likely to be found invalid in litigation than patents with a short prosecution history.

Of course, for every argument in law there is a counterargument. In this case, the counterargument stems from the deference shown to the PTO by judges and juries during litigation over a patent's validity. ^^ It is received wisdom

among litigators that patents that have been "thoroughly" examined by the PTO are more likely to be held valid than patents that "sailed through" the Office. In part, this is because factfinders are often unwilling to second guess the Examiner regarding a particular piece of prior art. Thus, if the Examiner has actually considered most of the relevant prior art, the patent may be harder to attack in litigation. ^H A long

110 Deference is compelled by the patent statute. 35 U.S.C. § 282. This presumption of patent validity can be overcome only by clear and convincing evidence. E.g. Intel v. ITC . 946 F.2d 821 (Fed. Cir. 1991); accord Greenwood v. Hattori Seiko Co. , 900 F.2d 238 (Fed. Cir, 1990) .

m E.g. Hewlett-Packard Co. v. Bausch & Lomb Inc. . 909 F.2d 1464 (Fed. Cir. 1990) (meeting the burden of showing invalidity "is especially difficult when the prior art was before the PTO examiner during prosecution of the application."); accord Rvco. Inc. v. Aq-Bag Co. . 857 F.2d 1418 (Fed. Cir. 1988). Indeed, so important is this perceived benefit that patentees sometimes put their own patent into "reexamination" before the PTO, in order to have the PTO consider the applicability of a key piece of prior art that was not considered in the original examination. See 35 U.S.C. §§ 301-06 (governing reexamination and citation of new prior art) .

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examination period may also mean a series of amendments to claim language, which have narrowed the claims sufficiently that they are more likely to be valid. This suggests a positive relationship between examination time and validity, expressed in the following alternative hypothesis:

Hypothesis 3b : Patents with a long prosecution history are more likely to be found valid in litigation than patents with a short prosecution history.

Data and Analysis . The data used to test these hypotheses were taken from a study of 197 reported utility patent decisions between 1989 and 1994 in which the validity of the patent was determined. 1^2 These decisions represent nearly every case

reported in United States Patents Quarterly from July 1989 through September 1994. ^^ For each litigated patent, I then
112 Technically, the issue presented in these cases was whether the defendant in an infringement suit (or in some cases the plaintiff in a declaratory judgment action) had proven by clear and convincing evidence that the patent was invalid. The Federal Circuit refers to the relevant findings as "invalid" and "not invalid," but for simplicity's sake I have used the categories "Valid" and "Invalid".

I have not studied judgments relating to infringement, unenforceability, patent misuse, licensing, or other aspects of the patent laws than validity.

113 Volumes 10 USPQ2d through 31 USPQ2d, inclusive. Volume 29 USPQ2d was unavailable to me at the time of this study, so cases from that volume are not included. However, there is no reason to believe that this omission should prejudice the results of the study in any way.

In each case, only the last judgment regarding validity was tabulated. Thus, if a patent was held invalid by the district court, but found valid on appeal, only the latter determination is included in the study.

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compiled prosecution history data identical to that used in Parts II and III above. A sample data page is presented in Appendix The results of this study are presented in Table 8.

[insert Table 8 here]

Of the 197 total patents, 110 were found valid by the courts. The patents found valid had an average time in prosecution of 1,238 days. The remaining 87 patents studied were found invalid. The patents found invalid had an average time in prosecution of 1,320 days. As demonstrated at the bottom of Table 8, there is no statistically significant difference between the prosecution times of those patents found valid and those patents found invalid. Thus, both Hypothesis 3a and Hypothesis 3b must be rejected.

There are two other items of interest regarding this data.

First, between 1989 and 1994 the federal courts found 110 out of 197 patents, or approximately 56%, to be valid. This represents a higher validity rate than demonstrated in pre-1982 studies, ^^

11^ The full data set, numbering approximately 7 pages, is on file with the author.

115 For example, pre-1982 data indicate that the regional courts of appeals found only about 35% of patents valid on appeal.

Karen G. Bender et al. Patent Decisions of the United States Court of Appeals for the Federal Circuit; The Year 1985 in Review . 35 Am. U. L. Rev. 995, 997 (1986) ; see also Donald R. Dunner, The United States Court of Appeals for the Federal Circuit; Its First Three Years . 13 AIPLA Q.J. 185, 186 (1985).

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Table 8 Summary of Data from Litigation Data Set

Category
Valid patents

Statistical Measure

1st US Time
(in days)

Number Sampled 110
Average 1238
Median 1040
Maximum value 5723
Minimum value 246
Standard deviation 930
95% confidence interval +/- 174

Patent Length
(in days)

6131

6209

6209

2730

376

70

Invalid patents Number sampled 87

Average 1320

Median 988

Maximum value 7104

Minimum value 200

Standard deviation 1044

95% confidence interval +/- 219

6187

6209

6209

4880

153

32

Total patents

Number sampled

Average

Median

Maximum value

Minimum value

Standard deviation

197

1274

1012

7104

200

983

95% confidence interval +/- 137

6156

6209

6209

2730

300

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and is consistent with the thesis that the creation of the Federal Circuit in 1982 had the effect of making the law more favorable to patentees. ^^

Second, it is evident that the patents tested in this portion of the study spent significantly more time in the Patent Office than the patents studied in Section II. The mean time in prosecution for the 2,081 patents studied in Section II was 864 days.^1^ By contrast, the mean time in prosecution for the 197 litigated patents was 1,274 days, a period nearly 50% longer. Thus, it appears that for some reason, litigated patents had a much longer prosecution period than average (and thus would receive less protection than average under the new law) .

Conclusion . There is no significant relationship between the length of time a patent spends in prosecution and whether or not it is found valid in court. Hence, both Hypothesis 3a and Hypothesis 3b must be rejected.

The patents litigated between 1989 and 1994 spend significantly more time in prosecution on average than did the group of patents issued in December 1994. There are at least two possible explanations for this. First, it may be that the PTO has significantly reduced the time it takes to get a patent issued between the early 1980s (when most of the litigated

•^1^ See Dunner, *supra* note , at 186-87 and Appendix A (in its first three years, the Federal Circuit found 53.6% of patents valid on appeal) .

H^ Table 1. See *supra* note and accompanying text.

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patents issued) and 1994 (when the patents studied in Sections II and III issued) . Alternatively, it may be that those applications the patentee considers "important" — because they are likely to result in litigation — are precisely those which the patentee is willing to continue fighting over with the PTO, resulting in a longer average prosecution time.

V. Conclusion

The current legislative battle over the new twenty-year patent term centers on the effects the new term will allegedly have on patentees. This study has determined that overall, patentees will benefit from the new twenty-year term. Indeed, on average patentees can expect to gain around one year of additional term, depending on the assumptions made. Under any set of assumptions, patentees show a statistically significant gain from the new law. Further, the data indicate that all of these results are statistically significant at a 95% or greater confidence level.

It is true, as critics of the new law assert, that some industries will fare better than others. However, with one possible exception, a large majority of patentees in every industry studied are better off on average under the new law. The one exception is the biotechnology industry, which the data indicate cannot be proven to be either better or worse off under the new law. The small sample size of biotechnology patents in the study makes it difficult to draw unambiguous conclusions on this issue. Further, in any given industry only a few patentees

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can expect to lose a significant portion of their patent term under the new law.

The benefits of the new twenty-year patent term are clear: it gives U.S. patentees certain procedural advantages before the Japanese Patent Office, and it curtails the problem of submarine patents. The study indicates that submarine patents are a small but not insignificant percentage of the total patents issued, and that submarine patents suffer the brunt of the burden imposed by the new law. Based on the data presented in this study,

enactment of the Dole-Rohrbacher bill appears unwarranted. Most U.S. patentees will be just as well off without the seventeen-year term, and much of the benefit of the seventeen-year term will go to submarine patents.

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Mr. MOORHEAD. Mr. Stead.
STATEMENT OF EDWARD STEAD, VICE PRESIDENT, GENERAL
COUNSEL AND SECRETARY, APPLE COMPUTER, INC., ON BE-
HALF OF THE INFORMATION TECHNOLOGY INDUSTRY
COUNCIL

Mr. Stead. Thank you, Mr. Chairman and members of the sub-
committee.
I'm here on behalf of Apple Computer, a recognized creator of
technology, and we're located in Cupertino, CA. I'm also here on be-
half of the Information Technology Industry Council which is
headquartered here in Washington. ITI members represent the
leading providers of information technology products and services.

With worldwide in excess of \$300 million in 1994 and more than 1 million employees in the United States, our members are consistently at the very top of the list of all companies receiving U.S. patents.

In the information age in which knowledge is the coin of the realm, the U.S. information technology industry is the world leader. This is because we create intellectual property that provides the added value that is most in demand. A strong patent system is one of the cornerstones of protection of that intellectual property.

We are here today to support H.R. 1733, your bill, Mr. Chairman, and to express our opposition to H.R. 359. Mr. MOORHEAD's bill improves the patent system by providing additional protection for inventors, including individual inventors, against delay in the Patent Office. Mr. MOORHEAD's bill is a step forward. In an industry in which advances in technology occur at ever-increasing speed, H.R. 359 would create significant uncertainties which would impede our members' ability to compete in a global economy. H.R. 359 is a big step backward.

I'd like to deal with some of the issues that were raised earlier by the subcommittee. One had to do with the constitutionality of the current law. The Constitution provides that the Congress will decide how to protect an inventor. The Constitution does not say you get 17 years or you get 20 years. That's up to the Congress. That's what we're here to talk about today. I think that the 17 years, a lot of emphasis was put on 17 years certain versus 20 years of uncertainty. To me the only certainty is in the 20-year term. The 17-year term is the uncertain term.

We had a specific example at Apple recently, where an application was originally filed in 1955. The patent went through five successive series of cancellations and refilings. The patent ultimately issued in 1993. No one knew what the patent was for that 35 years. No one knew what the invention was for that 35 years. I'm not sure that the inventor knew what the invention was for that 35 years. But, in any event, when the patent finally issued, it was asserted against Apple Computer, was said to be asserted against all of our computers which we had been producing, developing and marketing from some period of time. It cost us a substantial amount of money to defend against that claim and that's the problem that we'd like to see dealt with, with the 20-year term which will provide certainty. The 17-year term, in our judgment, does not

do that.

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In a global economy I think it's ridiculous to think that you can hide an invention. We're dealing with a system, a global system, in which inventions are disclosed after 18 months. Let's get them out there. Let's get to work and start producing. Regarding the delay issue, I think that where delay is caused by the Patent Office, the GATT provisions and the MOORHEAD bill would allow for extensions. If the inventors knew they were operating under a new system, they may well have acted to speed up the processing of their claim rather than to delay it. And I think in a global economy we need to be sped up. Delay is not going to help us. Most — I think the number is something like 45 percent — of the patents that are granted today in the United States are foreign applications. So, to think that we're protecting anyone is just beyond my imagination. Regarding small inventors that we're supposedly trying to protect, the small inventor in the case I cited happens to live in Nevada where he doesn't pay any taxes and spends a lot of time skiing. His lawyer, who I guess he can afford, is among the highest paid lawyers in the country. So, I don't think money is an object here.

I think we're dealing with a real abuse of the system under the old system and I don't see how anything other than the MOORHEAD bill would deal with the abuse of the system. And I have seen no effort, in spite of efforts on our part, to try and make any accommodation to deal with this abuse of the system. I think the MOORHEAD bill does it, and I think we ought to get on with it.

As far as the chart that was put up, I think a number of examples that were on the chart were deliberate delays on the part of the inventors and deliberate delays shouldn't be compensated. Where they have been delayed by interference procedures, that's taken care of in the current legislation. A few situations may have been caused by the Patent Office where the Patent Office caused delays; those would be directly dealt with under the MOORHEAD bill. So, I don't see the problem here.

I think in your opening comments, Mr. Chairman, you dealt with the improvements that your bill put forward on GAIT and I don't see any need to go into that. Just to kind of net it out, I think it's important that we have some certainty in the system. I think we

have with the new GATT legislation more certainty than we had before. I think that the improvements offered by the MOORHEAD bill provide additional certainty and accommodation where it's needed and I would urge the committee to support the MOORHEAD bill.

[The prepared statement of Mr. Stead follows:]

Prepared Statement of Edward Stead, Vice President, General Counsel and Secretary, Apple Computer, Inc., on Behalf of the Information Technology Industry Council

I. introduction

Mister Chairman and members of the Subcommittee, my name is Ed Stead. I am the Vice President, General Counsel and Secretary of Apple Computer. Apple is a Kioneer and innovator in the information industry. We create powerful solutions ased on easy to use personal computers, servers, peripherals, software, Internet services and personal ^gital assistants. Headquartered in Cupertino, California, we develop, manufacture, license and market products, technologies and services for the business, education, consumer, scientific and engineering and government markets in over 140 countries.

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rm also here today representing the Information Technology Industry Council, or ITI. ITI members represent this nation's leading providers of information technology products and services. With worldwide revenues over \$323 billion in 1994 and more than one million employees in the U.S., our members are consistently at the very top of the list of all companies receiving U.S. patents.

In the Information Age in which knowledge is the coin of the realm, the U.S. Information Technology industry is the world leader. This is because we create the intellectual property that provides the added value that is most in demand. A strong patent system is one of the cornerstones of protection of that intellectusJ property. Accordingly, we applaud any improvement to the patent system and steadfastly fight any effort to weaken it.

We are here today to support Chairman MOORHEAD's bill, H.R. 1733, and to express our opposition to H.R. 359. H.R. 1733 improves the patent system by providing additional protection for inventors, particularly individual inventors, against delay in the Patent Office. H.R. 1733 is a step forward. In an industry in which advances in technology occur at every-increasing speed. H.R. 359 would recreate significant uncertainties which would impede our members' ability to compete domestically and internationally. H.R. 359 is a step backward.

I'm going to briefly discuss the following: (1) our current patent system, which was updated by the Uruguay Round of the General Agreements on Tariffs and Trade (GATT) implementing legislation last year; (2) our support of H.R. 1733 be-

cause it improves upon the changes made by the GATT implementing legislation; and (3) our opposition to H.R. 359 because it invites and incents abuse of the patent system and represents a retreat from important commitments the U.S. has made with and obtained from its trading partners.

II. THE CURRENT PATENT SYSTEM

With the enactment of the GATT implementing legislation last year, the U.S. achieved an important goal of bringing our major trading partners into alignment with our key intellectual property principles. The GATT legislation changed the term of a U.S. patent from 17 years measured from the date of grant of the patent to 20 years measured from the date of filing the application for the patent. This brought the U.S. patent system in line with all of our major trading partners. Most U.S. manufacturers and intellectual property owners supported the shift to a 20 year term measured from filing. By measuring from the date of filing, the new law eliminates the incentive for applicants to "game" the system by obtaining so-called "submarine patents," in which the applicant extends the issuance and expiration date of a patent. I will discuss this process and its implications for U.S. industry in some detail later in this statement.

According to the Patent Office, over 95 percent of U.S. patent applications are acted upon within 18 months after the application date. To ensure that the GATT implementation of the patent term did not disadvantage inventors who might be subject to Patent Office procedural delays, the GATT implementing legislation included up to five years of patent term extension for procedural delays such as judicial appeals, secrecy order delays, and interference priority contests.

Reform of the U.S. patent system to adopt the 20 year term from filing was supported by U.S. industry. In addition, the U.S. obtained a number of important changes in the Japanese patent system that will benefit U.S. companies and inventors. These include:

Japan agreed to abolish the authority for granting compulsory licenses for dependent technologies which Japanese industry relied upon to leverage their position to obtain licenses on terms set by the Japanese Patent Office rather than the patent owner;

Japan agreed to drop its pre-grant opposition procedure, which allowed serial opposition and which was used to delay the issuance of the Japanese patents of U.S. companies for long period of time;

Japan agreed to provide an accelerated examination procedure for companies that need to obtain their Japanese patents quickly; and

Japan agreed to accept patent applications filed in English.

The improvements to the Japanese system will speed the granting of patents in Japan, allow for recovery of research and development expenses, and reduce the cost of obtaining patents.

III. H.R. 1733 IMPROVES ON THE CURRENT SYSTEM

Chairman MOORHEAD's bill, H.R. 1733, improves on the changes made by last year's GATT legislation in two ways: (1) it includes a provision to accommodate inventors for delays by the Patent Office that could otherwise reduce the effective

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term of a patent granted under the new system; and (2) it provides for publication of patent applications 18 months after filing.

As I noted above, the GATT legislation includes up to five years of patent extension to accommodate for certain Patent Office delays. Soon after passage of the legislation, it was recognized that this rectified the vast majority of the delay situations that are not within the control of the applicant. However, there are some delays caused by the Patent Office which are not covered, such as a loss of files by the Patent Office, extended prosecution in complex technologies, or simply over-long delays in responding to papers filed by the applicant, and the GATT legislation did not provide the flexibility to deal with those delays. Mr. MOORHEAD introduced H.R. 1733, which addresses this problem by allowing the Patent Office to extend the term of a patent up to ten years to accommodate for unusual Patent Office-caused delays. The solution provided by H.R. 1733 provides appropriate relief for the potential loss of patent term caused by Patent Office delays that are beyond the control of the applicant, without undermining the internationally accepted 20 year term.

H.R. 1733 also provides for publication of patent applications 18 months after filing. Publication alerts entrepreneurs and companies early on if there is an adverse patent or patent application potentially covering a new product in development. Early publication will reduce surprise and as a consequence, add more certainty and predictability to the patent system.

This will allow an early assessment for a license to be negotiated with the patent applicant or for the investment proposal to be dropped. Importantly, this also alerts U.S. entrepreneurs and companies of the U.S. patent claim coverage being applied for by foreign companies in our home market. Note that almost 45% of U.S. patent applications are of foreign origin. (Foreign countries routinely publish the foreign patent applications of U.S. inventors 18 months from the original filing.)

Publication of patent applications also will improve the examination of later-filed applications, particularly in the software area, by getting earlier-filed applications into the patent examiner's search files quickly and by facilitating the public submission of prior art.

H.R. 1733 includes a provision specifically designed for small inventors that allows them to prevent publication of their applications until three months after the first examination action by the Patent Office. This provision will allow the maintenance of the secrecy of the application during this period and permit inventors to

keep their inventions as trade secrets by abandoning the patent process if they are concerned with the likely outcome.

When the invention claimed in the publication is identical to the one claimed in the issued patent, the royalty-bearing portion of the patent term is extended back to the application publication date. This allows the inventor to collect royalties from the publication date once the patent issues. For fast-moving technologies, where inventions typically have a short life, this is a particular advantage to inventors.

The MOORHEAD bill, by compensating for delays outside the control of the applicant and requiring publication of patent applications, will promote the efficient and effective use of inventions.

IV. H.R. 359 REINSTATES A SYSTEM THAT INVITES AND INCENTS ABUSE

H.R. 359 would reverse our improved system, which offers a 20 year protection period for patents, counting from the date of filing, by adding the option of a 17 year term from the day the patent is granted. This is bad because the date of grant can occur for an unlimited number of years after the initial application filing. This system would have no certainty.

Going back to a 17 year from the grant date term would reopen the ability to abuse the system through what are seen as "submarine patents." A submarine patent is typically one where a patent application is abandoned by the applicant, then immediately filed again, restarting the entire application process. This ploy can be repeated again and again with no penalty to the applicant except additional filing fees. This allows an applicant to hold a patent in reserve for an indefinite period of time. The inventor is entitled to his or her original filing date during this entire process and therefore is able to predate the work of others that occurs after that date. During the years of delay, the applicant is permitted to change the claims of the application to cover new technologies and new products that he or she never envisioned when the patent was originally filed. The patent owner then springs the patent on others who are manufacturing the product or using process and who were unaware of the earlier filings and abandonments.

In a recent case brought against Apple, for example, we were faced with charges of patent infringement under a patent where the original application was filed approximately 35 years before the issuance of the patent. The original application had

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been refiled by the inventor six successive times. When the patent issued in 1993 it reverted to 1955. Moreover, the claim was that all of Apple's computer systems infringed. The original application bore no resemblance to our products, nor did it add anything to the development of our products. Apple had no way of knowing of the pendency of the application nor what it covered.

Finally, the scope and the impact of submarine patents on those corporations that

are creating the new jobs, new products and new services in this Information Age should not be underestimated. Exclusive of hundreds of millions of dollars in research and development expense, Apple spends, for example, approximately \$5,000,000 a year to acquire and administer its patent portfolio. But, the cost to defend against a single submarine patent in patent litigation can easily equal or exceed that amount. Such costs can be fatal for a startup company.

V. CONCLUSION

No industry cares more about developing and maintaining a strong, certain intellectual property system than the U.S. information technology industry.

By supporting H.R. 1733, this Committee can help advance U.S. competitiveness. The current system, particularly as modified by H.R. 1733, incents all inventors and the Patent Office to expeditiously process and issue patents, and is to everyone's advantage. If you support the wrong bill, H.R. 359, it would be a significant step backward to the previous situation, where uncertainty and unpredictability were an inherent part of the system. The incentives of that prior system which encouraged delay, and resulted in submarine patents, were to the United States' disadvantage. Mr. Chairman, Apple and ITI are prepared to help you and this Committee any way we can to improve the patent system.

Mr. MOORHEAD. Thank you.

Very unfortunately, we have a vote on the floor, the rule on the Partial-Birth i^Dortion Act. I'll get back as fast as I possibly can, and I hope that as many of our panelists as possible can come back. As soon as they can, we'll get started again. Thank you.

[Recess.]

Mr. MOORHEAD. The meeting will come to order again. There are so many things going on and this debate on the floor has a lot of interest. Our ranking minority member is very much involved in that or we would have more people here today, but you can see from the questions that were asked that there's a lot of interest by the members of the subcommittee, and I'm sure that all of the testimony is in written form and they are all pretty well acquainted with what the issues are.

Mr. Barram.

STATEMENT OF STEPHEN H. BARRAM, INTEGRATED SERVICES, INC., LAKE OSWEGO, OR

Mr. Barram. Thank you.

Mr. Chairman, I am a founder and CEO of a small business in Portland, OR. We're a software manufacturer that was established in 1988. In 1993 we were able to place 25th on Inc. 500 list of fastest growing privately held companies. We have been privileged to

attain a leadership position in a niche market and we have as major customers Texaco, Pennzoil, Jiffy Lube, Esso, Shell of Canada, Castrol, and others. While our business growth and software manufacturing capabilities drive me to have a keen interest in the intellectual property area and the protection afforded us, I also sit here having been a delegate to the 1995 White House Conference on Small Business.

I believe the Conference delegates came away with both a clear understanding and consensus of the fact that we are now part of a global economy. This world economy doesn't just impact small

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business, it provides opportunities for small business. I believe the United States right now is at a crossroads. We can either choose to live and act as we always have or recognize we are in this global economy and seize the opportunities being presented to us.

H.R. 359 has been introduced specifically to override and repeal some GATT provisions. While I believe its intentions are well founded, I would urge you to consider whether the old protections that used to be effective will continue to be as effective in this changing environment. On the other hand, I believe H.R. 1733 addresses the concerns about the term length of patents by providing for extensions whenever a delay takes place in the process.

We're a small business in the software industry. While patents are a tool we use, the software industry also relies heavily on the other forms of intellectual property protection. If H.R. 359 were passed into law, some of us in the software industry are concerned it would signal a retreat on the part of the United States. It would signal that the United States believes we are not subject to some of the international accords which have been agreed to by many other jurisdictions. I am afraid 359 would perpetuate a methodology that is no longer in the best interest for the United States to pursue.

Let me give you an example of how I fear H.R. 359's adoption might impact our company in Oregon. I will use trademark issues by way of analogy.

ISI has installations in every State of the United States, every province in Canada, Costa Rica, Mexico and soon Australia, South America, and Europe. Today when ISI files for trademark protection in the United States, it receives no reciprocal benefit from any

of the participating countries which were part of the Uruguay Round Agreement. But if the Madrid Protocol, currently under consideration, is signed, then ISI would have that reciprocal protection with all of those participating countries. This will be a very valuable tool for a small company such as ours. We cannot afford to prosecute trademark applications in every country. We're just too small. The same would be true of patents. If H.R. 359 became law my company would face the same burden. In the international marketplace we need certainty in the patent process. And I believe we define "certainty" differently than Congressman ROHRABACHER did earlier.

Today, with the increasing use of the Internet, our world has become as small as a local telephone call. Our business relies on technological improvements and advancements in order to remain competitive in this world economy. And certainly we will use the Internet to compete in this global economy.

At the White House Conference, we thoroughly discussed how to protect intellectual property rights of U.S. businesses. There was initial discussion by some who argued we should adopt a stance similar to H.R. 359. But in the end the group felt that H.R. 359 was a step backward and contrary to the role the conference wanted the United States to play. Therefore, the technology section specifically omitted any reference that would tie us to a position similar to 359. I applaud the Conference delegates for taking an aggressive and forward thinking role. I sit here as one of them urging you to do likewise when considering the provisions of these bills.

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As a lawyer, I have an additional concern if 359 were to become law. Because the debate has become so public, lawyers who are properly representing clients in the patent process will now urge those clients to work to delay as long as possible. I believe this is legally proper and even ethically mandated, but I don't believe this fosters competitiveness in this global environment. Rather, it encourages just the opposite — monopolistic tendencies. Historically, American businesses have thrived under a free market economy. The United States should do all it can to enhance this historical strength of small business by encouraging competitiveness in a global economy on a level playing field. H.R. 359 ignores this point of view and I believe ultimately would damage the United States

small business as we try to lead the world in innovation and aggressive adoption of technological breakthroughs.

Please support our efforts to lead. We will succeed more readily if you leave us free from the old burdens, which were not designed for the new global economic landscape. Our major trading partners have been able to agree among themselves that a 20-year term measured from the time of filing is materially acceptable in the world today. Yes, that is different from a 17-year patent term from date of issue that the United States has lived with. But it will work fine and allow us to meet and compete on a level global playing field. Therefore, I stand before you this morning in support of H.R. 1733. Thank you, Mr. Chairman, for giving me the opportunity to testify this morning.

[The prepared statement of Mr. Barram follows:]

Prepared Statement of Stephen H. Barram, CEO, Integrated Services, Inc.,
Lake Oswego, OR

Mr. Chairman and Members of the Subcommittee, my name is Steve Barram. I am one of the founders and CEO of a small business in Portland, Oregon. We are a software manufacturer established in 1988. In 1993 we placed 25th on the Inc. 500 list of fastest growing privately held companies. We have been privileged to attain a leadership position in a niche market. Our major customers include Texaco, Pennzoil, Jiffy Lube, Esso, Shell Canada, Valvoline, Castrol and others.

While our business growth and software manufacturing capabilities drive me to have a keen interest in the intellectual property area and the protection afforded us, I do sit here having been a delegate to the 1995 White House Conference on Small Business.

I believe the conference delegates came away with both a clear understanding and consensus of the fact that we are now part of a global economy. This world economy doesn't just impact small business, it provides opportunities for, small business. I believe the United States stands at a crossroads. We can either choose to live and act as we always have, or recognize we are in a global economy and seize the opportunities being presented to us.

H.R. 359 has been introduced specifically to override and repeal some GATT provisions. While I believe its intentions are well-founded, I would urge you to consider whether the old protections that used to be effective will continue to be as effective in this changing environment. On the other hand, I believe H.R. 1733 addresses the concerns about the term length of patents by providing for extensions whenever a delay takes place in the issuing process.

We are a small business in the software industry. Patents are a tool we use, however, the software industry also relies heavily on the other forms of intellectual

property protection. If H.R. 359 were passed into law, some of us in the software industry are concerned it would signal a retreat on the part of the United States. It would signal that the United States believes we are not subject to some of the international accords which have been agreed to by many other jurisdictions. I am afraid 359 would perpetuate a methodology that is no longer the best for the United States to pursue.

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Let me give you an example of how I fear adoption of H.R. 359 might impact our small company in Oregon. To illustrate this I will use trademark issues by way of analogy:

ISI has installations in every state of the U.S., every province of Canada, Costa Rica, Mexico and soon Australia, South America, Europe and potentially the continent of Asia. Today, when ISI files for trademark protection in the United States it receives no reciprocal benefit from any of the participating countries which were part of the Uruguay Round Agreement. But, if the Madrid Protocol, currently under consideration, is signed, then ISI would have reciprocal trademark protection with all the participating countries. This will be very valuable for a small company such as ours. We cannot afford to prosecute trademark applications in every country. We're just too small.

The same would be true of patents. If H.R. 359 became law, my company would face the same burden. In the international marketplace, we need certainty in the patent process.

Today, with increasing use of the Internet, our world has become as small as a local telephone call. Our business relies on technological advancements in order to remain competitive in our world economy. Certainly we will use the Internet to compete in this global economy.

At the White House Conference, we thoroughly discussed how to protect the intellectual property rights of U.S. Businesses. There was initial discussion by some who argued we should adopt a stance similar to H.R. 359. But, in the end, the group felt that H.R. 359 was a step backward and contrary to the role the conference wanted the United States to play. Therefore, the technology section specifically omitted any reference that would tie us to a position similar to 359.

I applaud the conference delegates for taking an aggressive and forward-thinking role. I sit here as one of them urging you to do likewise when considering the provisions of H.R. 359 and the provisions of H.R. 1733.

As a lawyer, I have an additional concern if 359 were to become law. Because the debate has become so public, lawyers who are properly representing clients in the patent process will now urge them to work to delay issuance in order to "protect their clients" best interests. While this is legally proper, and I would say emphatically

mandated for a lawyer, I do not believe this fosters competitiveness in our global environment. Rather, it encourages just the opposite — monopolistic tendencies. American small business has historically thrived under a free market economy. The United States should do all it can to enhance this historical strength of small business by encouraging competitiveness in a global economy on a level playing field? H.R. 359 ignores this point of view and I believe ultimately would damage United States small business as we try to lead the world in innovation and aggressive adoption of technological breakthroughs.

Please support our efforts to lead in our global economy. We will succeed more readily if you leave us free from old burdens which were not designed for the new global economic landscape.

Our major trading partners have been able to agree among themselves that a 20 year term, measured from the time of filing, is materially acceptable in the world today. Yes, that is different from the 17 year patent term, from date of issue, that the United States has lived with. But it will work fine and allow us to meet and compete on a level global playing field.

I urge you, today, to support H.R. 1733 and not support H.R. 359. And, I thank you, Mr. Chairman for giving me the opportunity to testify before you today.

Mr. MOORHEAD. Mr. May.

STATEMENT OF ROGER L. MAY, ASSISTANT GENERAL COUNSEL, INTELLECTUAL PROPERTY PRACTICE GROUP, FORD MOTOR CO.

Mr. May. Thank you, Mr. Chairman. I'm here today representing Ford Motor Co. and I'd like to express Ford's support for H.R. 1733 and our concern regarding problems raised by H.R. 359.

Ford is a technology-driven company with more 17,000 scientists and engineers in the United States alone and our success is based to a very great extent on our ability to design, engineer and build new or improved products based on new technologies which are responsive to our customers' demands. Our ability to do this will be enhanced, clearly, by a stable, predictable patent system. It's our

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view that H.R. 1733 builds upon the stability and predictability provided by the recent patent term changes while H.R. 359 just as surely destroys this predictability and stability.

We particularly favor the 18-month publication and provisional rights in 1733. Clearly, scientific advancement, which is a primary purpose of the patent system, is promoted by publication of patent applications at 18 months, because scientists and engineers are

then given the opportunity to study the technology and to move quickly to assess the state of the art. This will reduce wasteful duplication of research and development funds. It also encourages improvements at a more rapid pace. An early publication reduces the cost of patent litigation because it's possible to study these patents, identify problems, possibly avoid litigation by licensing, or making design changes which themselves could result in improvements, a purpose of the patent system.

Finally, and perhaps most importantly, I think this provision levels the playing field. It will provide American innovators the opportunity to view the inventions of others, including our international competitors, in English in their own country, just as the Japanese and others have been able to view our inventions. And I might point out that under this law the inventions which come from overseas, for example, from Japan or Europe, would be published 6 months after they arrive in the United States. It's significant because 45 percent of the patents issuing in this country are issuing to foreign inventors.

Ford is unequivocally opposed to H.R. 359 and other legislation that might come along to roll the U.S. patent system back to one with a term being measured from the date the patent is granted. We believe this would create an unstable and unpredictable termination of patent rights arising from a single application similar to what existed prior to June 8, 1995. This poses significant business risks to technology and capital intensive companies because there is no way to predict when patent infringement allegations will be made against independently developed products and processes. The public interest is served only if certainty and predictability are features of the patent system. The patent term measured from the date the patent is granted will afford attorneys and applicants alike an opportunity to manipulate the system. Now this has gone on in the past. In some circumstances these manipulations have led to the issuance of multiple patents covering variations on a single invention. In others, these manipulations have caused exaggerated delays in the ultimate issuance of a single patent. Patents obtained through these manipulations have been referred to together as submarine patents and they have created a little bit of confusion. It was mentioned earlier that the inventors are incentivized under 359 to get their patents out as soon as possible, and that they shouldn't want to delay. Well, the fact is that people can get many

patents out from a single application. They can get their first patent out early and just keep chaining new ones along while keeping them pending from the original. This allows them to continue to craft claims as they see fit to cover technologies that have been developed by others.

So, we have seen situations, in fact Ford has been victimized in litigation, where applicants have chained patent applications to-

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gether, issued multiple patents while continuing to craft new claims in pending applications. These applicants then contend that the technology developed by others was really theirs, and they deserve in the form of substantial licensing tribute. The expense of defending oneself against allegations of infringement of these patents is becoming the bane of American industry. Defense bills in excess of \$1 million are quite commonplace. Patent term, we believe, has to be measured from the date of filing to avoid the kinds of abuses that occurred under the old law and which the ROHRBACHER bill would allow to return. It is clear that the patent system should not tolerate an applicant failing to claim his invention within a reasonable period of time. The Constitution was referenced earlier, and it's clear that article I, section 8 refers to the fact that a patentee should get protection for a limited period of time, not forever, not for 40 or 50 or 60 years.

The public has a right to know what the applicant considers to be his or her invention. Otherwise, anyone trying to do business will be left to either litigate or cave-in when threatened by patents issued years after the commercial development of the technology. And so, we favor 1733 because we think it represents a forward step in the development of the U.S. patent system as an integral part of international harmonization, and I think this is very important, while maintaining the stability and predictability needed by American enterprise of every stripe.

Thank you.

[The prepared statement of Mr. May follows:]

Prepared Statement of Roger L. May, Assistant General Counsel,
Intellectual Property Practice Group, Ford Motor Co.

My name is Roger May. I am an Assistant General Counsel at Ford Motor Company and I have worldwide responsibility for Ford's intellectual property matters. I have come here today to voice Ford's support for H.R. 1733 and to once again

express ovu* concern regarding some problems raised by H.R. 359.

As you well know. Ford is an international organization conducting business in many countries — in fact, more than 200. Ford employs more than 330,000 people worldwide, including 180,000 in the United States with manufacturing facilities in 14 different states.

Ford is a technology-driven company employing over 17,000 scientists and engineers in the U.S. alone. We are striving to introduce a new or significantly improved product every 6 weeks for the next 3 years. Ford's success in its core business — automotive — is based to a very great extent upon our ability to design, engineer, and build vehicles having new or improved technologies responsive to our customers' demands.

Ford's ability to continue its success will be enhanced by a stable, predictable patent system. It is our view that H.R. 1733 builds upon the stability and predictability provided by the recent patent term changes, while H.R. 359 just as surely destroys this predictability and stability.

H.R. 1733 — PATENT APPLICATION PUBLICATION ACT OF 1995

Ford supports H.R. 1733 because this bill wisely leaves untouched the patent term provisions of the present law as amended by the GATT implementing legislation, because it provides for 18 month publication of patent applications which assures the timely flow of technology necessary to keep America competitive with the rest of the world, and because it creates provisional rights which assure inventors the longest patent protection available in U.S. history.

Scientific advancement, a primary purpose of the patent system, is promoted by publication of patent applications at 18 months because scientists and engineers are given timely insight into advances in technology, thus allowing them to quickly assess the state of the art in a particular field. Early publication not only reduces wasteful duplication of research and development relating to preexisting technology,

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but also encourages improvements at a more rapid pace. And, early publication reduces costly patent litigation by allowing potential patent conflicts to be identified earlier, permitting licensing and/or design changes which often lead to further improvements. It is not surprising that almost all major patent systems other than ours provide for early publication.

Viewed another way, the publication provision of H.R. 1733 is a necessary step toward patent harmonization, which will benefit all American inventors. Harmonization will provide all American innovators with significantly more comprehensive global patent coverage for their dollar.

Some are concerned that publication of pending applications will allow competitors to rush in and capture a new market. However, if competitors do this in the

face of a dominant patent, not only would the inventor be able to stop the infringing activity upon issuance of the patent; but also, with provisional rights, he or she would be able to recover reasonable royalties beginning with the date of publication.

H.R. 359 — A BILL TO MODIFY THE TERM OF PATENTS

Ford unequivocally opposes H.R. 359 and any other legislation seeking to return the U.S. to a patent system having a term measured from the date the patent is granted.

In contrast to H.R. 1733, H.R. 359 would create an unstable and unpredictable termination of patent rights arising from a single application, similar to what existed under the law prior to June 8, 1995. This poses a significant business risk to technology and capital intensive industries because there is no way, at any time, to predict whether patent infringement allegations will be made against newly developed manufacturing processes and products.

The public interest is served only if certainty and predictability are features of our patent system. When patent term is measured from the date the patent is granted, applicants and their attorneys are afforded an opportunity to manipulate the system. These manipulations may lead to the issuance of multiple patents, or exaggerated delays in the ultimate issuance of a single patent, also referred to as submarine patents. Under the prior law, certain applicants succeeded in obtaining chains of patents strung out over several decades, each having claims "tailored" to capture the subsequent innovations of others. The filing date of the original application in this chain was then used in an attempt to establish priority against the actual innovator, when in fact, the patentee had never contemplated that which he later claimed. Through this gamesmanship, these applicants attempted to extend their patent rights indefinitely. Quite simply, the public got nothing new in return for the onslaught of patents which stemmed from this abuse.

Infringement litigation expense arising from these convoluted patent chains is becoming the bane of American industry, as an unproductive use of corporate resources. Patent infringement defense bills well in excess of \$1 million are common. Ford has had direct experience in defending itself against patents obtained by these abusive practices. If H.R. 359 is passed, Ford and many other American corporations will continue to be injured as a direct result of the abuses that measuring patent term from date of grant invites.

Patent term must be measured from the date of filing the earliest application to assure that pendency is finite and that no one will abuse the system. The patent system should not tolerate the failure of the applicant to claim his invention within a reasonable period of time. There is simply no justification for allowing an applicant to continue changing the language of his or her claims indefinitely. The public has a right to know what the applicant considers to be his or her invention. Otherwise, anyone trying to do business will be left to either litigate or cave-in when

threatened by patents issued years after the commercial development of the technology.

Such uncertainty of patent rights was cured by the GATT implementing legislation. Reinstating a system which will once again incentivize patent owners to engage in these abusive patent games would seriously impair the integrity of the U.S. patent system.

The sponsors of H.R. 359 argue that these abuses will be remedied by the publication of any application pending for more than 5 years. Unfortunately, the problem is not simply the secrecy of the application process. As long as applicants are permitted to indefinitely tailor their claims after publication, no form of publication can prevent this abuse.

Ford has listened to the concerns expressed about the possible ill effects of the GATT implementing legislation. In fact, Ford, along with other industry representatives, has met with proponents of H.R. 359 to discuss these concerns. While we are clearly opposed to any solution that involves measuring patent term from grant.

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H.R. 1733 includes provisions directed at addressing the concerns raised by the supporters of H.R. 359.

Many supporters of H.R. 359 are concerned about the possibility of an applicant receiving less than a 17 year patent term. To address this concern H.R. 1733 extends the patent term extensions provided under the GATT implementing legislation, so that all applicants who diligently pursue patent protection will receive at least a 17 year term and most will receive more. This has been accomplished by increasing the term extension cap from 5 years to 10 years and by adding a provision aimed at assuring that applicants will not lose term if applications are delayed in prosecution for reasons beyond the control of the applicant.

H.R. 1733 further provides provisional rights to applicants who are successful in obtaining a patent. Under this provision, a patent holder may collect reasonable royalties for infringement occurring between the 18 month publication and the actual grant of the patent. Taken as a package, H.R. 1733 will provide U.S. inventors with more patent protection than ever before in the history of U.S. patent law.

CLOSING

We firmly believe that H.R. 1733 represents a forward step in the development of the U.S. patent system as an integral part of the international patent community, while maintaining the stability and predictability needed by American enterprise of every stripe. In contrast, H.R. 359 seeks to return us to a system subject to abuse driven by greed — a system which is in fact hostile to those seeking to market new technologies. Let us not take this backward step. Thank you.

Mr. MOORHEAD. Thank you very much.

I'm terribly sorry, we're in about the last 6 minutes of another vote and I have to leave to get over for it. I will try to make it back as fast as I can.

[Recess.]

Mr. MOORHEAD. If you wonder what was in the sack, I was being honored this noon at a luncheon by California Tourism and Travel. I gave them 3 minutes. I wanted to get back to you folks, and we're looking forward to hearing you, Mr. Buckman.

STATEMENT OF THOMAS W. BUCKMAN, VICE PRESffIENT, PAT-
ENTS AND TECHNOLOGY, ILLINOIS TOOL WORKS, INC., ON
BEHALF OF THE NATIONAL ASSOCIATION OF MANUFACTUR-
ERS

Mr. BuCKMAN. Thank you, Mr. Chairman. I'm here representing the National Association of Manufacturers and through my com-
pany, Illinois Tool Works, I'm trying to give a perspective of how this issue relates to the NAM and to our company.

We refer to our company as ITW, not to be confused with ITT or IBM or any other initialed company. We are a very low visibility diversified manufacturer of many parts and components for a huge variety of markets and industries. We operate through 280 dif-
ferent businesses in 28 different States. We serve automotive in-
dustries, construction, electromechanical, electronics, food and bev-
erage, through products that range from arc welding to plastic and
metal fasteners, six-pack holders, industrial packaging, glue for
household and industrial uses, and a variety of others.

What is germane to this hearing today is that all of our products either are or have been protected by patents. We are an active user of the patent system in a positive manner and we feel that ulti-
mately the legislation H.R. 359 would harm our company and com-
panies like it and that H.R. 1733 is the appropriate measure.

Today, ITW holds over 1,500 U.S. patents and files an average 150 U.S. patent applications annually. It's interesting to note that I would estimate that our average pendency from filing to issue is

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24 months. Each of our individual 280 businesses have engineers and technicians who work very closely with customers to solve their problems. These individual units and their inventors are our most prolific inventors and patent applicants. These are the people who create products, who create businesses. In fact, many of our

business units were spun out of a previous business unit as a result of a new product that had patent protection. We build businesses from businesses and new products.

Let me give you an example of a success story of one of our small businesses and an example of how it could not have been a success story if someone chose to manipulate the system in a manner promoted or proposed by 359. One of our operations makes capacitors. It's a small element necessary in all electric circuits, probably no bigger than a thumbnail. ITW Paktron in Lynchburg, VA, was a major producer of capacitors. However, during the midseventies the U.S. capacitor business was dying. It was becoming very inefficient, no new products, and falling prey to the cost advantages of foreign competition. We were on the verge of either selling or closing that business. However, one of our more creative individuals in 1981 tried to save the business by an invention that improved the process of making capacitors. It turned out to not only be a cost savings for Paktron, but a capacitor that gave industries a capacity to make components and to build circuits not known before.

We were willing to promote this and to invest in this technology because of our knowledge that the patent system would protect us, that we had done our research, that no one had invented it before us, and that we were not infringing another's patent. Therefore, we were aware of the huge investments in a new product development and were willing to take that risk. We carefully searched both the U.S. and foreign Patent Offices and found nothing that we felt that would prevent us from doing this, and we continued to have those searches during the early days of the development.

Our first patent application issued in about 36 months. We think this seemingly insignificant development is, in many ways, a breakthrough invention. We continued to invest in this technology and filed 12 or more patent applications on it. Paktron is now making money. The new technology is recognized by several industries as a major improvement and more interestingly to this agenda, is that suppliers to us have created new products to serve our new technology; likewise, our capacitor permits users to create new products.

This is the way the system works when used in a value added manner. Product development is not easy. There's a lot of downfalls and it's very expensive. Product development to commercialization of a product now, which is our objective, is forced to be very rapid

and, at our company, and companies like our company, require certainty as to preexisting patents and certainty as to prior art. We aren't arrogant enough to think that our solution at that time is the only solution. There are other ways to do things. We prefer to have a solution that is proprietary so that when we invest in a product it is protected by the patent system.

Let's look at this process and see what might have happened if 359 were in existence or if the patent laws prior to GATT were in existence and someone took advantage of those laws. We would

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have spent perhaps 10 years agonizing and spending a lot of money trying to convince the world that our capacitor, that our process, was sufficient. It's not easy to convince people of new things. We were successful after about 5 or 6 years. However, if the process as proposed and promoted and suggested by 359 were in existence, it is possible that somebody who legitimately invented something similar to ours before we invented it and before we commercialized it could have issued a patent with claims that may cover our process and procedure and not publish or issue those claims until long after we commercialized. It is those claims that would stop us and would put us at a severe disadvantage. It would put our operation at Ljoichburg at a severe disadvantage. We would be held hostage after we spent time, money, and development costs. The patent system would have failed us.

We think the provisions of 1733 give back the issue of the progress of science as recited in the Constitution and give a definite term. We think, also, that in many respects the way we operate and the way we do business, our inventors are the creative energy for our economy. We are involved with real people, real communities, and real businesses. And the way we do business in the small entrepreneurial style of operation, we rely upon our wits, we rely upon new product development, and we rely upon the patent system to protect us in these global, fast moving product development areas.

Thank you very much, Mr. Chairman.

[The prepared statement of Mr. Buckman follows:]

Prepared Statement of Thomas W. Buckman, Vice President, Patents and Technology, Illinois Tool Works, Inc., on Behalf of the National Association OF Manufacturers

Mr. Chairman and members of the Subcommittee, my name is Thomas Buckman and I am Vice President of Patents and Technology for the Illinois Tool Works, Inc. (ITW). I am also a member of the National Association of Manufacturers' Intellectual Property Subcommittee, and represent them here this morning as well. On behalf of both ITW and the NAM, I want to thank you for giving me the opportunity to present our views in support of H.R. 1733.

The NAM Intellectual Property Subcommittee's membership is broadly representative of NAM member companies and includes a number of representatives from affiliated manufacturing trade associations. Through its IP Subcommittee, the NAM has followed closely the various changes to U.S. patent law made or proposed over the past several years. We have considered carefully the evolving nature of intellectual property in an increasingly global economy, and how both our own domestic intellectual property laws and those in other countries affect the ability of American manufacturers to compete. We are on record as supporting changes in U.S. patent law that reflect intellectual property's growing importance in fiercely competitive world markets. In short, strong and effective protection of intellectual property rights is not an abstraction for ITW or other NAM member companies; it is a very real, bottom-line and ongoing concern.

Before addressing the specifics of H.R. 1733 and H.R. 359, I want to explain briefly why a strong, effective and efficient patent system is crucial for the health of both my company and the U.S. economy as a whole.

WHY PATENTS MATTER

The Illinois Tool Works, Inc., is a diversified manufacturer of products and systems used by others to produce finished products. In a June 1990 article, Fortune magazine described ITW and its 280-plus decentralized operating businesses located in some 28 States as "The Ultimate Nuts and Bolts Company." We employ more than 11,000 men and women here in the United States and another 2,000 elsewhere in the world in the production of big and little "widgets."

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Our product line ranges from paint booths to welding equipment, from metal and plastic fasteners to plastic six-pack rings, from capacitors and switches to titanium putty. Though not a household name, ITW, at one time, advertised itself by proclaiming "you are not more than a few feet away from an ITW product." This statement is still true today.

What is germane to today's hearing is the fact that all of these products either have been or are still protected by patents.

Article I, Section 8 of the Constitution was intended not only to reward the innovator, but also to facilitate the transfer of ideas and innovations to the marketplace. The protection inherently afforded to patent holders encourages companies and indi-

viduals to release these ideas to the world, wherein others may find ways to improve on them — thereby producing still other products. Increasingly, however, the laws relative to the terms of patents prior to the GATT-implementing legislation (and as proposed by H.R. 359) became inconsistent with this positive attribute of the patent system. More and more, these provisions placed new product developers, such as ITW and others, at a material disadvantage to those who manipulated the system by withholding publication of their repeatedly amended applications. The Uruguay Round Agreements Act addressed one part of the problem. H.R. 1733 addresses the other part of the problem and further encourages the commercialization of ideas by providing early publication and notification of claims to the public.

Today, ITW holds some 1,500 U.S. patents, and we file another 150 U.S. applications annually. Though we provide our numerous individual business units with support, it is the engineers, technicians and even sales and marketing people at the individual units who are our most prolific patent applicants. It is these individuals who work most closely with their customers and who solve their problems with ideas that are patented and become products. Let me give you an example from one of ITW's units in the capacitor business.

ITW Paktron of Lynchburg, VA, like other capacitor manufacturers, had by the late 1970s fallen on hard times and was at risk of being sold or closed. The U.S. capacitor market had become stale and generally unprofitable and susceptible to the cost advantages of foreign competitors. In 1981 a creative engineer at Paktron set out to design a new technique for making capacitors. He created an entirely different process that resulted not only in cost savings for Paktron, but also a product that had improved qualities over existing capacitors.

ITW supported this individual's efforts with our financial backing, which amounted to millions of dollars. We were willing to risk this investment because of (1) Paktron's confidence that we could re-establish the capacitor market in the United States; (2) our belief in the engineer's creativity; and (3) our expectation that the patent system would protect that investment by providing us a strong claim to a technology that did not infringe on other patents.

We subsequently filed 12 patent application on this process and continue to invest in technological improvements. The Paktron operation is now making money, the new technology is recognized by several industries as a major improvement, and we have licensed the technology to other producers. In fact, suppliers of certain materials used in this new technology have developed their own new products to support our innovation. The users of capacitors are now about to design smaller and more powerful components at less cost as a result of Paktron's technology. This is how the system works in a positive, value-added manner!

It is the investment, the successes, the failures and the anguish inherent in the

development of new products — products that meet customer needs at a price advantageous to both seller and buyer — that define the industrial world. It is patents, however, that provide the incentive and protection for this investment.

If someone had invented a similar technology but kept it buried in the patent system for 10 years or longer, without any early publication of the invention (and more particularly without public knowledge of the allowed claims), then allowed their patent to issue after we commercialized our process, our investment would be lost. The men and women who depend on the commercialization of such innovations to support themselves and their families would pay a steep price if awards resulting from submarine patents skewed the economics of a product. Further, the incentive to ITW and others to expand that technology would certainly be reduced. In other words, "the progress of science and useful arts" would definitely not be promoted. This example is representative of the new product development risks and rewards that occur throughout the 280 business units that comprise ITW. I could have used a welding technology story from our operation in Wisconsin, or an acrylic adhesive story from our adhesive business in Massachusetts, or a hot melt adhesive equipment business in Tennessee. Real people, communities and businesses that add

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value to our societies were at risk from this flaw in the patent system. Fortunately, we corrected this flaw in the GATT-implementing legislation.

Let me now comment more specifically on the proposed changes contained in the Patent Application Publication Act.

OVERVIEW

The basic changes proposed in H.R. 1733 — the publication of pending patent applications at 18 months with provisional royalty rights and patent term extension provisions — are ones ITW and the NAM support. We also want to state in the strongest possible terms our opposition to H.R. 359. H.R. 359 not only represents a giant step backwards in U.S. patent law, but also undermines U.S. credibility by renegeing on our international obligations.

These proposed changes have been the object of a great deal of deliberate distortion and misinformation. We view this as unfortunate and unnecessary, and trust that public policy decisions will be made by the Congress on the basis of fact and informed judgement, not fabrications and demagoguery. We regard today's hearing as an important step in this direction.

EARLY PUBLICATION

The NAM and ITW support the publication of pending patent applications at 18 months from filing because it reduces the amount of uncertainty in the patent system — uncertainty for not only the inventor, but also for other innovators and investors.

If applications are published at 18 months, patent applicants and examiners alike will have access to potentially relevant prior art much earlier than is now the case. Potential interferences can be identified and resolved much earlier — and far less expensively — than is now possible.

Perhaps the most important gain from 18-month publication is the early availability of technical data from foreign-origin patent applications filed in the United States. Foreign origin applications represent nearly half of all patents filed in the Patent and Trademark Office. Obviously, this is an important source of technical information — information unavailable to U.S. inventors and investors because patent applications filed in the U.S. PTO are kept secret until the patent is granted. Furthermore, since nearly all foreign-origin applications have counterpart applications in the home-country patent office, our competitors have early access to the technical data in their own language at 18 months. This information will not be available in the United States for several months beyond that (or even longer, if foreign applicants choose to "game" the U.S. system by filing numerous continuing applications).

Similarly, U.S. -origin applications filed abroad are published at 18 months in Europe and Japan. This means that the technical data contained in U.S. applications are available to foreigners in their respective languages, but is unavailable to U.S. inventors! Publishing patent applications at 18 months (in English) would correct this asymmetry and greatly increase the amount of technical data available to U.S. innovators.

We recognize, however, that 18-month publication may pose a dilemma for inventors who might want to pursue the trade secret route to protecting their intellectual property. To avoid the potential problem of forcing a premature election of trade secret/patent protection, H.R. 1733's proposed paragraph 122(b)(2) of 35 USC would permit independent inventors to request a three-month window between a first office action and publication, provided that they certify they will not be filing foreign patent applications. The NAM supports this concept, and would go further. We urge that this provision be expanded to permit companies and universities to take advantage of it as well. We find no reason to limit its applicability to independent inventors.

PROVISIONAL RIGHTS

The nam's support for 18-month publication is premised on the inclusion of a right of a patent owner to obtain a reasonable post-publication, pre-grant royalty in appropriate circumstances. Although the NAM supports Section 4 of H.R. 1733, we recommend one change in the proposed language. That is, in order to obtain a reasonable royalty, an invention claimed in the patent should be "substantially identical" to the invention claimed in the published application, rather than "identical" as currently proposed in H.R. 1733.

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EXTENSIONS TO THE 20- YEAR TERM

ITW and the NAM view the 20-year term from filing as a better balancing of the twin purposes of our patent system. Opponents of the 20-year term focus solely on the private reward aspect of U.S. patent law (i.e., ". . . by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries") and completely ignore the public's reward (i.e., "To promote the progress of science and useful arts . . ."). Patent terms measured from grant date encourage delay and result in unduly long exclusivity periods. This upsets the patent system's delicate balance of public and private interests by tilting too far toward the individual at the expense of the public.

Although the Uruguay Round Agreements Act contained provisions to facilitate the transition from our previous 17-year term from grant to a 20 year term measured from filing, we believe further changes in the law are necessary. In particular, we believe that inventors who, through no fault of their own, have their applications subject to unusual delays in the Patent and Trademark Office should be afforded an extension of patent term commensurate with the period of delay. Section 8 of H.R. 1733 accomplishes this.

We do, however, urge several changes to this section. Most significantly, we are concerned with the overly broad discretionary authority given to the Commissioner under the proposed Section 154(b) of title 35. This is particularly true with respect to determining "unusual administrative delay" and "reasonable efforts." These terms should be clearly defined in the statute. We suggest the following as a guide to delineating the extent of "unusual administrative delay":

- (i) any time in excess of nine months between the filing of the patent application and the date of a first notice by the Office requiring restriction under section 121 of title 35, informing the applicant of a rejection, objection or requirement under section 132 of title 35, or informing the applicant of allowance under section 151 of title 35;
- (ii) any time in excess of six months between a response by the applicant to a rejection, objection, or requirement of the Office and the date of the next action by the Office;
- (iii) any time in excess of six months between the date of payment of the issue fee by the applicant and the grant of the patent; and
- (iv) unusual delay should not include time spent by the Office waiting for responses from the applicant unless the applicant has to respond to the Office an unusual number of times as a result of unreasonable processing of the application by the Office.

In clarifying "reasonable effort," we believe that, if an applicant pays extra to ex-

tend the time for responding to Office actions beyond the normal three months, this will not be considered a failure to make reasonable efforts. However, extensions of time for responding to Office actions should not be counted as unusual delay when computing the length of patent term extension to which an applicant is entitled under proposed section 154(b).

The NAM also believes additional language should be added to H.R. 1733 to provide for inclusion of the term extension on grant of the patent, rather than requiring the patent holder to file separately for the extension.

H.R. 359: REOPENING THE DOOR TO ABUSE

Proponents of H.R. 359 claim this legislation is necessary to insure that patent applicants receive a minimum of 17 years of patent protection. Their reasoning is based on the dubious premise that the Patent and Trademark office routinely takes longer than three years to issue patents for so-called "major" innovations. There is no objective or factual evidence to support this hypothesis. We believe that H.R. 359's proponents bear the burden of offering at least some proof for their assertions; to date, they have offered none.

Ironically, although the NAM unalterably opposes H.R. 359, we agree with the ostensible purpose of the legislation: to protect patent applicants from undue delay by the PTO. We believe that inventors who, through no fault of their own, have the applications delayed by the PTO should not be penalized by having that period of delay count against their 20-year term. The provisions in Section 8 of H.R. 1733 guarantee that every applicant who is diligent in prosecuting his or her application will receive a minimum of 17 years of patent protection. We would support changes that would make these guarantees stronger. Therefore, the invitation-to-abuse approach taken by H.R. 359 is unnecessary.

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CONCLUSION

In conclusion, Mr. Chairman, we categorically oppose H.R. 359 and urge the Congress to kill this ill-advised measure. More importantly, ITW and other NAM members commend you and members of the Subcommittee for your work in crafting H.R. 1733. As currently drafted, H.R. 1733 is a good bill that we support. We believe that the changes we recommend would make H.R. 1733 an even better bill.

We look forward to working with you in effecting these major improvements to U.S. patent law.

Mr. MOORHEAD. Thank you. Mr. Budinger.

STATEMENT OF WILLIAM D. BUDINGER, CHAIRMAN AND CEO,
RODEL, INC., NEWARK, DE, AND TECHNOLOGY AND INNOVA-

TION CHAIR, WHITE HOUSE CONFERENCE ON SMALL BUSINESS

Mr. Budinger. Thank you, Mr. Chairman. I'm delighted to be here. I come not only on behalf of my company, which is a small company, I come as an independent inventor, which I am and also as a Technology Chair for the White House Conference on Small Business.

What I'd like to do if I may is depart from my written testimony which basically states the position of the technology delegates to the White House Conference on Small Business. Instead I'd like to talk about a couple of issues that were raised here today.

First of all, we do not agree with Congressman ROHRABACHER's dismal prognosis for the future of America if we continue with the reforms that were put in place with GATT. Quite the contrary, we think that they're good for America and good for small inventors.

I'd like to explain a little bit about why. First of all, in regard to publishing applications, at first glance it would seem absolutely crazy to publish applications and allow everybody else in the world to read what we're going to be patenting, many people assume that American applications are completely secret now. That simply is not true. The fact is that 45 percent of American patents are issued to foreign companies. These patents are American counterparts of foreign patents so that 45 percent of American patents are already published abroad. Another 30 percent of American patents, are issued to multinational corporations. Since there are very few multinational corporations who file patents only in the United States. I believe we could safely say that probably almost all of that 30 percent is also filed abroad. In addition, companies like mine, who count in the small business category, we file all our patents abroad. Therefore, more than 75 percent of American patent applications are already being published abroad. The difference is the information in those applications is available to our foreign competitors and is not available to us unless we have the money to go abroad and search and translate. That, small business doesn't have.

So, from that standpoint, from the standpoint of publication H.R. 1733 is extremely important and beneficial to small companies and small inventors. There's nothing more heartbreaking than to see a small inventor sink his life savings into a technology or a small company, only to find out later that someone else had a patent pending and got there first.

When applications are published in the United States at 18 months it will solve that problem. We in America will then have the same advantage that our foreign competitors now have with

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their ability to read American patent applications, the point is the vast majority of American patent applications are not secret. They are already published, usually in a foreign language. We need them to be published here, in English as well. We need H.R. 1733.

The second thing I'd like to talk about is the issue of term. The word uncertainty has come up today a lot. We like 1733 because of the certainty it provides. We will have 18 y2 years to collect royalties no matter how long it takes the patent to issue. 1733 also continues with the reform in GATT in that the patents will expire 20 years after filing date. That's critically important to us. When a patent in the United States continues on longer than its counterparts in foreign countries — most patents around the world expire in 20 years. They freeze technology in the United States.

The whole point of the patent is to allow the patentee to exclude competition. When you exclude competition, when you freeze technology only in the United States, it means the rest of the world is free to advance and we're stuck. It means our factories can't buy the instrumentation that our Japanese competitors can buy because the patents are still valid in the United States.

I've heard some comment today about, "There aren't a lot of submarine patents and we shouldn't have to worry about them." The fact is, there are enough to be a problem. For example, in the 2 years before the law changed on June 8, foreign companies received 300 patents — and I have them here and are important and appear to have been deliberately delayed in the examination process. Because there issuances was delayed, they will all expire in the United States 5 to 25 years after they expire in their home countries.

These 300 patents will freeze American technology only in America. The technology will be free to advance in all of our competitive countries.

And that's something that we in the small business community really don't want to see. We want to see all patents expire at about the same time. In other words, a level playing field. And finally, I'd like to quote an earlier statment: "Inventors struggle diligently to get their patents issued as quickly as possible." I'd like to com-

ment on that as an inventor. I'm going to throw myself on the sword here.

I am a submarine inventor. The simple fact is, before the law changed I worked hard to delay my patents. I filed all the responses at the last possible moment and when it was possible to make something a little less clear than it might have needed to be, I did that. And the reason is because a pending patent is very valuable. The period of protection really begins when we file that application and we can stamp "patent pending" on our goods.

A pending application has other value as well. I licensed my first patents while they were still pending applications. I licensed them to a large corporation, W.R. Grace. They paid me upfront money and royalties on the applications.

So, from our standpoint, the application is as valuable as the patent until such time you actually have to sue somebody for infringement. And as Congressman ROHRABACHER pointed out, that takes an awful lot of money to fight an infringement action and that's pretty tough for small businesses to do. So for us, that patent application is a very important thing. Under the old 17-year-from-issue law.

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the longer we could keep our application pending, the longer we put off expiration of the resulting patent, in effect, the longer our monopoly. My case is an example.

My royalties at Grace ended, and they just ended a couple of years ago, 22 years after they started because I was able to delay the issuance of my patents. We have in my company breakthrough technology going on right now that will dramatically affect semiconductor production, at least we hope so. It will make semiconductor production cheaper so that the companies who don't use our technology will be at a competitive disadvantage.

And I'm aware that I've got customers in this room and this is a dangerous thing to say. If 359 passes, we will be able to string out the many inventions that are going to be pulled out of that application for years and maybe decades. In fact, we're a lot smarter about it now than we used to be, so we ought to be able to do it for a lot longer. And we can control that aspect of semiconductor manufacture for a lot longer than 20 years. That's tremendously good for me. It's good for my company, at least in a selfish way; it's not good for America, and we don't think it's good for small

business in general.

So, that's our direct experience. Frankly, we deeply believe that H.R.1733 is an excellent step in the right direction. It gives us 18 V2 years of what amounts to guaranteed protection, and that should be enough. Thank you.

[The prepared statement of Mr. Budinger follows:]

Prepared Statement of William D. Budinger, Chairman and CEO, Rodel, Inc.,
Newark DE, and Technology and Innovation Chair, White House Conference ON Small Business

My name is Bill Budinger. I am both an inventor and the founder of a successful manufacturing company. As an inventor I hold several dozen patents in the U.S. and overseas. I derive significant income from licensing some of those patents. I appreciate the opportunity to appear here today to talk about this issue of such importance to entrepreneurial technology companies.

I founded my company 26 years ago to manufacture some of my early inventions. Today we sell our American-made products all over the world. Our primary products are polishing pads and slurries that are used by the electronics industry in the manufacture of micro-chips, LCD screens, and memory storage devices. Because our customers are in the electronics business, most of them are foreign — Hitachi, Mitsubishi, Toshiba, Samsung, and Siemens, or internationals — IBM, Texas Instruments, Motorola. In order to exist, my company must now think and act globally. If we try to limit our activity to the U.S., foreign competitors who offer global service will displace us — even here. We have no choice. We cannot ignore global markets and global competitors.

Small and start-up manufacturers like us are at a tremendous disadvantage in global markets. The big guys don't take kindly to newcomers. The weapon we have against their muscle is our ability to innovate and move quickly. But without good patent protection, the fruits of our innovation can be taken from us. We must have good patent protection and it must be global.

This year, I elected a delegate to the White House Conference on Small Business. Of the almost 2000 delegates, I was delighted to discover that several hundred came from manufacturing or technology backgrounds like mine. They also had a similar interest in global business. We believe that H.R. 359 and H.R. 1733 deal with issues that have a significant effect on our global competitiveness. The technology delegates have already made several trips to Washington to present their views on these bills. They have asked me to speak for them here today.*

* There is confusion about one of the Conference's recommendations. Recommendation #115 is a foreign trade recommendation asking for "an international effort to protect the ownership of intellectual property and to ensure adoption of reciprocal uniform standards * * * working

with NAFTA, GATT and other treaty partners. We further recommend that Congress protect

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The issues tackled by these two bills are complex issues that would require a book length feature to cover competently. Today I will talk about just 3 of the most important features: Globalization — can the U.S. afford a patent law that ignores the outside world; Publication — should applications be published and if so, when; and Patent term — when should a patent expire.

GLOBALIZATION

Most of us believe that the patent law has served America quite well during the last 200 years. For most of my lifetime, America was the bastion of almost everything good. Our economy at one point was stronger than all the rest of the world combined. We could make out laws without regard to the outside world. The American market was the only market that mattered, American competitors were the only competitors to fear. For better or worse, that is no longer true. The factories left in ashes by WWII have been rebuilt. We have global competitors that make genuinely good products. To ignore global competitors is to invite failure, to ignore global markets is to miss great opportunities. We are told that soon the new Asian markets will dwarf the U.S. market.

In recognition of these changes, the delegates to this current White House Conference departed dramatically from the isolationist perspective of the earlier Conferences. Small business sees the opportunities in the global market, we're excited about them, and we're anxious to compete.

Trade between nations is now almost as easy as trade between the states. Fifteen years ago it took me several days to get product to a customer in Texas; today I can get product to a customer in Taiwan in a few hours. Fifteen years ago I was pretty well insulated from competitors in Korea (if there were any); today they are calling on my American customers offering next day delivery. For this reason, the Conference voted in favor of enhancing international trade and adopting international standards. Just as our founding fathers realized the importance of a uniform law governing trade between the states, we now need that same uniformity of law for trade between nations. Therefore, as we consider these two patent bills, it is imperative that we take into account their effect on international trade and our global competitiveness. We believe that it is important to ensure that American law does not put American companies at a global disadvantage.

How America deals with the next two topics is critical.

PUBLICATION OF APPLICANTS

At first glance, it must seem crazy to publish applications before they issue as patents. Publication would seem to allow anybody to read and copy the invention before there is any patent protection. Publication would also destroy the opportunity

to keep the invention a secret should it prove to be not patentable.

Things are often not what they seem at first glance. Publication will actually protect American inventors and help them to be more competitive.

From information available in the U.S., an inventor presently has no way of knowing what new technologies are in the process of getting patent protection. Nothing is more heartbreaking than to see a small inventor sink his life savings into an invention only to discover later that somebody else filed a patent before his. H.R. 359 gives partial recognition to the problem by publishing some applications after 5 years. That does not really help. In this day of rapidly advancing technology, that means an inventor could be 4 or 5 years down the road and deeply invested in his invention before he learns that he will lose everything to an earlier inventor. H.R. 1733, on the other hand, publishes most applications after 18 months. Inventors and technologists can more readily determine what technology is going to be

international patent rights in a way that takes into account the needs of small business, including retaining the patent term to run for 20 years from date of application or 17 years from date of issue, whichever is longer, that the patent applications remain unpublished until the patent is granted; and that the patent remains with the first-to-invent rather than the first-to-file." The last part of this recommendation (We further recommend * * *) was added late in the Conference and went unnoticed by most delegates. The wording conflicts with other resolutions and the vote that was conducted in the caucus on Technology. The confusion is understandable in light of the fact that over 80% of the delegates were from businesses in retailing, food service, insurance, public relations, etc., who have no connection with or knowledge about patents. The delegates who came from businesses concerned with technology, innovation, and patents discussed H.R. 359 in detail and then overwhelmingly rejected a return to the 17 year term. These delegates also supported publication of applications. Therefore, while it is technically correct that the Conference voted in favor of a recommendation calling for a 17 year term and no publication, that vote does not reflect the views of the businesses engaged in technology and innovation. The views of those businesses are presented here.

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protected and what technology is free for development. After an inventor's application has been on file for 18 months, if he has seen no conflicting applications published, he can go forward with confidence knowing there are patents waiting to ambush him.

Another reason we prefer the 18 month date in H.R. 1733 is that it publishes applications at the same time as they are published abroad. There is a popular belief that American patent applications are presently secret until the patent issues. That is not true. At least 75% and perhaps close to 90% of all American applications are published abroad 18 months after their U.S. filing date. This is because 45% of U.S.

applications are filed by foreign companies as a counterpart to the application they file in their home country. Another 30% are filed by multinational companies who almost never file only in the U.S. Many additional U.S. patent applications, filed by small business like mine, are also filed abroad. All of these U.S. applications filed abroad are "laid open" or published in those foreign countries 18 months after filing. The real significance of not publishing these applications in the U.S. is that American technologists are kept in the dark about what is going to be patented here (unless they read German or Japanese). We believe that American technologists must be able to see what their foreign competitors can already see. We can't continue the present situation where our foreign competitors know more about what patents are going to be issued in the U.S. than Americans do.

There is one opposing argument that does seem to have validity; publication of the application would remove the opportunity to keep the invention a secret if the patent is not granted. This argument only applies to the small number of patents, usually by small inventors, that are not filed abroad. Those who make this argument do not seem to realize that H.R. 1733 has a special provision protecting these inventors. For small inventors who did not file abroad, H.R. 1733 delays publication until 3 months after the patent office has made the first office action. This provision gives the applicant and his or her attorney a look at the examiner's prior art and reasoning so that the applicant can make a determination on the likelihood that the patent will be granted. If granting looks unlikely, the applicant has time to withdraw the application before publication. Thus the secret is safe.

We like the way publication is handled in H.R. 1733 and we believe it does a nice job of providing U.S. inventors and small business with a level playing field on which to compete globally. We also believe it will save inventors and small business money by alerting them to technology that is being claimed by others.

The opportunity for provisional royalties is another positive aspect of publication. H.R. 1733 provides that the inventor may claim royalties back to the date that the application was published. This means that the publication of the application will put potential competitors on notice that they have a liability. It also means that an inventor's right to royalties will be a full 18.5 years regardless of when the patent issues. This is an elegant solution to the concern of some that patent office delays will shorten the royalty period or lessen the value of patents under the 20 year term.

H.R. 359 does not provide for provisional royalties. According to advocates of H.R. 359, some patents may be delayed in the patent office for 15 to 20 years and the inventor will be entitled to no royalties until after the patent issues and he notifies infringers. In this day of fast moving technology, both the patent's value and the inventor's opportunity may be lost. On this issue, we believe that H.R. 1733 provides vastly superior protection to most small inventors.

PATENT term

To some people, our old system of granting a patent for 17 years seems like a good idea that shouldn't have been changed. But again, things are not what they seem.

The term issue is not about the term of a patent, it is about the total period of protection, it is about putting in place incentives to speed up or delay examination.

A patent confers a monopoly. The real question on the table is: how long after an invention is made should that monopoly expire?

The term issue is, therefore, mostly about dates. Patents have 4 key dates: Invention date. Filing date. Issue date, and Expiration date. To a new inventor, the most important date is the day when the first patent comes through. That great seal, the blue ribbon — I still get excited when a new patent comes through confirming that I am an inventor. "To an entrepreneur, however, the least important date is the Issue date. For the entrepreneur or manufacturer, the most important dates on his patent are the Filing date and the Expiration date. Most of the patent applicant's "rights" effectively begin with the Filing date. After the Filing date, the applicant can do everything he can do after the issue date except initiate an infringement suit. He can show the public his invention, raise money, manufacture his product,

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license others, threaten competitors, and mark all his goods "patent pending." I speak from direct personal experience. I licensed and got paid for my first two applications long before they issued as patents. I also sit on the board of a venture capital company and we often find a company with a fresh application to be more exciting than one with an older issued patent. In fact, for 99.5% of patent applicants, the Issue date is so unimportant that even though the Patent Office has a procedure to expedite examination and get an earlier Issue date, less than 1% of applicants do so. In other words, the record confirms that I know from my own experience — because protection has already started, most applicants do not work to expedite the issuance of their patents.

The point is that the current emotional rhetoric about shortened patent term ignores the distinction between the term of protection and the term of the patent. In the real world, it is the term of protection that matters most. The words "patent pending" are as powerful as the patent itself. Competitors not deterred by one will not be deterred by the other. Protection, therefore, effectively starts on the Filing date and ends on the Expiration date. These are the two critical dates. These are the dates that really define the period of effective monopoly.

H.R. 359 and H.R. 1733 take two very different approaches to determine the period of protection. H.R. 1733 maintains the reforms in GATT and sets the protection period to expire 20 years from the Filing date. H.R. 359, on the other hand, ignores the File date and sets the expiration date at 17 years from the Issue date. That is

a distinction with immense significance. The Issue date is something that can be delayed for years, sometimes for decades, thus (under H.R. 359) extending the period of protection. The technique for delay is simple: never submit a response to the PTO until the last hour it is due; argue interminably over little, inconsequential things; submit multiple inventions as one thick application forcing the PTO to break it up and examine each invention serially; file repeated continuations; and when all else fails, abandon and refile. Under our old "pre-GATT" system and the one that H.R. 359 would return us to, applicants have the incentive and ability to extend that period of protection (the period of monopoly) almost indefinitely. I did it, especially with my important patents, and I know others did it. Delaying examination was legal and it served my self interest. If H.R. 359 passes, our patent counsel says that he would be derelict in his duty if he does not advise clients that it is to their best interest to drag out examination.

It is clearly in the self interest of most inventors to have as long a protection period as possible. As an inventor and one who makes his living from patents, I'd like to see the monopoly period last forever — or at least as long as I live! Why should inventors be any different than authors or the people who dream up trade names? Furthermore, long or indefinite monopolies would surely make it easier to secure financing or negotiate with potential licensees. Why should the protection period be limited at all?

The answer, of course, is that unlike trademarks or books, patents represent an economic monopoly. Once the incentive value of patent protection is completed (i.e. the invention has been commercialized), the patent becomes an agent of restraint. It is, after all, the point of a patent that the patentee shall have the right to exclude competition. Technologies protected by patents tend to remain frozen until the patent expires and competition can enter the market. Imagine the effect on the recording industry if Edison's original patents were still in effect.

A contemporary illustration of the effect of a closed technology is found in the evolution of the personal computer. Look at the rivalry between Macintosh and DOS based computers. One had the best technology — forcefully protected. The other was open to competition, innovation, and price wars. Although it is clear who won the battle for the market, the real story is which approach provided the greatest opportunity for innovators and inventors. Which approach provided more opportunity for entrepreneurs. Which approach allowed the most new patents. Which approach made the most people the most money. Indeed, the thriving competition around the DOS architecture has created many more wealthy inventors, software writers, and entrepreneurs than the closed, albeit superior, architecture of the Macintosh.

My own company provides another example. We have just made a major breakthrough in semiconductor processing technology. If we are right, our invention will improve semiconductor processing so much so that companies who do not use it will

have trouble competing. Our breakthrough is really a cluster of inventions that will most likely be broken up into many different patents. We have filed the breakthrough as one large single patent — just in case H.R. 359 passes. If H.R. does not pass, all those patents will expire in 20 years. If H.R. 359 does pass, we would be crazy not to do the smart thing. We should drag out examination of each patent, making sure that the most important patent is examined last. With just average skill, we should be able to keep that last patent from issuing for another 10 or 15

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years. Then when it issues we'll get another 17 years of protection. In this way, we should be able to dominate semiconductor processing for the next 30 years or so, This will be nice for us, but not so nice for industry, especially since there will be thousands of other patentees doing the same thing with their patents. (And by the way, if you ask us, we'll all tell you that we are examples of how difficult it is to get a breakthrough application speedily issued.) Indeed what I have just described is precisely what happened under our pre-GATT system and why most knowledgeable people wanted it changed.

Another word about dates. To the rest of industry and the U.S. economy, the most important of the 4 patent dates is the Expiration date. On that date, the monopoly is over and the market opens to free competition. When the market becomes free, competition soars, prices timble, great technological improvements come forward, and the nation prospers. Thus while we need patent monopolies to incent invention and commercialization of new technology, patent monopolies that continue longer than necessary become increasingly counterproductive.

There is, however, another even more important reason why patent monopolies need to be limited: their effect on our global competitiveness. The Expiration date becomes critically important to global competition when it is different in different countries. Most of our trading partners — and foreign competitors — have adopted a standard that says that patent protection expires 20 years from the Filing date. As of June 8, 1995, American patents also expire 20 years from the Filing date. But if H.R. 359 is passed, we will return to a system where patents can expire 30, 40 or 50 or more years after the Filing date. That is 10, 20, or 30 years or more after the counterpart patents have expired everywhere else in the world. In each such case, American technology will remain frozen while the technology of our international competitors is free to advance. We in America and only we in America will have our hands tied. Extended patent Expiration dates, while they may be beneficial for an individual inventor or an individual business, are bad for business in general, bad for our global competitiveness, and bad for the American people. Finally, although we dislike the xenophobic paranoia that has been part of this debate, we feel that someone must point out the contradictions. We have been hear-

ing dire predictions about the patent reform in GATT being a new Pearl Harbor. If that is true, if our foreign competitors are as sinister as these people contend, then H.R. 359 is the last thing we want to give them. The loophole that H.R. 359 opens upon is admittedly useful to some American inventors and companies, but it is even more useful to foreign companies. As I said earlier, only 17% of U.S. patents are issued to independent inventors. Two and a half times that number, 45%, are issued to foreign companies. Furthermore, unlike our small businesses and individual inventors, those foreign companies are much more likely to have the financial and legal resources needed to take advantage of H.R. 359's new opportunity for delaying Expiration dates, it is certainly true that if a Mitsubishi patent expires in the U.S. 5 or 10 years after it expires everywhere else, American innovators are held back while the rest of the world is free to compete and advance. This is not speculation; in the last two years of our old system, foreign corporations received 300 U.S. patents that appear to have been intentionally delayed and will therefore expire in the U.S. from 5 to 25 years after their counterpart patents expire in their home countries.² The home countries will be open for competition and development while technology in American factories remains frozen by those patents. Some of these patents are significant and can be expected to have an adverse impact in certain industries. "Thus, far from saving American technology, H.R. 359 will actually hand a tremendous advantage to those very foreign competitors that some people are worried about. In an effort to help American inventors, H.R. 359 will provide much greater help to the competitors of those inventors. In an effort to please a relatively small number of vocal constituents, H.R. 359 would make American industry uniquely vulnerable to foreign competition.

If there is a problem with unfairly shortened patent terms, H.R. 359 addresses only the symptom of the problem. The real problem is delay in examination. We should be doing things that expedite examination. By putting incentive in front of the applicant and his attorneys to delay examination, 359's band-aid for the symptom makes the disease worse.

For my self and my fellow delegates, we ask Congress to back away from the emotional rhetoric in this debate and consider the interests of all Americans. Invention is a wonderful thing but it is useless until it has been manufactured. All nations have great thinkers. America's historic strength came from its ability to commercialize ideas and put them to use. This debate must consider what is best for not only inventors but also for manufacturers and the American people themselves. And

2 The stack of patents is quite thick. They are available on request.

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this debate must look forward to the challenges and opportunities that await us in

the 21st century. We must not retreat, we must go forward.

As small technological companies, all we want is a level playing field; to be able to compete on an equal footing with competitors all over the world. If the U.S. patent system retreats into the past, we will see our American shops and factories put at a disadvantage over our competitor's shops in foreign lands. The 1950's are gone. We are excited about the future. If you give us that level playing field, we think we can win in the 21st century. We ask that you support H.R. 1733 and not H.R. 359. Please don't turn the clock back. I will be pleased to answer questions.

Thank you

Supplemental Statement

The testimony presented at this hearing suggests this issue needs a dose of reality.

For starters, the GATT is not destroying the U.S. patent system; the world will not come to an end if H.R. 359 does not pass. For that matter, the world will not come to an end if H.R. 359 does pass. The issues involved here are complex and important. They deserve careful, considered, rational discussion. They also deserve to be based on truthful data.

FACTS

1. The average patent does not take 8 years to issue, it takes less than 2 years. 94% of 1994 patents issued in less than 3 years. (That number drops to 79.4% if you include the earliest filing dates of refiled applications, it rises again if you exclude patents delayed for defense reasons.)
2. There is no data to suggest that "Breakthrough" patents take 10 to 15 years to issue. At the speed technology moves today, such a situation would be intolerable. Most observers believe that breakthrough patents take less than average time to issue because there is less prior art to be examined.
3. The primary exhibit presented to show the injustice perpetuated by the 20 year term on a slow-to-issue patent happens to be a chemical patent. The owner of that patent (Dow) and the chemical industry oppose H.R. 359.
4. Under the pre-GATT (17 year) system, inventors did not often try to expedite their patents. Less than 0.7% of applicants used the Patent Office's procedure for expediting examination.
5. The 20 year term was not "snuck into GATT at the last minute." The issue had been discussed for years and was generally thought non-controversial. Only the controversy was last minute, and even then there were months of discussion. See the attached letter from Congressman ROHRBACHER.
6. It is not true that American patent applications are completely secret until the patent issues. On the contrary, the vast majority of American applications are also filed abroad where they are routinely published 18 months after their priority date.

(45% of American applications actually originate abroad.) H.R. 1733 simply gives Americans a look (in English) at the same information our foreign competitors already have (about U.S. applications).

7. There is no Constitutional right to a patent. The Constitution empowers Congress to grant patents, it does not require it. If H.R. 359 passes and patentees can again assert patent rights 50 or 60 years after the invention priority date, the American people could get angry and severely limit or even withdraw patent privileges. (Remember that before the 1980s, the courts saw patents as undesirable monopolies.)

8. Finally, the opposition to H.R. 359 is not made up of foreign agents or people bent on destroying the American patent system. H.R. 359 is opposed by honest Americans who work in the system and have first hand knowledge of how it really works. H.R. 359 is opposed by the vast majority of American manufacturers, large and small, by almost every major trade group, by most patent professionals, and by many if not most thoughtful inventors.

COMMENTARY

We should not let a small group of angry patentees overrule the interests of the nation or the long term health of the patent system.

1. If speed of issue is important to society (and it is), H.R. 359 is a step in the wrong direction because it will again slow down speed of issue.

2. Patentees are important, but not to the exclusion of all others. It is only when inventions are manufactured that wealth and public benefit are created. The voice

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of America's manufacturers deserve to be heard. Even the American people (who pay the ultimate price for monopolies) deserve a voice.

3. A passionate claim is made by H.R. 359 advocates that patentees should have the right to establish priority with an incomplete idea and then be allowed as much time as necessary to perfect the idea. This is crazy. In this competitive world, it makes no sense for the public to grant a 17 year absolute monopoly that starts only after the inventor decides he is ready. The patent system must provide incentives — and penalties — to ensure speedy development and public benefit. It seems a much better balance of fairness that the public gives an inventor a 20 year monopoly from his priority date. Remember, most important inventions are made almost simultaneously by many different people as a result of their reaction to common stimuli. (Edison and Bell each had many competitors claiming similar invention dates.) Patents should not be a lottery prize awarded to the lucky person who made the first notebook entry. Patent monopolies should be granted solely to serve society — to incent and expedite technology the public would not otherwise get. In return for the privilege of monopoly, the patentee must act quickly.

It is good that the H.R. 359/H.R. 1733 debate raises awareness of the importance of U.S. patent law to our global competitiveness. The debate needs to be based on the real world and real facts, not anecdote and myth.

Mr. MOORHEAD. You know, I had a couple of questions along that line that I wanted to ask. In H.R. 1733, for anyone who is concerned they aren't going to get their patent, and they'd know usually by 18 months, that there's a real problem with it, they can withdraw and have no publication. And I think for those that are concerned about that publication, that can be answered. All patents are published when they are issued. So, if you were worried about enforcement overseas, once you get the patent anyway, they're going to have the formula. You've got to have the tools to enforce the formula. That's what we get with working with the patent people in the other countries, and with the enforcement agencies to make sure that our patents are protected in their countries. Now, I know some countries don't do a very good job of it. But, we're at least moving forward in that area. We need that enforcement for our people and our patents. That's one thing that we gain.

The second thing is, if there is publication and someone violates your patent, there is a cause of action against him and you can collect under H.R. 1733. You can't at the present time. So, there are protections that are built in here to protect people and for that specific purpose and to make the protection of our patents not only in the United States available, but around the world. You know, it's in a slightly different area than the copyright area. They were selling millions of copies of "The Lion King" all over China and all over Asia before it was released in the United States. We've made every effort to get greater cooperation from the Chinese Government and I noticed there've been arrests made lately, there've been lawsuits that have been won and we're making some progress in that area. But that's what we need if we're going to really be a world power and continue to be the leader. If we want to enforce the innovations that our people have come up with, we have to have that kind of enforcement. I just had to make that comment along with what you said, Mr. Budinger.

There has been some confusion as to where the White House Conference on Small Business stands on these bills. And as an active delegate, Mr. Budinger, can you explain the position of the conference to the audience here?

Mr. Budinger. Thank you. There is confusion on that.

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First of all, the White House Conference was a big thing; it went on for IVa years, and then the final convention, as it were, was in Washington. When we came to Washington, we had all been given 460-some resolutions which we diligently read and studied and were going to decide in Washington which ones to vote on. And we pretty much made up our minds on the way in.

At the convention in Washington, Resolution 115 had some words added to it which supported a return to the 17-year term and asked that applications not be published. I voted for 115, even though I'm very opposed to those provisions because I didn't know those provisions had been added and I think that's true for a lot of the delegates.

The only place where this issue was discussed at the White House Conference was in the Technology and Information Section; and, as Steve Barram said, it got pretty thoroughly discussed and a number of people brought up the issue of H.R. 359 in particular. We overwhelmingly voted not to support H.R. 359.

So, technically, yes, that Resolution 115 seems to support H.R. 359. If you really want to know the sense of the delegates it would be better to talk to them. The Technology and International Trade Chairs of the Conference have made a couple of trips to Washington to express to the Members of Congress that Resolution 115 does not capture — in fact, contradicts — what their sense was. Mr. MOORHEAD. Why is there so much emotional support for H.R. 359?

Mr. BUDINGER. Well, I think there are a couple of reasons. There are some people, like me in a way, who would like to have their patents go on forever. Or at least we'd like the ability to have a patent go on for a long time. I think, however, an awful lot of it comes from the misinformation that is out there. This is a magazine. Inventors Digest, which is highly respected and highly regarded in the small inventor community. It is really the voice of the small inventor.

I'll just read you a couple of things that are printed. It says, for example, "Huge foreign corporations will pocket tens of billions of dollars they would have paid to Americans." Inventors read that, and they believe what they read in this, their magazine. That's frightening. If I believed that I'd probably be in favor of H.R. 359

too.

It also says, "If the Patent Office and others continue their assault on the 200-year-old system the Japanese may as well take our Constitution and hang it in a trophy case in Tokyo."

The Alliance for American Innovation puts out letters to small inventors. My company has also had two phone calls from people claiming to represent the Alliance for American Innovation. And my staff people who took the calls came in and said, "Well, this is a terrible thing that's about to happen to us we've got to support 359," because what they heard would have made anybody want to support 359.

The American Alliance letter says, "Since it takes the PTO on average 8 to 9 years to process and grant a patent, it is imperative that breakthrough patents have a useful life of 17 years, not 11 or 12 years as would be the case if the patent term begins at the date of filing." If that were true I might have a very different point of

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view about this legislation. And I think that an awful lot of the small inventor community really has heard only that side of the issue.

Mr. MOORHEAD. Thank you.

Mr. Stead, we were told in earlier testimony that submarine patent issues being used to cover by those who simply want a weaker patent system because they respect big money and multinational corporations more than they do the creative individual. Would you comment on that?

Mr. Stead. Well, Mr. Chairman, I cited Apple's experience in this area during my testimony. Our experience has been that the longer an individual inventor can keep the patent secret, the longer someone else can develop the technology and implement the technology, and he or she can spring that invention on them after having made successive changes to their original application, so that it reads closer to a technology that is actually being implemented than it might have originally. And then you're in a situation where you've got to defend, and pay a lot of money to defend, and often times it's cheaper to settle than it is to defend because of the expense of defending. The so-called small inventors operate with contingency fee lawyers and they're very often the ones that help them game the system, if you will. So, it's a very definite abuse and it's

an unacceptable way to expect us to do business in a globally competitive era.

Mr. MOORHEAD. Mr. May, what's the issue in the pending litigation between Ford Motor Co. and the inventor Jerome Lemelson?

Mr. May. Mr. Chairman, in two words the issue is undue delay, but let me expand on that a little bit. Mr. Lemelson, and I think it's quite widely known, sued Ford Motor Co. and we've been in litigation since 1992. He filed a patent application in 1954 and then proceeded over the following years to file a number of continuing applications and in the process issued a number of patents, all stemming from that first 1954 application claiming priority to overcome prior art of others. In 1963 he issued his first patent, in 1969 he issued another one. They expired in 1980 and 1986, respectively. He then proceeded to continue to file continuation applications and has issued many, many patents. One of which I have in mind right now issued in 1994, 40 years after the original application was filed, will expire in the year 2011, 57 years after the application was filed and 31 years after the first patent granted to him on that application expired.

Of particular interest is his contention that Ford, and by the way everyone, including the U.S. Congress, the local Wal Mart store, and the U.S. Patent and Trademark Office infringe his bar code reading patents, or what he contends are bar code reading patents. Ford, like a lot of industries in the early eighties, relied on technology which I would call bookshelf technology purchased from companies that had spent millions and millions of dollars developing it, such as Symbol Technologies.

Symbol Technologies developed bar code readers. We use those in our manufacturing operations. We put that in place. Mr. Lemelson read about it, has a lot of articles about it, and in 1989, 35 years after he filed his patent application, he for the first time decided that he had invented bar code reading after it was in place every-

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where. And he filed claims; then he filed some in 1990, 1991, and 1992. These patents are being asserted against Ford, and what happens is, if he's successful in this, there's a tax against every American based on an invention which was really made and developed by someone else, but for which patents are granted because it's so difficult to ferret out the kinds of abuses we are talking

about here.

Fortunately, in June of this year, the magistrate judge handling this litigation recommended to the district court judge that these patents be held unenforceable for undue delay in prosecution. And we are now awaiting a ruling by the judge in Las Vegas.

Mr. MOORHEAD. Mr. Lemley, what prompted you to undertake your empirical study of the 20-year-from-filing patent term and were you influenced by any outside groups or was that an independent study?

Mr. Lemley. Mr. Chairman, the study is an independent study. I suppose you might say that I was prompted in part by a desire for tenure at the university. [Laughter.]

But I don't believe the University of Texas has any direct or indirect interest in the outcome of this study.

One of the things that I noticed, when I was looking at this information at the time the GATT bill was pending before Congress, was the paucity of real data, one way or the other, on what the new term would actually do. The only sources of data that I could find were the data provided by the Patent and Trademark Office which were defective because they measured only current application time; they didn't measure the entire length of time a patent spent before the Patent Office including continuation applications, divisionals, et cetera. And the Patent Office said that there were 18 months on average between the time you file an application and the time the patent issues.

Then there was a claim made by a New York law firm, that I believe Representative ROHRABACHER has alluded to in his article, that the average length of time that it takes a patent to get through the Patent Office is 6.6 years, and that was based on 30 patents that this law firm allegedly picked at random out of the Official Gazette. There's a big difference between 18 months and 6.6 years, and it occurred to me that somebody ought to figure out what the real answer was.

So I did a study which I think overcomes the flaws that may exist with the PTO data. It measures the entire length of time that a patent spends before the Patent Office, from the first day the first application is filed to the day that it issues, because that's the length of time that is relevant under the 20-year term. And what I discovered is that while the average time that something spends before the Patent Office is greater than 18 months, it's an awful

lot less than 6.6 years. It's around 24 or 25 months.

Mr. MOORHEAD. According to your study, the overwhelming majority of patent applicants will receive a significant amount of additional patent term under the 20-year-for-filing system. You testified that it will reduce intentional delay and unintentional delay. Do you believe that such changes will make the U.S. patent system even more the envy of the rest of the world?

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Mr. Lemley. I do. I wanted to note one thing. Representative ROHRABACHER said that the reason that the United States has a technological edge over the rest of the world is because we've had this strong patent system and in particular because we've had a 17-year minimum term of protection. And I just don't think that that's accurate. I think the reason that the United States has a technological edge over the rest of the world is because of our inventors, because of our people, our research universities, our corporations, and what it is that these people do.

Obviously, we need a patent system in order to encourage innovation, in order to pay for research and development costs, but there is simply no indication that we've got to have a 17-year term or all of the inventiveness that has always characterized America will suddenly dry up and wither away.

Mr. MOORHEAD. I have a couple of questions and I'd like brief comments from each member of the panel. In earlier testimony, we were told that the 18-month publication is like hanging a huge neon sign out in front of the Patent Office which displays, "Steal Our Technology."

Mr. Ferguson. Absolutely not. I have never heard of anything that really gets sold by keeping it a secret and the real purpose of most of us when we do inventions is to sell something. Tom Peters, a noted author, has said that the best way to get your ideas accepted is to get out and talk to people about them. So I think secrecy is highly overrated, at least in my experience with building companies.

I think one of the things I rely on is recognizing the fact that I have to run, not walk, to develop companies or to develop a new product, or whatever. I think, in fact, I actually resent that kind of implication, that I'm going to be in some way emasculated by

having to publish my patents, which I always have in the past; the important ones at least, I have filed on a foreign venue. So I just don't believe that I am going to have to suffer for that.

Mr. MOORHEAD. Who's next? Mr. Lemley.

Mr. Lemley. It seems a rather astonishing suggestion to me that if you want to start a new business, to invest in research and development, that the thing that you are going to do is look to applicationr that have been published and that you would expect within the next year to issue as a patent. This seems to me precisely the sort of thing you would not want to do. If I am going to invest my money in a company, I'm going to invest my money in a company that has its own technology or at the least that can use public domain technology. This patent publication is a signal to the world that somebody has a claim on this invention and if anything, I would expect that it would cause imitators to shy away from using those inventions.

Mr. Stead. Mr. Chairman.

Mr. MOORHEAD. Yes?

Mr. Stead. It seems to me that the purpose of an invention is to build something, and the faster the better in a global economy. And if you want to keep it secret, you can't build it. So I don't know what purpose secrecy serves at all.

Mr. May. Mr. Chairman, you, yourself, pointed out that when a patent issues, of course, it's published; we should read the 18-

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month publication always in conjunction with the provisional rights, I believe, too. The fact is that by publishing at 18 months, or whatever period of time, amounts — if there's a special request, the applicant from that date on is protected, and when they obtain their dominant patent, they not only could shut down the competitor, who might be moving in to try to take the market as has been suggested with injunctive relief, but they can also sue for damages and receive a reasonable royalty back to the date of publication.

Mr. MOORHEAD. If it's a foreign group, that we've heard so much talk about, that has taken it, once you get the patent which would be a few months later probably, they can still get it because it would be published, and if you can't enforce your patent in their country, you aren't going to have any.

Mr. May. That's correct. And that's why harmonization is an overridingly important element of this.

Mr. MOORHEAD. Yes?

Mr. BUDINGER. It might actually work the other way around. A lot of similar invention occurs by different people at about the same time because they are reacting to the same stimulus in the technology. And so you find, even back looking at Edison and Bell, they spent a lot of their time in court with other people who are claiming to have invented the same thing at about the same time. Inventions tend to come in clusters like that and even now. If the patent application is secret, other inventors who have separately invented the technology might invest a great deal of money and become committed competitors by the time the patent comes out. Then they have got to fight in order to stay alive. With publication, there is the possibility that the potentially committed competitor learns that his technology has already got a claim on it, and he goes and does something else instead. So it may actually do just the opposite of what Congressman ROHRABACHER suggests.

Mr. MOORHEAD. Yes, Mr. Barram.

Mr. Barram. Yes, Mr. Chairman. There's also another point that Congressman ROHRABACHER brought up this morning with respect to investors. Given — another take on that viewpoint is a better way to phrase that — investors with venture capital funds are also looking for certainty. He refers to certainty as a 17-year term. However, I think another way of looking at it would be, in an investor's point of view, an 18-month window, is a much narrower term of certainty at which their investment may be at risk, and it may now be very able to say that it's at a much less degree of risk for a

shorter period of time as well.

Mr. MOORHEAD. The other question I had: Are the bilateral agreements made with Japan that changed their patent system for certain changes in our patent system worthwhile? Do two to three of you want to answer that? Yes, Mr. Ferguson.

Mr. Ferguson. I've been dealing with Japan and their patent system for over 20 years now, and I can tell you that the Japanese patent system has improved an enormous amount. It still has a ways to go, but at one time before publication, you could be caught up in the Japanese Patent Office for 19 or 20 years and the patent would not issue until the term of the patent was done. With their publication and with some of the changes they've made in terms

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of — they also had a practice which one claim and the claim was read, and if you had dependent claims, the claims were read to limit the scope of the independent claim. They've changed a lot of that. Now you can get independent claims. You can do a number of things.

There are other people in the room that can probably answer the question on a technical basis better than I, but I can say from my direct experience that those agreements are helping us an enormous amount, that we are getting many things from the Japanese that we need. There is a ways to go. And it will be a great day when we can file a patent between the two of us that can be filed in our language in Japan and actually be accepted. So, I would say that those agreements are very important.

Mr. MOORHEAD. Mr. May.

Mr. May. Mr. Chairman, as a company that is seeking to increase its market share in Japan, I can tell you that we are very interested in being able to work effectively with the Japanese patent system. And it's no secret that in the past it was extremely difficult to obtain Japanese patents, to get them examined, get them through the office, and I believe that it's imperative that we move in the direction of harmonization, and we have taken some first steps toward getting the Japanese Patent Office to be more reason-

able in their approach to examine the applications in a reasonable period of time. I think it's very important for all of us if we want to operate in the global economy.

Mr. Ferguson. Let me say one more thing here. I've had opposition — and my experience is not nearly as great as somebody like Ford Motor Co. or something like that — I've had oppositions filed against my patents in Japan lately and the results have been very, very good, very favorable.

Earlier on I had a case — I invented the method of aligning liquid crystal displays that are 100 percent being used now. I didn't get the patent in Japan because I used cotton as an exemplary material and they wouldn't, even in appeal, wouldn't allow me to use cloth as the operative word in the claim. It had to be the exemplary material. It was done purposely, I believe.

Mr. Chairman, lately I had a case that had 18 oppositions and we got it granted with less trouble than we had in Europe for opponents for that same case. So my experience would say that things are improving a lot.

Mr. MOORHEAD. The gentleman from Virginia is impatiently waiting. And I'm sorry I took so long. You're recognized.

Mr. Boucher. Thank you very much, Mr. Chairman. No apology needed. You were asking very pertinent questions and, in fact, have covered a number of the ones that I intended to ask.

Let me return, if I may, to the concern that was expressed by

Mr. ROHRABACHER with regard to 18-month publication. My recollection of his principal objection to that was not so much with reference to the potential that the innovation might be pirated here in the United States, but with regard to the difficulty that the inventor would face in terms of protecting his property interest abroad. And he suggested that the filing might lead to the incentive being created by people of other countries to take that innova-

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tion and utilize the technology there without compensating the inventor here.

Well, what really is the answer to that? I would assume that filing the patent application simultaneously abroad with the publica-

tion here in the United States would be one effective approach. When I asked him about that he said, "Well, that's very expensive. We don't know what it would cost, but perhaps the expense would place that beyond the ability of a lot inventors here in the United States to accomplish."

Do you have general comments about how the protection could be assured with regard to use of that technology abroad? And address, if you would, the question of expense. Mr. Ferguson.

Mr. Ferguson. I believe that the PCT, the Patent Cooperation Treaty, offers a very good way to at least buy yourself some time abroad, get yourself a good basis in fact. We've discussed using the conditional and have used the conditional — as I say I have four patents in PCT~patents being filed with U.S. designations, which means that we essentially file the foreign patent first. I think this can be done with good effect, and I must say that it has been my experience that it's easier to collect royalties from Japanese companies than it is U.S. companies in general.

Mr. Boucher. Any other comments concerning that? Anything directed specifically at the cost of filing abroad?

Mr. BUCKMAN. Unfortunately, I think if you do want to protect your inventions in foreign countries, you must file patent applications in those foreign countries, just as we file applications worldwide. The publication of the patent is not the critical thing. If we make a product, it's fair game to be copied any place that patents don't exist. So I think it is, unquestionably, a cost factor, but that's the way the game is played, unfortunately.

Mr. Boucher. Well, let me just ask for some practical information. What does it cost to file a patent application in Japan and in the typical country in Western Europe? Anybody know? Mr. Ferguson.

Mr. Ferguson. Yes; if you file worldwide, and we did a study on ours and this does not include in terms of the European Convention Countries, but just filing the EPC by itself. Our number is about \$250,000 for all of them, for the United States, Japan, and several of the Pacific Rim countries that really count.

Mr. Boucher. That would strike me as being a considerable expense.

Mr. Ferguson. It is, but the strategy is to spread it out. I am very much interested in reducing that cost. I think we get ripped off in a number of countries. For instance, Spain, you can't file a Mexican patent in Spain. You can go the other way, but not — so there's a lot of little things. They have setups that allow them to keep their own fully employed and that sort of thing, so you run into it, and it's country by country that may kill you.

Mr. Boucher. Well, let's take the small inventor who does not have a lot of capital, who has a good idea. He has filed for his application in the United States. The period of 18 months arrives. He has the application on the brink of publication here. To protect himself internationally, I think we're concluding he would have to file his application in Japan and in Western European countries.

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perhaps file it centrally in the Munich European Patent Office, but the cost is substantial there, and it seems to me, without necessarily endorsing Mr. ROHRBACHER's approach, that perhaps he's made a point here, that that small inventor is going to run up against a barrier in terms of being able to afford to file his patent application at a cost of \$250,000 in Japan and Western Europe. What do we say to that small inventor without access to a great amount of capital, who doesn't know what the market for his product is going to be and perhaps cannot raise capital at the 18-month period sufficient to file abroad, about the 18-month publication requirement? What do we say to him? Mr. Ferguson.

Mr. Ferguson. That was my point about the PCT. I don't think there is a good answer to that. I've been very fortunate and have been able to raise money on patents that I think are good by going out and raising that money to get those patents filed abroad. I can't personally afford to spend that kind of money on patents, either, so it's a matter of sales, and so forth, going into it. But the thing that I do is file a PCT, and then I designate the countries and that allows the first publication and the examination, the publication to be made in English and to be, before any foreign designations are actually acted on, and prolongs the time that you have to raise the money. It also lets you have more time to make a judgment on whether you want to file for it or not. I usually end

up designating more countries than I — but it's relatively cheap compared to filing a foreign and it can be done in English.

Mr. Boucher. Now, what protection do you get when you do that, again?

Mr. Ferguson. You protect your place in line, basically. And they give you a separate examination.

Mr. Boucher. Let me just ask you, does that then take priority over a separate patent application that someone else might file in Japan or Western Europe?

Mr. Ferguson. Absolutely.

Mr. Boucher. It does?

Mr. Ferguson. Absolutely. It's full publication and has all the rights and privileges that go with that.

Mr. Boucher. And what is the cost of doing that?

Mr. Ferguson. I think it's — what is it, \$1,500 or something like that, if I remember right. \$2,500? \$2,500.

Mr. Boucher. Well, this is a very interesting area of inquiry for us and we'll look more carefully at that and see if, in fact, it does address the problem.

I appreciate that response. Does anyone else on the panel want to comment on this?

Mr. BUCKMAN. I'd just like to mention that I don't think those figures are for the initial filing fees that Mr. Ferguson talked about. We've been averaging \$5,000 initial filing fees for Japan and in the EPO \$5,000 to \$10,000. And we must understand that you have the ability to control, if you want further prosecution so you can somewhat control your expenses in those. The other thing is, let's not lose sight of the fact that if you have a U.S. patent, you could stop anybody from making, using, or selling that invention in the United States.

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Mr. Boucher. I think that was understood. And I don't think

Mr. ROHRABACHER's complaint was so much with regard to conduct here in the United States as it was with regard to what might happen internationally.

Mr. Budinger.

Mr. Budinger. Just one quick thing: this has been alluded to already, but a United States patent does not protect my invention in Japan. Whether the patent is simply published at 18 months or issued 24 months or 30 months, I am equally vulnerable. Having a United States patent is no help in what happens in Japan. And, incidentally, I salute Congressman ROHRABACHER's attention to the cost issue of foreign patents. That's a major issue and it's something that does need to be addressed.

Mr. Boucher. All right.

Mr. MOORHEAD. It does affect their ability to export it to the United States, though, a product that violates our patent?

Mr. Budinger. Yes, absolutely. But from a practical standpoint, if the invention isn't already thought of by somebody — we keep picking on Japan — but if the invention isn't already thought of by somebody in Japan and he first learns about it at 18 months and then he goes into engineering and production and everything, from a practical standpoint by the time he does all that if he plans on entering the United States market, he's a fool because by then that patent is likely to have been issued and he can't get in there. He'd be a fool to make that investment.

Mr. Boucher. Let me, Mr. Lemley, inquire of you if I may, based upon the study that you have performed, of your conclusions with respect to the number of applications that are not acted upon within a period of 3 years. In other words, how many applicants would not have their patent issued within a time that would give them the practical effect of having a 17-year patent term?

Mr. Lemley. Well, under the most realistic set of assumptions in my study, 87.1 percent of the applicants gain patent term so 12.9 percent either stay the same or lost some amount of patent term. Now my data also indicate that the vast majority of those who lose term lose only a year or 2 years, and that it's a very small percentage that lose more than that.

The other thing I would note, if I may, is that there are provisions in the current law to take care of some of these cir-

cumstances. You can extend the patent term for interference, for appeal that is successful, and many of the patents that in fact spend a significant amount of time before the Patent Office do so for that reason and therefore would get a longer term that is not indicated in my study.

Mr. Boucher. And can you categorize the kinds of patents that we're talking about with regard to this 12.9 percent who would lose patent term? Are these products that tend to be on the higher end of the technology scale, typically?

Mr. Lemley. One of the things that I did in this study is to break down the patents by industrial classification. I do that in two ways. First, the way the Patent Office does it, breaking them into mechanical, electrical, and chemical patents. And there the data indicate that for each of those categories patentees on average and a significant majority of patentees gain protection rather than lose

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protection. It is true that in some categories patents take longer than in other categories, but on balance everybody across those industries gains.

Mr. Boucher. And for the 12.9 percent who lose, can you assign any kind of categorization to them? Do they fall within one of the classifications that you've said or can you make some estimate into what field or series of fields these patents would fall?

Mr. Lemley. Yes, I can. In the study itself, which has been provided as testimony, we break down each of those things. The percentages are different for each term. For example, chemical patents, one of the categories, 79.1 percent gain term, so 20.9 percent lose term. Electrical patents, 86.1 percent gain term, so 13.9 percent lose term. Mechanical patents, 93.2 percent gain term, so only 6.8 percent lose term.

Mr. Boucher. So it sounds like in the chemical field there would be a higher than normal loss. What about in biotechnology?

Mr. Lemley. I did study two other technologies, software and biotechnology. Unfortunately, the data sample I have included a relatively small number of biotechnology patents. And while there

are data that suggest that biotechnology take longer than any others, the data are not statistically significant. So I would hesitate to draw a conclusion and act upon it for that reason.

Mr. Boucher. All right. Let me ask you this question, presuming that I know the answer, but I'd like to hear you state in any event, and I'm addressing this basically to the panel. What do we do for those patent applicants who do, in fact, lose term when the operative law moves to the 20-year-from-date-of-filing a patent? What do we do for those who lose term under that arrangement?

Mr. Lemley. Well, some of them are already taken care of — the interference proceeding, the appeal proceeding, et cetera. Some others can take care of themselves. This is a proactive, not a retro-active provision. People can reduce the delay to the extent that it is their fault before the Patent Office.

Now it's still true that a few, and I think that my study shows a very few people, will be injured by this new law. And I think that all you can do is to weigh the benefits of the new law against its costs. Every aspect of our patent system has costs. The Patent Office occasionally wrongly rejects patents, for example, but I don't think it would be wise to suggest that we abolish examination because some people had their patents wrongly rejected during the examination process.

Mr. Boucher. Well, let me just suggest to you that there may be some of us who are not content to accept a cost and try to do something to take care of the problem of the person who loses term and winds up with less than 17 years. Do you have any suggestions for how to address that problem?

Mr. Lemley. Well, one way to address that, and I think probably a good one, is Chairman MOORHEAD's way. That is, under H.R. 1733, to provide some sort of provisional rights to people who are in this situation, so that when the patent does issue, they get not only the exclusive right after issue, but the right to go back and collect royalties for the entire period of prosecution.

Mr. Boucher. All right. Let me, finally, ask a question that perhaps is somewhat unrelated to the core reason we are here today.

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but may have a bearing as well. And that is this: we are perhaps

the only nation, or one of a very few in any event, that awards intellectual property rights for technology and innovation based upon who was the first to invent. Most of the rest of the world does it based on who is the first to file for the patent. Would there be any advantage or disadvantage to the United States if we were to adopt a first-to-file system like most of the rest of the industrialized world, if not all of it?

Mr. Lemley. Are you directing that question to me or to the panel?

Mr. Boucher. Anyone on the panel. Mr. Ferguson.

Mr. Ferguson. I'd love to answer the question because I believe in — I've been involved in a number of things. And I am very against interferences. And I think that doing the first-to-file will get rid of the interference proceeding.

Now let me explain why I think the interference proceeding is terrible. It is a legal proceeding, you have to prove who was first. So you have to take depositions; you have to do everything that a normal suit has to take, and it's very, very expensive. Now, considering that you're a small inventor — I was once told by Hoffman LaRoche that we will keep you in the Patent Office forever. They couldn't do it because of the way I planned the situation, but they threatened it. There is no recovery to an interference. So if you're a small company and you get into an interference with a big company and you get stuck in there, you have to pay your patent bill because nobody will take it on contingency. There's no contingency to it, so you're stuck. And you're stuck big. So, me? I'd love to see first-to-file.

Mr. Boucher. Now what disadvantage might you imagine from it? Would anybody be hurt as a consequence of that? What about the small inventor who perfects a technology but doesn't really know the procedure for going about filing a patent application and perhaps someone learns of what he's doing and beats him to the punch? Is there any problem in that?

Mr. Ferguson. I think that this is a risk. I think you can say that, but it's a risk in any case. The guy that actually invented the

device which signals when you take a book out of the library or something like that made a mistake, talked to the wrong people, was not able to prove his inventorship and lost it. He couldn't afford to fight it. He just flatly lost it.

Mr. Boucher. All right. Let me ask you one other question while you have the microphone. Mr. Chairman, I hope I'm not trespassing too much on your time here, but it's an interesting subject.

Mr. MOORHEAD. That's fine.

Mr. Boucher. Do we solve the submarine problem if we go to first-to-file? Is that an effective way to do it or does that affect it?

Mr. Ferguson. I wouldn't think that would have any effect on the submarine problem. The submarine problem is more a procedure Eifter you get into the Office. But a first-to-file does solve one of my big problems and

Mr. Boucher. Which is interferences.

Mr. Ferguson [continuing]. And that's the procedure, any procedure for a small inventor that does not have recovery.

Mr. Boucher. OK. Other comments?

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Mr. Lemley. Just one brief note. Representative ROHRABACHER's chart presented earlier today listed three examples of patents that spent a significant amount of time in the Patent Office. The first of those, I believe, was crystalline polypropylene. The reason it took so long to issue the patent for crystalline polypropylene was because it spent that time in an interference proceeding, and under the first-to-file system presumably that patent would have been issued significantly more expeditiously.

Mr. Boucher. OK. Other comments? First-to-file, any ideas? Yea or Nay?

[No response.]

Mr. Boucher. No? All right.

Well, I would like, Mr. Chairman, to thank these witnesses for the time they spent with us and the ideas they've shared with us and I thank you for your indulgence.

Mr. MOORHEAD. I wish to thank you all, too, and it's been a good discussion.

Our second panel this morning consists of six distinguished witnesses.

Our first witness is Dr. Rajrmond Damadian, who is the president and chairman of Fonar Corp., a graduate of Albert Einstein College of Medicine, the University of Wisconsin and the Juilliard School of Music. Dr. Damadian holds the original patent for the MR, otherwise known as the MRI, the magnetic resonance imaging. His pioneer patent commenced a new "shoe" at the U.S. Patent and Trademark Office which today contains over 700 patents. He received the National Medal of Technology from President Reagan recognizing his efforts in that field. Welcome, Dr. Damadian.

Our second witness is Prof. James P. Chandler who is the president of the National Intellectual Property Law Institute, which is a nonprofit institute, research, resource and education center involved with patents, unfair trade and trade secret law. From 1977 to 1994, Professor Chandler was director of the Computer Law Institute at George Washington University. He was also instrumental in creating the Computer Law Association of America, serving as a member of its board of directors from 1972 to 1982. Welcome, Professor Chandler.

Our third witness is Dr. Robert Rines, a founder and past president of the Franklin Pierce Law Center. Dr. Rines is a registered professional engineer, inventor, composer, and lawyer. In 1994 Dr. Rines was inducted into the U.S. Inventors Hall of Fame in recognition of his inventions in high resolution imamage scanning radar and sonar used in submarine detection, LORAN, which is used in boat navigation, medical ultrasound imaging, and patriot

missile tracking systems. Welcome, Dr. Rines.

Our fourth witness is Ms. Diane L. Gardner who is currently a patent agent for Molecular Biosystems, Inc., a biomedical company that develops a range of contrast agents for use with diagnostic ultrasound. Prior to that, Ms. Gardner was a patent examiner at the U.S. Patent and Trademark Office. She is currently a member of the San Diego Intellectual Property Association, the Licensing Executives Society, Chemistry and Law Division of the American Chemical Society and the American Intellectual Property Law Association. Welcome, Ms. Gardner.

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Our fifth witness is Dr. Paul Crilly who since 1989 has been as associate professor of electrical engineering at the University of Tennessee in Knoxville. From January 1994 to July 1995, he was an IEE-USA congressional fellow and served on the professional staff of Congressman Dana ROHRABACHER. From 1978 to 1989, Dr. Crilly, who has been awarded three patents, was a member of the technical staff of the Hewlett-Packard Co. Welcome, Dr. Crilly.

Our sixth witness is David L. Hill. Dr. Hill is a nuclear physicist and the current president of the Patent Enforcement Fund, which assists small inventors involved in infringement suits. Dr. Hill worked with Enrico Fermi in building the first nuclear chain reactor and in subsequent experimental nuclear physics research. Dr. Hill was an associate professor at the University of Tennessee, Nashville, and was a group leader in theoretical nuclear physics at the University of California, Los Alamos Scientific Laboratory, Los Alamos, NM. In addition to having lectured extensively in the areas of atom energy, science and public affairs, he has also been the president of several companies engaged in various scientific endeavors. Welcome, Dr. Hill.

We have written statements which I ask unanimous consent be made a part of the hearing record and ask that you summarize your statements in 6 minutes or less. I'm giving you 1 more minute each than I gave the first panel. We appreciate your being here and I ask the members of the committee to hold their questions until all of you have testified.

Dr. Damadian, do you want to begin?

STATEMENT OF RAYMOND DAMADIAN, M.D., PRESIDENT AND

CHAIRMAN, FONAR CORP.

Dr. Damadian. Mr. Chairman, I begin with an introduction: The U.S. patent system, its purposes and its benefits.

Much of the attack directed at the U.S. patent system that I and others are here today to defend against, arises from a lack of appreciation, I think, of just what the U.S. patent has done for the American people and how directly it has caused the financial well-being of every person in this room and indeed every person in America. I begin from this premise because it is impossible for me to imagine that men and women of such noble intentions as inhabit this Congress could tolerate, even for a moment, such hostile attacks on this institution of the U.S. patent if they genuinely understood what a crucial role it has played in generating most, if not all, of the wealth our people have had the privilege to enjoy. They would view it as a betrayal of a nation and its promoters as the betrayers. They would recognize without qualification that we should be laying our gratitude at the feet of the patent, instead of seeking its destruction.

The history of what the patent actually did is simple. Appreciating what it did sufficiently to grasp the full measure of the financial tragedy that lies ahead, if we do not turn aside the current concerted attack leveled at it by bills like H.R. 1733, H.R. 1732, and GATT, is a different matter.

The steps taken by America's founders:

Step 1, 1789, Washington and the Founding Fathers for the first time in all human history make the right to the substantial eco-

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conomic power of a patent an absolute right of every citizen of the new Republic. As far as the new Republic was concerned, the issuance of the patent was no longer to be the prerogative of a monarch. Instead, it was to become the inalienable right of every citizen. They wrote in article I, section 8, of the U.S. Constitution, "Congress shall have the power to promote the progress of science * * * by securing for limited times to inventors the exclusive right to their discoveries." Note that the Founding Fathers did not give a royalty. They gave instead the right to exclude. That right to exclude was the means. It was the means for the inventor to gain the protection he needed from large competitors so he could build a new business for America.

Step 2, 1790, Washington and the First U.S. Congress enact the first Patent Act on April 10.

Step 3, the enacted patent ignites the industrial revolution.

Whitney, Morse, McCormick, the Wright Brothers, Eastman, Good-year, Edison, Bell, Westinghouse, Dow, Deere, Hollerith, and so forth, many others, all file patents in the first century after the patent is enacted. The companies their patents founded. International Harvester, Kodak, Goodyear, General Electric, AT&T, Westinghouse, Dow, Deere, IBM, and many others, open the industrial revolution and generate enormous wealth for America and for Americans.

All these patentees exercise the right of the patent to exclude others in order to build their companies. During the first 100 years of operations, AT&T and Bell's patents generate an estimated \$3 trillion in salaries for AT&T employees underscoring the Senator from Connecticut, O.H. Piatt's famous statement in 1891, quote, "There never was a true invention from which the public did not reap infinitely greater pecuniary reward than the inventor."

The patent fulfilled the purpose of George Washington and the Founding Fathers. The right to exclude proved to be the magic formula for founding the new businesses the young republic so bally needed.

It worked. The first century citizens of the new Republic understood that the patent had created all their prosperity. At the 1890 Centennial celebrating the patent, the citizens of America lavished their praises on the patent and gave it full credit for all the prospering of all America's people.

Why I have come to Washington this day, Mr. Chairman, to testify? I see it as my duty. Having perceived the enormous impact of the U.S. patent on American history and having experienced firsthand the staggering power it possesses to shape the economic destiny of a nation, I consider it my duty to report my observations to the honorable men and women of this Congress and to persist, if need be, until I gain your proper attention to the matter.

In short, Mr. Chairman, I have come humbly to plead its case.

I have come, sir, before you, Mr. Chairman, because you are, in my opinion, the Chair of the most powerful committee in all of Congress. With a turn of your hand, Mr. Chairman, you can steer the course of the good ship of America away from its persisting and ever-lengthening economic decline. Your committee, and you, Mr.

Chairman, have the power to turn our ship into the lane of boundless prosperity instead.

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The U.S. patent possesses all that power, Mr. Chairman. All that is needed is its proper administration and its proper protection from assaults. I humbly beg you to free the patent from bondage, Mr. Chairman. I beg you to use your great power to set it free so that it can once again do what history has so amply taught us it has done before.

I beg you to give no quarter to its attackers. I remain confident, Mr. Chairman, that you are fully aware of the solemn power that has been entrusted to your care to affect the future of a Nation for centuries to come and that you will commit to the exercise of that power with equal solemnity.

I have here a chart, which I call the chain reaction of enforced patents and the chain reaction of unenforced patents. At the top you see that, if we successfully enforce patents, what we achieve with enforced patent is that inventors trust patents. We see that investors trust patents. The immediate result of that is that we produce abundant investment capital, and as a direct chain reaction from that, many successful new manufacturing enterprises. And there's a list of them that I put on the right.

But the most significant outgrowth of investors trusting patents and abundant investment capital is, and I've highlighted them, increased employment, increased tax revenues for the American Government, and another important one that I would like to draw your attention to is the chance for upward economic mobility for America's poor and disadvantaged.

Now, then, if we don't enforce patents, and we go to the bottom chart, unenforced patents, we produce investors' disregard of patents; we produce disinterested capital in patents. We have fewer and fewer successful manufacturing enterprises. We have loss of employment. We have declining tax revenues for the American Government. We have negative balances of trade and very importantly we have destruction of hope for upward economic mobility for America's poor and disadvantaged.

The U.S. patent and the story of MRI — I have come before you this day, Mr. Chairman, to tell you my story, the story of MRI — 25 years ago in 1970, I made the discovery that opened the field

of MRI. From that day to this, I have labored diligently to advance the technology and perfect it so that the public could have its benefits. I labor now with all my energies to reduce its cost, so that Americans and the rest of the world's people can readily afford its lifesaving attributes. But the course to its current state has not always been easy, Mr. Chairman.

In 1977, after overcoming a multitude of financial and technological difficulties that blocked our path, my graduate students, Mike Goldsmith, Larry Minkoff, and I completed the construction of the first human scanner and obtained the first scan of a live human being. Shortly thereafter, I left the university and with my students formed the first MRI company. We called it Fonar Corp. We commenced the manufacture of MRI machines.

Mr. MOORHEAD. Would you excuse me just a minute? We're not being rude, but we're in the final stages of a very important vote over on the floor, and Mr. Goodlatte has been over and voted. So I'm going to ask him to take the Chair.

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I know you people have waited for a long, long time and every single word is in the record and, believe me, we read the comments because we're interested in them. So they won't be missed.

Mr. GOODLATTE [presiding]. Thank you, Dr. Damadian.

Dr. Damadian. After obtaining the first live human scan

Mr. GrOODLATTE. Please proceed.

Dr. Damadian. Shortly thereafter, I left the university and with my students formed the first MRI company called Fonar Corp. We commenced the manufacture of MRI machines.

By 1980, we introduced the first commercial scanners to the world. As of today, we have been in business 18 years and have sold and installed approximately 200 Fonar scanners worldwide. We are a publicly traded company on Long Island with 300 employees, but the road has been difficult and painful, Mr. Chairman.

MRI has been a multibillion-dollar industry, and while President Reagan awarded me the National Medal of Technology at the White House for the MRI, and while I was inducted into the National Inventors Hall of Fame for my invention, neither my company nor I have ever received a single royalty for its patent. The courts did not enforce my patent. I did not receive the promise of the U.S. Constitution, "the exclusive right of inventors to their dis-

coveries for a limited time." Though fully earned and fully justified, I was never granted the privilege the Constitution promises. I did not receive any protection in the marketplace, as the Constitution promises, from a host of multinational corporations whose only claim to our technology was that they wanted it.

But I have not come to complain, Mr. Chairman. While I would be less than candid if I did not admit that the above turn of events caused me a measure of anguish by its lack of fairness, I have come, notwithstanding what personal distress I may have suffered in these matters, sincerely hoping that I might be able to convince you, though sally, that it is not I who has sustained the major injury in this failed enforcement of my MRI scanning patent. Even more sally, the victim has been America and her people.

Much as I wanted to, I was not able to build another great new industrial enterprise for America as Bell, Edison, and the others have done. Our company was not able to create the tens of thousands of new jobs for America that enforcement of our patents would have ensured.

Instead, out of nine companies making MRI machines today, only two remain that are American. All the rest are foreign. Three are Japanese. Simply stated, this means that the majority of the multibillions of dollars generated each year by the sales of MRI machines goes to foreign citizens. As a patriotic American, this grieves me, Mr. Chairman. MRI is an American invention. It is only just that its proceeds should be used to pay American salaries rather than Japanese salaries. The Japanese contributed nothing to the development of MRI. It is not just that the income from America's invention of the MRI should be flowing to the citizens of Japan instead of to the citizens of America.

It means that tax revenues for the sale of MRI machines are flowing to foreign governments. It is not just. The tax revenues from the sale of MRI machines should be flowing to the American Government. Instead, it is flowing to the Government of Japan.

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It means that today America spends more in purchasing medical equipment from Japan than the Japanese spend in purchasing medical equipment from America. In 1992, America had a medical equipment trade deficit with Japan of \$320 million. If my MRI scanning patent had been enforced, that medical equipment trade

deficit would have been a medical equipment surplus. The surplus would still be growing.

The current bills before Congress, in my view, are unmitigated attacks on the U.S. patent system. They should be recognized for what they are. Their purpose: to inflict a mortal wound on the U.S. patent.

Three bills before Congress, H.R. 1733, H.R. 1732 and H.R. 1659, plus a fourth that is constantly being threatened, the replacement of first-to-invent by first-to-file, plus the new GATT patent legislation, when taken in concert as they must be, can only be construed as a concerted attack on the entire U.S. patent system, the overall purpose of which is to mortally wound it.

In addition to the Japanese, a few large domestic companies are leading the current charge against the U.S. patent. These are the same companies that the newspaper headlines tell us daily are laying off hundreds of thousands of employees across the country as they continue to lose sales to their Asian competitors. Maybe we shouldn't be taking their advice. They haven't been able to figure out that they are losing these jobs because patents aren't working. Indeed, they are living proof of my strongly held view that when patents don't work, people lose their jobs, and they lose them in large numbers.

And there is another issue, Mr. Chairman, The patent is a proper alternative to welfare, with far more economic potential and job potential than welfare ever had. With a strong patent, our Afro-American brethren can start new businesses and make major advances up the economic ladder. Can we really argue to our underprivileged brethren that there are more productive alternatives than welfare and then turn and render impotent the most powerful weapon on Earth that exists for him to use to bootstrap himself and his community into the economic mainstream?

GATT replaces 17 years from the date of issue with 20 years from the date of filing as the new patent life. H.R. 1733 calls for publication to the world of a patentee's application prior to the patent's approval and issuance. The provision replaces the longstanding secrecy of a patentee's application until granting of the patent. It exposes the patentee to worldwide disclosure of his invention even though he may never receive a patent. Most inventors will elect to hold major new inventions in the future as secrets rather than risk patenting them. The patentee will recognize the publica-

tion of his application prior to patenting will invite attacks on his patent prior to its approval by the Patent Office by adversaries seeking to prevent its issuance.

H.R. 1732 expands the power of large adversaries to request the reexamination of existing patents by the Patent Office. It empowers teams of highly paid corporate lawyers to argue their reexamination case within the Patent Office with only the patent examiner, who is unskilled in legal matters, presiding. Current reexamination laws do not permit outside intrusion in a reexamination proceed-

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ing. By so doing, H.R. 1732 expands the power of large adversaries and their corporate legal teams to eliminate existing patents of small entities without the adversary being forced to conduct those adversarial proceedings under the watchful eye of a judge.

Under present law, small entities are protected against attacks by large companies. The patent is presumed valid and litigation cannot be used to challenge a patent's validity unless an enforcement action is initiated by the patent holder.

H.R. 1732 alters this balance. The legal armies of giant corporations will now be empowered under H.R. 1732 to initiate attacks in the Patent Office on small entities by forcing small entities to exhaust their finances defending their patents. Few will be able to withstand such attacks. Additionally, H.R. 1732 will empower large corporations to initiate these attacks on small entities risk free.

Under present law, litigious challenges to patent validity can only accompany the attempted enforcement of a patentee's patent in a court of law. Under the present law, the party challenging the patent's validity in an enforcement action by a patentee must face the prospect that in the event he loses, he will be enjoined from making the product and will be compelled to pay damages for infringing the small entity's patent. The prospect of a loss prevents frivolous attacks on patent validity and compels infringers to seriously negotiate pretrial settlements with patentees when they recognize that their use of the invention has a high probability of being deemed infringement by a court of law.

Operating in concert, as the designers of this pending patent legislation apparently intend, a patent life that begins under GATT when a patent is filed, is expended when the Patent Office fails to issue the patent in a timely fashion. An 18-month publication

under H.R. 1733 that can be counted on to instigate challenges to a patentee's application before his patent is granted and further consumes patent life, and a right under H.R. 1732 to litigate the validity of the issued patents in the Patent Office with the patent clock still on the run should, at a minimum, substantially curtail the effective life of most patents.

Additionally, 18-month publication exposes the patentee to the prospect that his invention will be disclosed to the world even though he may never receive a patent. H.R. 1732 means that all adversaries may attack his existing patents, risk free, and proceed to exhaust his finances with impunity.

The proposed legislation represents, in my view, a mortal wound to the American patent system, Mr. Chairman. I pray, sir, that you may exercise your stewardship to repulse this attack. No amount of handwashing in the future will be able to erase the economic wreckage that will be the aftermath of these bills. H.R. 359 restores the patent's natural lifetime and begins the road to recovery. I beg you to seek its speedy passage and commence the economic recovery of our Nation.

[The prepared statement of Dr. Damadian follows:]

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Prepared Statement of Raymond Damadian, M.D., President and Chairman,
FoNAR Corp.

INTRODUCTION

THE U.S. PATENT SYSTEM: ITS PURPOSES; ITS BENEFITS

Much of the attack directed at the U.S. Patent that we are here today to defend against arises from a lack of appreciation of just what the U.S. Patent has done for the American people and how directly it has caused the financial well being of every person in this room and indeed every person in America. I begin from this premise because it is impossible for me to imagine that men and women of such noble intentions as inhabit this congress could tolerate, even for a moment, such hostile attacks on this institution of the U.S. Patent if they genuinely understood what a crucial role it has played in generating most, if not all, of the wealth our people have had the privilege to enjoy. We should be laying our gratitude at its feet instead of seeking its destruction.

The history of what the patent actually did is simple.

Appreciating what it did sufficiently to grasp the full measure of the financial tragedy that lies ahead if we do not turn aside the current concerted attack leveled at it by bills like H.R. 1733, 1732 and GATT is a different matter.

Step one

In 1789 Washington and the founding fathers, for the first time in all human history, make the right to the substantial economic power of a patent an absolute right of every citizen of the new republic. As far as the new republic was concerned the issuance of the patent was no longer to be the prerogative of a monarch. Instead it was to become the inalienable right of each of its citizens. They wrote in Article 1 section 8 of the U.S. Constitution "Congress shall have the power to promote the progress of science * * * by securing for limited times to * * * inventors the exclusive right to their discoveries."

Step two

In 1790 Washington and the first U.S. Congress enact the first Patent Act on April 10.

Step three

The enacted patent ignites the industrial revolution.

Whitney, Morse, McCormick, the Wright Brothers, Eastman, Goodyear, Edison, Bell, Westinghouse, Dow, Deere, Hollerith, etc., all file patents in the first century after the patent is enacted. The companies their patents found. International Harvester, Kodak, Goodyear, General Electric, AT&T, Westinghouse, Dow, Deere, IBM and many others open the Industrial Revolution and generate enormous wealth for America and for Americans.

All patentees exercise the right of the patent to exclude to build their companies. During the first 100 years of operations AT&T and Bell's patents generate an estimated \$3 trillion in salaries for AT&T employees underscoring the Senator from Connecticut O.H. Piatt's famous statement in 1891. "There never was a true invention from which the public did not reap infinitely greater pecuniary reward than the inventor."

The patent fulfilled the purpose of George Washington and the founding fathers. The right to exclude proved to be the magic formula for founding the new businesses the young republic so bally needed.

It worked. The first century citizens of the new republic understood that the patent had created all their prosperity. At the 1890 centennial celebrating the patent they lavished their praises upon it and gave it full credit for the prospering of all our citizens.

WHY HAVE I COME TO WASHINGTON FOR THIS DAY OF TESTIMONY?

I see it as my duty.

Having perceived the enormous impact of the U.S. Patent on American history and having experienced first hand the staggering economic power it possesses to shape the destiny of a nation I consider it my duty to report that to the honorable men and women of Congress, and to persist if need be, until I can gain your proper attention to this vital matter.

In short, Mr. Chairman, I have come humbly to plead its case.

I have come before you, Mr. Chairman, because you are, in my opinion, the Chair of the most powerful committee in all of Congress. With a turn of your hand, Mr. Chairman, you can steer the course of the good ship America away from its persist-

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ing and ever lengthening, economic decline. Your committee and you Mr. Chairman have the power to turn it instead into the lane of boundless prosperity for long into the next century. The U.S. Patent possesses all that power Mr. Chairman. All that is needed is its proper administration and proper protection from assaults. I humbly beg you to free the patent from bondage Mr. Chairman. I beg you to use your great power to set it free so that it can do once again what history has so amply taught us it has done for us before. I beg you to give no quarter to its attackers.

THE U.S. PATENT AND THE STORY OF MRI

I have come before you this day Mr. Chairman to tell you my story, the story of MRI. 25 years ago, in 1970, I made the discovery that opened the field of MRI. From that day to this I have labored diligently to advance the technology and perfect it so that the public could have its benefits. I labor now with all my energies to reduce its cost so that America and the rest of the world's peoples can readily afford its lifesaving attributes. But the course to its current state has not always been easy, Mr. Chairman.

In 1977, after overcoming a multitude of financial and technological difficulties that blocked our path my graduate students, Mike Goldsmith, Larry Minkoff, and I completed the construction of the first human scanner and obtained the first scan of a live human being. Shortly thereafter I left the university and with my students formed the first MRI company.

We called it Fonar Corporation. We commenced the manufacture of MRI machines. By 1980 we introduced the first commercial scanners to the world. As of today we have been in business 18 years and have sold and installed approximately 200 Fonar scanners worldwide. But the road has been difficult and painful Mr. Chairman.

MRI has become a multibillion dollar industry and while President Reagan awarded me the National Medal of Technology at the White House for the MRI and while I was inducted into the National Inventors Hall of Fame for my original patent neither my company nor I has ever received a single royalty for my patent. The courts did not enforce my patent. I did not receive the promise of the U.S. Constitution "the exclusive right of inventors to their discoveries for a limited time." Though fully earned and fully justified I was never granted the privilege the Constitution promises every inventor. I did not receive any protection in the marketplace, as the constitution promises, from a host of multinational corporations whose only claim

to our technology was that they wanted it.

But I have not come to complain, Mr. Chairman.

While I would be less than candid if I did not admit that the above turn of events caused me a measure of anguish by its lack of fairness I have come, notwithstanding what personal distress I may have suffered in these matters, sincerely hoping that I might be able to convince you, that sally it is not I who has sustained the major injury in this failure of enforcement of my MR scanning patent.

Much as I wanted to, I was not able to build another great new company for America as Bell, Edison and the others had done.

Our company was not able to create the tens of thousands of new jobs for America that enforcement of our patents would have ensured.

Instead, of nine companies making MRI machines today only two remain that are American. All the rest are foreign. Three are Japanese.

Simply stated, this means that the majority of the money generated annually from the multibillion dollar sales of these machines annually goes to foreign citizens. It is an American invention. It is only just that it should be paying American salaries. The Japanese contributed nothing to the development of MRI. It is not just that the income from the American invention of MRI should be flowing to the citizens of Japan instead of to the citizens of America.

It means that tax revenues for the sale of MRI machines are flowing to foreign governments. It is not just. The tax revenues from the sale of MRI machines should be flowing to the American government. Instead it is flowing to the government of Japan.

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In 1992 America had a medical equipment trade deficit with Japan of \$320 million. If my MR scanning patent had been enforced that medical equipment trade deficit would have been a medical equipment trade surplus and the surplus would still be growing.

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THE CURRENT BILLS BEFORE CONGRESS ARE UNMITIGATED ATTACKS ON THE U.S.

PATENT SYSTEM — THEIR PURPOSE IS ITS DISMANTLING

Three bills before Congress, H.R. 1733, H.R. 1732 and H.R. 1659 plus a fourth that is constantly being threatened, the replacement of first to invent by first to file, plus the new GATT patent legislation when taken in concert, can only be construed as a concerted attack on the entire U.S. Patent System, the overall purpose of which is to complete its dismantling.

GATT replaces 17 years from the date of issue with 20 years from the date of filing as the new patent life span.

H.R. 1733 calls for publication to the world of a patentee's application before the patent is granted. This provision replaces the long-standing secrecy of a patentee's application until it is granted. It exposes the patentee to public disclosure of his invention when the prospect still remains that his patent may never be approved. Indeed its publication prior to issuance invites adversarial attacks on the patentee's application while it is still under review in the patent office. Such adversarial attacks prior to issuance can prove extremely costly to the patentee, threaten the issuance of his patent, or cause costly delays to its issuance.

H.R. 1732 allows third parties operating through surrogates to initiate reexamination of existing patents and to create adversarial proceedings at the patent office aimed at invalidating an inventor's patent. The reexamination request can be repeated without limit by changing the surrogate law firm. Under existing law a petitioner may request reexamination but may not participate in the reexamination process and may not repeat the request once it is denied.

H.R. 359 begins the road to recovery by restoring the patent's lifetime to 17 years from the date of issue. We urge that its passage be expedited.

Mr. GOODLATTE. Thank you, Doctor.

Dr. Rines.

STATEMENT OF ROBERT H. RINES, FORMER PRESIDENT,
FRANKLIN PIERCE LAW CENTER

Mr. RiNES. I don't think, Mr. Chairman, you're Hstening to
Chicken Little — the sky is faUing.

When the large multinationals and certain people in the Patent Office who are determined to have us "harmonize" couldn't push through harmonization, they decided to do it piecemeal. And that's why you have witnessed for the past few years all these attempts to radically change the U.S. patent system, the latest of which is the 18-month publication, and, earlier, the 20-year term, and now the final coup de grace, prior user rights, which didn't exist in the United States, and the final one, first-to-file, to be this ultimate God.

This is an attack on a system that isn't broken.

It is a stunningly successful system; and I want to take you now, not to the testimony you heard earlier by giant corporations, by bureaucrats, but I'd like to ask you to come with me into our office one day as an independent inventor, or a university inventor, or a small company inventor; come into the patent lawyer's office with a baby invention. Now we clearly have to describe this quickly and

get the earliest filing date we can in the Patent Office when we don't even know what the invention really is.

Do you think Dr. Damadian knew the significance of his MRI when he filed his first patent application? And so with this totally incomplete understanding, we file and we claim it the best we can. It's a first approximation.

Now the Patent Office comes and does a search. In the light of that search, invariably rejects our claims. The examiner doesn't like the words; it encroaches on this, and so forth and so on. Now you know who the culprit is? The U.S. Patent Office gives us only one

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chance to answer them. One chance, think of that. And when you're dealing with new technology and things that are on the cutting edge of the state of the art, we're supposed to be so clairvoyant that we can get our patent with one response to the Patent Office citation of prior art.

What happens then? Final rejection. It's a rule in the Patent Office, final rejection. So the inventor, or the patent lawyer like myself, then has to either appeal to the board of appeals on a cockamamie case in which there's no dialog, not even ready for it, or drop it, or file a continuation. That is, pay a new filing fee to the Patent Office, start all over again with a new examination and everything else, for the privilege of having another opportunity to have a dialog with a patent examiner.

And this doesn't go on just once. For breakthrough inventions — and in a moment I'm going to tell you about three that I have been involved with, four including one of my own — for those kind of inventions, sometimes we need three, four continuations. I've got one for a client right now with crazy rejections from the Patent Office saying, "It's not a patentable class of invention. It's an algorithm." Well, I know how to claim things. It's not an algorithm. And I have to keep fighting with this examiner and each time, new final rejections. Each time, new fee; each time, new delay for examination. You didn't hear that side of the story, did you, when you talk about all these bad inventors, all their bad lawyers, that are purposely delaying things? And less you have any sympathy for Bill Budinger, and I love him, who testified a little while ago, that, oh,

yes, he's tempted as an inventor to try to delay his patent — he's the man who's behind the prior user bill saying, "I don't even want to use the patent system. I want to have trade secrets that I want you to protect." You can see what you can think about his testimony. Now something else that wasn't touched on here, we talked about royalties to inventors. The heck with royalties to inventors for the moment. Let's talk about the Damadians. Let's talk about the Edgertons and the others, where royalties are not the name of the game.

I want to start a company. I want to have jobs in America. I want to build organizations. I don't want somebody else jumping in and competing with me. I want the exclusive privilege of the patent, not royalties. And that is the historic story of America. That's where the giant corporations that Damadian mentioned, and that's where the Gates, and all the modem companies that we have here today that weren't in existence 20 years ago, that's where they came from and that's who is saving your skin and mine. That's where the jobs have come from for the past 20 years.

For goodness' sake, don't look to the big people right now. They can't fight their way out of a paper bag to make any important inventions. The way they proceed is by buying up technology. And where do they buy it up? We had a system here that was conducive to having this new refreshment, this new seed corn coming along the line — and none of us can be clairvoyant on day one for this patent claim. You talk about an invention; what the devil is an invention? You define it.

The law tells us how to define it by a patent claim. And if I don't know the full scope in the beginning, I don't know how to draw a

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fair patent claim. And for the Patent Office to shut me off the first time, that's a heck of a way, particularly for the independent inventor.

Now our good professor did a study of all these patents. Most of these patents, my dear friends, are nothing in comparison with those patents that reside in the forming of new companies and making jobs, the new companies of the future. Ninety-five percent of these patents are uneconomical. They don't give jobs. And what we're pleading with you is to look to the important economic inventions of this country and do not make it impossible for those orga-

nizations to spring up and become the new big companies of the future, by this 20-year shackle rule or by this concept of publication after 18 months.

Now something that was not touched on that I must call to your attention. Forget the time of the prosecution in the Patent Office. Did you know that studies that I have done with my MIT classes and at the Franklin Pierce Law Center, and in my own law practice, and we've published but nobody seems to want to look at those publications, tell us that it takes 7 to 9 years after the grant of a patent — I don't care what's your system — 7 to 9 years after the grant of the patent, on an average, for an invention to start to be commercialized and profits to start to be earned? That's after the grant of a patent, Mr. MOORHEAD, 7 to 9 years for commercialization, not after the filing of a patent application. And when we come to breakthrough inventions, it's from 12 to 15 years from the date of issue — date of issue, not the date of application, when commercialization can start.

You folks talk about this as if the invention is the patent. The invention, however, has to be realized in some commercial form. That takes money; that takes time; that takes honing. It doesn't take the Patent Office attitude of speed and bureaucratic haste. And if we end up with a patent claim that is inadequate, our company will not be able even to be launched.

If in 18 months of our patent application we publish this in the United States — and I'm talking now about those kinds of people that are making new companies, new jobs, not people who are asking for royalties — they haven't got their patent yet. You publish that, and it may very well be that others with more money can move faster and they're into the field. You say, oh, well, you can collect royalties. We're not interested in royalties; we're interested in jobs for America. We're interested in the exclusive right of the patent, not what the big boys are interested in. They don't even dare sue on a patent.

Now, with that as a prelude, let me tell you about four cases I am intimately familiar with. I'm not just taking any patents and giving you statistics; these are four cases.

You heard one of them mentioned, power steering. Well, I was too young to represent Francis Wright Davis when he invented the hydraulic power steering, but I wasn't too late to do some of his licensing later on. He, by the skin of his teeth, made millions of

dollars on his inventions and helped start Bendix and GM on the road, after his patents had expired, because one case, which he fought a great deal with in the Patent Office to get it, finally issued by 1950 when General Motors started the use of power steering.

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But he brought his invention to General Motors in the thirties and got it turned down.

So this business of having a Procrustean bed of 20 years suiting everything, that may be OK if you're talking about arguments about royalties; it's not OK when you're talking about starting a company and where, as Dr. Damadian told you, if your claim isn't right, the competition comes in and you don't start the company or you struggle, the way he is struggling.

Second case in point: You've got a wristwatch, have you? Got a quartz oscillator on that wristwatch?

Mr. MOORHEAD [presiding]. It's a good thing we aren't looking at it, because we've taken about 40 minutes for the first two witnesses and we were going to take 6 minutes a piece.

Mr. RiNES. Well, excuse me. I'll try to make it very brief I think this is not testimony you have received.

That invention came in 1924 at Harvard University from Prof. George Washington Pierce, and it didn't arise for crystal watches. It came for the things that made FM, television, mobile communications, now satellite communications, everything possible by frequency control, known as the Pierce oscillator. And it took that man 14 years in the Patent Office, not because he was a crook trying to delay things.

It's in my paper, Mr. MOORHEAD: 14 years to get his patent. And who's to say how we're going to have delay extension of patent life on the GATT Treaty? Who's to say what's the Patent Office's fault, what's the inventor's fault?

What do we get — more proceedings, more litigation, more regulations?

I thought this Congress was interested in less regulations and less cost.

So, indeed, the third invention is that of the electronic flash that you see on all your cameras, done by Prof Harold Edgerton at MIT. I was privileged to take over from my father and represent him. I did all his litigation. I know what I'm talking about on these

things. That took 7 years to get his first basic patent out from the Patent Office. The examiners initially wouldn't give us the paper claims. It was too broad. It was this. It was that. And also we didn't know the full scope in the beginning.

The Edgerton patent, while it was first applied to flash photography or flash stroboscopy, what do you think it was used for? The atom bomb trigger circuits, radar trigger circuits. We'd be sued for malpractice if at some point we didn't wake up and say, "Oh, my God, those claims are too narrow." The real invention, which we didn't appreciate in the beginning, is this "trigger" kind of technology.

In my own case, one of my inventions, which is at the heart of our present LORAN-C radio transmitters, a world standard, not being displaced by GPS, by the way, it took me 11 years to get my patent claims that I needed through the Patent Office. And we formed a company. And it took that company, in addition to those years, 13 more years before we made our first commercial sale. And we had 3 years of a life of a patent left.

If you test any one of these examples I gave you, power steering, crystal control, electronic flash for photography or the stroboscopes

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in the airports or my paltry invention when compared to it, LORAN-C radio navigation pulsing, not a one of them would be alive today. We would never have formed the company and under the 20-year rule would have been dead before we started.

One comment please about "submarine" patents: Most Members of Congress are lawyers. Has it ever occurred to you why the Patent Office can't do the same thing in patents that it does in trademark interferences when we ask for additional time for opposing, extensions? The Patent Office knows how to handle "submarine" patents. It says, "You've had two extensions. You are on order to show cause why you need another one." And if they were doing their job, there would be no "submarine" patent. It's just that simple; not to come running to the Congress for piecemeal legislation that's been going on these past 2 years as if the patent system is in terrible shape.

Can't you see the conspiracy? They want to harmonize everything and they're just knocking it off piecemeal. Well, maybe that's good.

But what I'm trying to say to you is that all the Patent Office has to do — and I'm a former examiner, and my father was before me — is when anyone is continuing these cases too long, to put them on an order to show cause — why didn't you present it before at your peril — we lawyers know all about that.

And, yet, it shows you there's something else involved here in the Patent Office's desire for this legislation than just the idea of trying to inhibit "submarine" patents.

And I might say after 48 years of practice of patent law, I've learned of only two so called "submarine" patents. Two.

And as a last page, Mr. Chairman, of my submission here, you'll see there's a title from the New York Times: "A Submarine Detection System Wins a Patent After 21 Years." I call that to your attention because that's where the Government itself kept one of my real submarine patents for 21 years in secrecy. If we had the 20-year standard, we'd be dead.

So I try to plead with you, please, there's more in this country than the giant corporations, and there's more than the needs of the bureaucratic Patent Office, and there's more than wanting to wear the same suit with the Europeans and the Japanese.

There's, indeed, something that, Mr. MOORHEAD, I think you asked, but it was never answered: what happens in Japan? How come they can do this? How come they can live with the 20 years? My dear friends, there is no independent inventor community in Japan. My dear friends, there is no small and entrepreneurial company process going on in Japan. There is no large university invention program and the forming of companies from it in Japan. That's purely American and that's why we need a different system, one that's tried and true and adopted to these special needs.

And, you know, they've had 18-month publication for a very different reason, Mr. Chairman, in the European Patent Office since it started. Did they put that in for "submarine" patents? Oh, come on. This is ridiculous. There never was a "submarine" patent consideration because they're in a very different system, but they have the publication after 18 months. Why don't you look into why that is? It has nothing to do with "submarine" patents.

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And may I, in concluding, say to you I extend an invitation to your staff. I'm still — I'm an older man perhaps — but I'm still a very

active patent practitioner in many fields and sought all over the world, all over the country, for special kinds of cases. I often deal with these special kinds of breakthrough cases. And I'm not smart enough, gentlemen, to be able to get a patent in 2 years. I haven't seen that in 40 years. It takes me 5, 6 years — and I'm not talking about necessarily having appeals to the court yet; that's something else, indeed — to learn with my client, as things develop and as the Patent Office develops, how to claim this thing properly so we can start a company, so people can't creep in.

This is a difficult, difficult process. And I appeal to you, please, don't look at it in a simplified way. We're not crooks who want to delay the patent. And all you hear about, please. Congress, is one or two individuals, these "submariners." And I have to say to you that the "submarine" captain is the U.S. Patent Office because it could shut them off in a minute with an order to show cause: this is the third continuation you've done. We're not going to allow you another one. All they have to do is know their job.

Thank you.

[The prepared statement of Mr. Rines follows:]

Prepared Statement of Robert H. Rines, Former President, Franklin Pierce
Law Center

Thank you Chairman Hyde for soHciting my views on H.R. 359 this morning.

I would like to speak about this bill to this committee from the perspective of four separate view points of my lifetime experience:

- (1) as an inventor and entrepreneurial founder of several companies, still success-fully thriving and providing employment;
- (2) as an educator and researcher in the field of patents;
- (3) as an international patent and technology transfer lawyer who has had the wonderful lifetime experience of helping inventors launch new high technology com-panies for over four decades, at least one of which companies is now a Fortune 200 company; and
- (4) as a concern citizen quite disillusioned, as are many of our citizens, and in particular those in the independent inventor and entrepreneurial and small busi-ness communities, with the behavior and lack of sensitivity of the Congress in the area of new patent legislation.

Our Constitution fore-sightedly provided for "limited time" protection of the "rights" of an "inventor" to the inventor's "discoveries" — and the Patent Laws en-acted in pursuance of this Constitutional provision, have afforded inventors the way to protect the "discoveries" by the legal mechanism of patent claims; i.e. succinct paragraphs defining the metes and bounds of the novelty over the prior art — the

legal definition of the term "invention".

And here is the first of the inventor's dilemmas.

If the inventor claims too broadly and encroaches upon prior art anywhere in the world (much unknown and unknowable to the inventor), the Patent Office, or later the Courts, will reject the claims. If, on the other hand, the inventor claims too narrowly, the world becomes free to appropriate the "discovery" thus not protected to the full scope of what was actually invented.

Remember, now, that all the inventor and the patent attorney initially have before them in the rush promptly to get a filing date in the Patent Office, is the very preliminary "baby" — the first form or manifestation for the discovery. At this initial stage, there is inherently neither the clairvoyance or full understanding by either the inventor or attorney of the true significance or scope of the discovery, as crudely initially conceived and implemented.

And yet, it is in this posture that the inventor must define his patent claim at his or her peril.

This is particularly exacerbated in the case of pioneer or break-through inventions delving into the cutting edge of the real unknown.

Well — how, you may ask, did American inventors for 200 years succeed in getting the full protection which their inventions warranted?

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It was because the clock on their ultimate 17 year patent term, did not start tolling upon the filing of the application; but, rather, only after the inventor had several years of back-and-forth dialog with the Patent Examiner (for which the inventor's patent life was not heretofore penalized), re-defining, correcting and amplifying the originally presented claims, both in the light of the prior art that the Examiner uncovered in his or her searches, and in light of the knowledge gained in the continued development of the actual prototypes — that is, actually learning what really is important to making the invention commercial, and should thus be stressed in the ultimate patent claims to afford fair and proper scope to the claim definition of the full inventive concept underlying and involved in the initial discovery.

In passing the 20 year term of the GATT legislation, currently with us, this reasonable opportunity to assure the inventor his or her due full protection has been seriously impeiired — junking a system, mind you, that has worked so well for two hundred years and has made America, not the rest of the 20 year term countries, the most successful innovators.

As if this is not debilitating, enough, the Patent Office apparently sees only its bureaucratic mission, almost in a vacuum, and without any apparent sensitivity to the difficulties in the real world of the patent claim drafting and developing process. In that real world, the inventors must clairvoyantly create claim language, and the

Patent Office merely criticizes, rejects, tears down and collects fees.

On top of this, the Patent Office has the current regulation that gives every patent application only one chance to respond after receiving the Patent Office search and to try in that brief interval satisfactorily to amend the claims for acceptance. This indiscriminate practice of having the second Patent Office communication almost invariably a final rejection, shutting off the applicant — puts the inventor in the dilemma of either giving up and abandoning the application or appealing to the Board of Appeals, and on what is still usually then a very incomplete dialog and prosecution record (folly, on its face). The applicant is therefore forced to refile the application as a "continuation(s)," paying a brand new patent filing fee, just for the privilege of having a second crack at amending the claims or otherwise understanding and overcoming the Examiner's criticisms, to satisfy both inventor and Examiner.

Since Congress, in its infinite wisdom, and unlike any other country in the world, developed or undeveloped, at least with which I am familiar, has seen fit to put the total financial support of the Patent Office on the collection of fees from, and on the backs of the inventors, it seems a bit like the pot calling the kettle black to hear the Patent Office whine about applicants "delaying," patent issuance with the filing of "continuation" applications!

Not only is the inventor, in the real world, actually forced into the "continuations" and thus penalized with additional Patent Office and legal costs, but the present GATT law further penalizes the inventor by shortening the life of the patent by the time involved in the "continuation" or "continuations." But "continuations" are not the only new fee-extracting and time-tolling players in the game. The Patent Office, particularly where several modifications are present in the application, or both articles and the method of making them are in the same patent application, often requires restriction or election of what part of the invention is to be pursued in this application, and what parts should be "divided" out and re-filed as separate "divisional application(s)" — you guessed it, again, with new fees, new examination all over again, and more delays which, under the GATT bill, all toll from the original patent application filing date. So, also, if the inventor adds new improved materials to the "continuation" (a so-called "continuation-in-part") it is likely that even the new material, which should properly take the date of its addition, will be tainted with the twenty years from the original filing date.

While it is true that the current law providing 20 years from the application filing date does provide a mechanism for requesting patent life extensions, this leads only to more regulations and more new procedures in the Patent Office to prove eligibility for an extension, and new costs for the inventors to support the processing of requests for extensions and for contesting such issues.

And we thought Congress and the Presidents of both parties wanted less regula-

tion and cost cutting!

And all this because, contrary to their loud promises that implementing legislation under GATT would strictly be limited to compliance with the requirements of GATT and go no further — a much heralded pledge by the President, House and Senate — they apparently forgot about their pledge when it came to the 20 year term, and even slipped in a whole new system of provisional patents not in the slightest required by, or having anything whatsoever to do with GATT — and also fraught with a myriad of new regulations and new costs to implement.

Who can inventors trust, if anyone, in government?

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Until the recent rash of piecemeal patent law changes, our patent laws were well tailored and matched to the real world innovative needs of the creators of the new ideas and businesses. These recent piecemeal special interest changes, including the GATT patent law changes, are trying to fix something that not only is far from "broke," but that has been stunningly thriving. They are eroding away these well-proven rights and stimulations to small inventive businesses.

In days gone by, indeed, the difficulty of assuring an inventor proper claim protection in this difficult claim prosecution process, was recognized even by statutorily instituting a reissue proceeding! Even after the issuance of a patent, if the true inventive scope had still not been appreciated, claims may be broadened and reissued (though with protection for possible intervening rights of the public).

What a contrast is this earlier American Congressional philosophy for substance sake and for fairness to inventors, as compared with today's bureaucratic and typical European and Japanese form mind set, that has been adopted in our current 20 year law shackles.

America, in my view, distinctly does not owe its prior greatness to such small-minded bureaucratic thinking.

As for entrepreneurial and business-startup considerations, I have been involved in researches over the years at the Academy of Applied Science, MIT, the PCT Research Foundation and in my own law practice, which have confirmed the findings of others that, even under the tried and true guaranteed 17-year patent term from date of patent issuance, the average number of years consumed in the real-world experience to launch and then start to get a return on commercializing of an invention, is at least 7 to 9 years from date of patent grant (not application filing).

And for breakthrough or pioneer technology, from 12 to 15 years from date of issue; with some patents actually expiring before commercialization is attained! From my firm's clients and first-hand experience, here are a few striking examples:

1. Independent Inventor Francis W. Davis — inventor of hydraulic power steering

(who became my client and dear friend considerably after this basic invention).

First steering gear coupling patent 1,572,519 expired 1943; and open center valve power steering patent 1,790,620 expired 1948. The Davis power steering was not adopted by GM until the late 1950's and licensed from Davis under a later, still live improvement patent.

Commercial significance:

Daniel V. DeSimone, director of the Office of Invention and Innovation, United States Dept. of Congress, appearing before a U.S. Senate Judiciary Committee, May 18, 1965, stated: "What has the power steering gear meant in terms of gross national product? I am unable to compute the figure, but it is certainly substantial. In 1964, for example, 3V2 million gears were sold. This amounted to a gross sales volume, including the necessary accessories, of roughly 350 million dollars. Crank that figure into the economy and the resultant GNP, employment, etc., are substantial by any measure," (Page 156, *The Unreasonable American*, Francis W. Davis, Inventor of Power Steering, Houston Branch and Wendall Smith, Acropolis Books © Academy of Applied Science 1968).

2. Independent Inventor George W. Pierce (Harvard University), inventor of the crystal-controlled electronic oscillator. (Professor Pierce was originally a client of my father and law partner, David Rines, and I was privileged, on joining my father, to conduct Pierce's patent infringement litigation country-wide, and ultimately successfully).

Basic patent application filed Feb. 25, 1924 and, after much prosecution and appellate process in the Patent Office, and several patent interferences, also appealed to the Courts, (contests stimulated by others who saw Professor Pierce's scientific publications), issued as a patent on October 18, 1938 (over fourteen years after filing) as patent 2,133,642.

Commercial significance:

Launched the frequency-controlled standard business of General Radio Company (now GenRad); and through licenses at AT&T, Western Electric, Bendix, GE, the U.S. government and many others, ushered in the modern era of crystal-oscillator frequency control which is at the heart of FM, television, mobile communications, and is today used on nearly everyone's quartz controlled wrist watch throughout the world.

It is impossible to assess the precise trillion dollar figures and hundreds of thousands of jobs spawned by this break-through invention.

3. Independent Inventor Harold E. Edgerton (M.I.T.), electronic flash photography; stroboscopes. (The late "Doc" Edgerton became a client of my father, while "Doc" was an assistant professor at M.I.T. Again, I was privileged, on joining my father's practice, to become "Doc's" patent lawyer and the first patent lawyer of his

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post-war developed company EG&G, later discussed, and the litigator of his patents).

While originally filed on May 9, 1932, one of Edgerton's basic patents, because of difficult Patent Office prosecution and appeals, and because of interference contests with other would-be inventors, stimulated by Professor Edgerton's scientific publications, did not issue until over 7 years later on December 5, 1939, as patent 2,181,879.

Commercial significance:

EG&G, now a Fortune 200 company, launched out of the electronic flash inventions of "Doc" Edgerton and his former students Ken Germeshausen and Herb Grier, has given employment to tens of thousands in the U.S. and world wide.

The war-time advantage given our country by these electronic pulse inventions in the development of atomic weaponry and radar is enormous (Edgerton et al, incidentally, giving the U.S. government free license during the war, though collecting U-censing fees for usage after the war).

Licenses granted to Eastman Kodak, Polaroid, General Radio, General Electric, Sylvania, and a myriad of new and developing photographic equipment manufacturers, not only provided funds for the launching of EG&G, but gave raise to the electronic flash universally used on the world's cameras of today, and the strobe lighting systems of today's world airports.

The bringing of these enormous contributions to American society, business and job-making by these three illustrative pioneer independent inventors alone, is proof that our original system with a firm 17 years from grant, and not the new total 20-year shackle (despite a possibility for fighting for extensions) was well totally suited to accomplish these great results. Their dogged patent application prosecution to the attaining of their deserved broad protection, and the defeating of conflicting challenges to their entrepreneurship to gain clear title for the development of their businesses and/or licensees' businesses, could not, in my view, have been accomplished under our 20-year present law with its pre-set Procrustean time limitations.

If, indeed, hurry-up prosecution — the God of the current GATT legislation and of the Patent Office — is to continue as the standard for American inventors and entrepreneurs, clearly the 20 year shackles have taken away much needed and previously available time from at least the independent and small company inventors — certainly the break-through or pioneer inventors — and the new start-up or expanding small entrepreneurial high technology businesses, concerned not with bureaucratic speed, but vidth careful and thorough patenting with its attendant economic advantages and results.

While I consider that my own inventions blanch in comparison with the giants,

above, may I call your attention to the fact that there were only three years left on the life of my high power pulsing patent 2,786,132, issued March 19, 1957, when our company, Megapulse Inc. of Bedford, Massachusetts, succeeded in its first commercial realization of solid-state Loran-C navigation transmitters. Even this short life, however, provided the impetus and credibility for the developing of this company (in which I currently serve as Vice-Chairman and counsel) into the world's leading manufacturer of this type of navigation equipment, and with employment at peak times of up to about 200 engineers and workers, and now with joint ventures in Russia and China. My patent application was filed November 21, 1946 and it took eleven years finally to get from the Patent Office the broad claims to which I was entitled, including by appeal, and which secured Megapulse's position and enabled the first sale.

We'd clearly never have left the ground under the 20-year rule.

And there are other reasons why indiscriminate 20-year from filing shackles are inappropriate. (See attached New York Times October 9, 1964 article: "A Submarine Detection System Wins a Patent After 21 years" — attached).

Earlier wiser and more real-world-tested heads than apparently appear on today's horizon, have understood the validity of an old adage — haste makes waste.

Now, turning lastly, as an independent inventor and entrepreneur, as an educator, as a patent lawyer, and as a humble citizen, there is another reason for restoring the 17-year from grant term, while still admirably complying with all that GATT actually required of us, as can be well accomplished under H.R. 359.

As before mentioned. Congress (and the President) represented widely to the American people that, in return for "Fast-track," no debate legislation under GATT, the legislation would be strictly restricted to precisely what was demanded by the GATT undertakings, with the assurance that absolutely nothing outside such mandatory legislation would be slipped into the legislative provisions.

Either not aware of this solemn promise to the American public, or in blatant, callous and defiant disregard thereof, and breaking trust with the American public

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and particularly the inventors and smaller entrepreneurs, both the Patent Office promoters of the GATT patent legislation and your predecessors on this subcommittee, led the Congress into passing GATT patent legislation that, as H.R. 359 proves, went far beyond what GATT actually required of patent term particulars, and even created and slipped in a brand new provisional patent system, a Patent Office concoction having nothing to do with, and absolutely not mandated by, GATT treaty undertakings.

Now we witness, as a consequence, more regulations in the Patent Office and more costs, despite the other unkept promises of the Congress — in both parties —

that they want less regulation and less cost.

Do you wonder why we inventors, and probably the whole rest of the American public, no longer feel we can trust government — or, sally, any longer trust the Patent Office into whose hands we have heretofore entrusted our innermost secrets?

So here is your change, Mr. Chairman, for your sub-committee not only to adopt H.R. 359 because, on its merits, it is better for the inventive and entrepreneurial communities as a whole, as I hope has been demonstrated above, but to say to the inventors, their lawyers and backers, and the whole American people:

"We in Congress made a mistake in not honoring our pledge not to slip in extraneous legislation not actually demanded by GATT; and we are anxious to regain the confidence of our people to show we can be truthful and trusted."

This can be a significant and affirmative start on the road of rebuilding our trust in you — and I hope this sub-committee and your colleagues are big enough to seize this opportunity and to recommend H.R. 359.

Thank you.

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A Submarine Detection System
Wins a Patent After 21 Years

Kaiar Unit, Which Botintei
Radio WavH Olt WaUu
Wdi Utli in SkcTHy

. By STAOJT V. JONES

Kvrtlil Is Tti* N«v-iorit Tlmt*
• WASHINGTON, Oct 9— Alter waiting. mor# thaw 21 years
Robert It. Rlhes,- k Boston lawyer, will receive a' patent next
wccU on. IUj radar system for detertlitp ilibmarlnes. He states
that Uie Navy and other services
ire now iislng^ his tnVeiitton.
" The equipment, which \i lil-
sbilled in an aircraft; bounces

radio waves off the surface of
the water. The echoes, when An-
alyzed, show any vibrations
from a submarine:
i. Mr. Riles, a lecturer of Patent Law at Massachusetts Institute of Technology, filed his original application. In June, 1943. For most of the intervening period it was held in secrecy.

- As radio waves do not travel through water, submerged objects cannot be detected by radar. Moving objects, such as submarines create modulations in the radio echoes sent back from the surface of the water. Vibrations caused by submarines are easily differentiated from those created by other sea life: •••■••.

- Mr. Riles first noticed the Doppler effect when he was a student at M.I.T. In 1941. In

Robert H. Riles

ler, while a Signal Corps officer. He continued the study on his own time.

A patent was issued to him in 1951 for an antenna described in the original application. The Patent Office ordered that the submarine-detection device be separated and treated as a single invention. The patent number will be 3,153,230.

The inventor holds about 40
other patents, most of them for
electronic inventions. He is a
member of the National Inven-
tors Council.

NEW PATENTS

Continued From Page 58

, V.

merit of Commerce] Technical

Advisory Board.

He is the president of the
Academy of Applied Science,
which he helped to organize.

His book, "Create or Perish, the
Cast for inventions and Pat

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Mr. MOORHEAD. Ms. Gardner.

STATEMENT OF DIANE L. GARDNER, MOLECULAR
BIOSYSTEMS, INC.

Ms. Gardner. Thank you, Mr. Chairman.

Mr. MOORHEAD. I think that will move over in front of you, so
that you have a better chance [referring to microphone].

Ms. Gardner. Thank you. I'm here representing Molecular
Biosystems which is a small biomedical company. We have 150 em-
ployees and as such I know the special pain that is involved with
the FDA regulatory approval process for pioneering products, the
subsequent inadequacies of the Hatch-Waxman Act, the delayed
patent prosecution process which is notorious in Group 1800, and
the particular problem of the lack of investment capital that most
biotech companies of our size experience. So, with that, I encourage
any compromise that would strengthen our patent system and,
more importantly, provide equal protection for the small as well as
large inventor.

First, I would like to address the BIO statement that was slipped
under my hotel door last night. It was the first chance I have had
to see it, and I urge you to look at it carefully. There are many well

thought-out and effective provisions, especially the amendments to the Hatch-Waxman Act.

The one thing I would add to the proposed amendments would be an additional provision for a first office action at 9 months. Such an action on the merits at the 9-month mark would give all inventors the opportunity to decide whether to foreign file and whether or not to withdraw their patent application in the U.S. Patent Office well before publication in any country.

I'm sure that there would be additional provisions that would need to be included, so that the inventor or the corporation would be required to timely file all the necessary parts for the patent application to allow a 9-month first Office action, but I think those are really just technicalities. I think that a guaranteed first Office action at 9 months would be something that would be very helpful in terms of both publications and patent term.

In any event, I think that it's very optimistic for BIO to hope that five amendments to a bill and nine amendments to an already existing act will be taken as a whole and implemented. In their statement, BIO made numerous references to the fact that all of those provisions would need to be taken as a whole or else it would be necessary for a 17-year term to be guaranteed.

Given that, I think that a simple alternative would be H.R. 359, since it achieves the same basic result and it's much easier to implement. It provides for the secure patent protection guaranteed by a term of either 17 years from grant or 20 years from filing, whichever is longer, and it also avoids the possibility of the intentional submarining of patent applications by the provision for publication. I will avoid any comment on foreign and trade policy, since I'm really here on a more basic note. And that is, regardless of what country is allegedly stealing another's technology, as has been alluded to all day today, or what else happens at the publication phase, I think that it's important for us to have strong patent protection available upfront, or else we'll never get to the point of hav-

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ing technology developed for use by others. My company has a handful of research scientists; that's it. Yet, we have a budget this year of \$1.1 million to provide for filing patent applications here and abroad because the costs are so prohibitive. I think that without venture capitalists putting that money into our system, we

would be out of business. We would not exist. And in order to get venture capitalist's to fork over that kind of money, we had better be able to assure that we will have a guaranteed patent term and that there will be an opportunity to recoup that money in the long run. Otherwise, we'll never see the investment. Companies such as mine simply would cease to develop new technologies without that capital.

So, based on that, it's also important to realize that the cap on the term extensions as proposed in H.R. 1733 yields wholly inadequate term for the biotech field, especially. Quite often, the term that is lost due to extended patent prosecution and regulatory review exceeds the cap limit.

This results in an unfair disadvantage to those patentees. Furthermore, companies see the greatest return on their investment dollar at the end of their patent term. That is when they finally make the greatest profits and see some success. Any abridgment of the term that you would have otherwise been granted is going to be detrimental. And it is wholly unfair for these factors to affect one particular technology more than others.

Basically, PTO efficiency is at the heart of all of our problems. While there have been significant improvements made in various aspects of the examination process, there still needs to be a lot more improvement.

As a former patent examiner, I know just how arbitrary the examination process can be. If all applicants were assured equal examination time and if that time were truly 2 to 3 years, I don't think that the 20-year term would be considered as devastating as it is by people like myself who are here today urging its revision. I think that the publication at 18 months works to the detriment of the sole or small inventor who may not have the resources to foreign file without some assurances provided by the benefit of a positive first office action. Often, at the time 18 months rolls around, there has been no office action.

Two months ago, I received a first Office action on a case that had been pending for 26 months already. So, if there has been no first Office action on the merits at 18 months, the inventor is given absolutely no opportunity to withdraw that application and maintain it as a trade secret. That is truly unfair.

My company has several applications pending in Group 1800. They are 10 to 14 years old. We do not even practice that tech-

nology any more. Nothing would make me happier than to get those things off my docket. I am not intentionally submarining them. I would love to see them grant so we could license them to somebody else and forget about them.

The basic problem is that I must file continuation after continuation because, although the examiners are technically competent they are wonderful in that regard — the examination as far as the legalities of 101 and 112 rejections is lacking. The examiners who are making them are really not trained well enough in that area.

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And so it typically takes a patent practitioner several different tries, as was discussed before to prove the worthiness of the invention.

That is why there are typically so many continuations. It's not because we don't want to get the technology granted. I would love to get the technology granted. I need to get the technology granted, so I can convince my venture capitalists to invest money. They are not going to sink money into technology that is still patent pending. They are not going to give me millions of dollars on rights to which they are not assured.

I think that, in general, small biotech companies like ours feel that we are being unduly harmed by the 20-year provision, given the special circumstances that we face. Especially that it takes us so long to get our products through the FDA.

If the PTO were more efficient, publication would be less harmful. Typically, foreign patents involve improvements and the U.S. patents involve core technology. Core technology takes an awful lot longer to go through FDA regulatory approval than it does improvements. So we're looking at situations where, by the time we finally get our first product to market, foreign companies having had the opportunity to see our invention through the formal publication, especially when having greater resources, could have a second generation product ready to go. Those improvement products can ride the coat tails of our hard work through the regulatory process and follow us directly into the marketplace. This, too, is unfair.

I'd like to also mention that any publication provision needs additional provisions to curb the public use proceedings, to curb prior user rights, and definitely needs amendments to the requirement

for reasonable royalties. As it stands in H.R. 1733, the requirement is that the claims in the granted patent must be identical to those that were originally filed in the application. I don't think there is anybody here that would argue with the fact that that almost never happens. That is the process which occurs during examination. You amend the claims; you scope and mold. And so if identical claims were the requirement, reasonable royalties would never be available.

I would like to make one more comment, since the subject has been brought up several times today. First-to-file is undesirable. I am not in favor of it. It is unfair to the true inventor. Article I, section 8, constitutionally mandates that we give a reward to the first to invent. It does not mandate that we give a reward to the first person who has the resources and capability of filing. So, although it allows for interference practice which is potentially costly, it also prevents a large company having greater resources, capabilities and legal savvy from filing earlier than a small inventor would be able. At least inference provides the true inventor with a chance to win his patent.

Having said that, I'd like to close. I think that my company is representative of most others of similar size and technology. We wholeheartedly support H.R. 359. It's the best of both worlds. It provides for a full, solid patent term that we can use as a basis in forming strategic alliances and obtaining investment capital and, with the publication provision for continuations, it curtails the sub-

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marine patent issue. It gives us a chance to truly promote science and technology development.

Thank you.

[The prepared statement of Ms. Gardner follows:]

Prepared Statement of Diane L. Gardner, Molecular Biosystems, Inc.

introduction

I am honored to have the opportunity to address a matter today that is of grave concern to my company, and to our industry. I am here as a representative for my employer, Molecular Biosystems, Inc., for BIOCOM and the biotech industry as a whole. Companies like Molecular Biosystems play an increasing role in the economy of their home states and of the nation. But the biomedical/biotech industry is struggling to survive in our country. The United States is currently the worldwide leader in this field. We have the ability to produce the most innovative technologies result-

ing in the greatest medical advances ever imagined. Yet, our biggest fear is that our companies will not realize the longevity needed to accomplish these achievements. No biotech conference is complete without seminars on patent matters, regulatory issues and investment concerns. These three areas provide more setbacks to the scientific process than anything that occurs in the laboratory. Recent changes to the patent system have created yet additional hurdles for our industry. H.R. 359 provides remedies that will strengthen our patent system, which is critical to the survival of our technology.

Nothing has had a more profound effect on patent practice than the sweeping changes that were implemented by GATT. These changes have altered the strategies commonly used by patent practitioners throughout their entire careers. The resulting litigation that will result from new legislative ambiguities will surely provide job security for me and those in my field for decades to come.

From the time GATT passed, through the day it became effective, patent attorneys and agents worked feverishly to file as many patent applications as possible. For those six months, every workday was lengthened and each weekend was spent at the office. I will never forget that fateful deadline: June 8, 1995. Our company, like most others, filed four times as many new patent applications as normally would have been filed in that same time frame. And we were not alone. On June 7, as patent attorneys and agents across the country lined up at post offices just prior to midnight, many wheeling their applications in wagons and carts, there was but one common goal — to get a postmark (filing date) before June 8, 1995. Why did patent practitioners behave in such a widespread, radical manner? What could possibly have created enough fear to make them go to such lengths? The answer is quite simple. No more 17 year term.

H.R. 359

H.R. 359 seeks to accomplish two goals. The first, is the restoration of the fixed, 17 year patent term, measured from the date of grant, that we have traditionally relied upon to keep our patent system strong. This was eliminated by the implementation of GATT, although it was not a requirement of the agreement. The second provision addresses the problem of "submarine patents," which appears to be the primary drawback to the 17 year term.

Patent term

For 205 years, the term of a U.S. patent has been a constant, measured from the date of grant of the patent. Under the new GATT provisions, the term is now a variable determined by a number of factors, most of which are outside of the control of the inventor or representing attorney. The new term is measured not from the date of grant, but from the date that the invention was first filed. Therefore, the length of prosecution will be the greatest factor having a direct result on the ultimate term of the patent. As can be appreciated, this factor will depend upon the

competency, efficiency and good will of all USPTO employees. Any examination process that takes longer than 3 years will result in a patent term that is shorter than the 17 year term, as would have been granted under the old system. The U.S. patent system was established to promote the arts and sciences by creating a reward, in the form of a patent, as incentive for inventors to disclose their discoveries. In fact, inventors are now punished rather than rewarded for introducing innovations. Under the new system, an increase in the number of patent applications that are filed leads to longer examination delays, and ultimately to shortened patent terms.

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Although various measures have been taken at the USPTO to improve the examination process, it remains that each case is treated on an individual basis. While one case may involve a relatively simple process improvement and be examined by an experienced and effective examiner, another case may involve complex, pioneering technology and be assigned to a novice or less efficient examiner. It is often the most novel and pioneering inventions that require greatly extended examination. In this case, under the new provision, the two resulting patents would have very different terms. The pioneering patent would receive the shorter term! This is not fair. We need a system in which all patent terms are on equal ground.

As a former patent examiner, I am acutely aware of just how arbitrary the examination process can be. At the examination level, it is unclear to the examiner which patents will develop into the next generation's wonder drug, as opposed to those that are merely defensive in nature. A patent covering a remarkable new cure could be subject to a reduction in term simply as the result of, for example, an examiner picking up a different case that seemed easier to work on at the time. Term will also be affected by an examiner simply maintaining his rejection one more time in order to get more information entered into the record before allowance. A delay such as this, which may result in a term shortened only by a few months, could end up costing the company millions of dollars in revenue over that period of time. The possible delays that could be imposed and justified by the USPTO are numerous. Under the new provision, we are subjected to the inconsistencies of the USPTO. This is not the way the ultimate term of a patent should be determined.

The Patent Office has vehemently stated that most patents will enjoy longer terms under the new system. The fact that an avalanche of applications was filed prior to the effective date of the new provisions should lead one to believe that the patent practitioners and inventors have done their own assessment and have reached a different conclusion. If we truly believed that all patent applications could be prosecuted in under 3 years, the race to file applications would have been non-existent.

The USPTO estimates that the average pendency for applications is about 19 months. Thus, under the new system, the resulting patent would have a term of 18 plus years. Unfortunately, there are flaws in this estimate. First, the estimate is based upon the length of time required for a case to be completed by either an allowance or an abandonment. What is not considered is the fact that most applications require several such cases to result in any (3T) of patent protection. Several years ago, the USPTO implemented "compact prosecution" in order to speed up the process of examination. Typically, this results in two rejections per case. The initial rejection is made, and after a response from the applicant, the case is allowed or the rejection is made final. At this point, if the rejection was maintained, the applicant has two choices. The first choice is to abandon the application in favor of filing a continuation application in order to continue the examination process. Often, the examiner can be convinced of the worthiness of the invention by these further communications and would have otherwise allowed the original application, if not for the compact prosecution requirements. The other choice is to file an appeal. This is a costly and lengthy process. Needless to say, most practitioners choose the first option several times before resorting to the second. As is readily apparent, the filing of even one continuation application under the new system, using the average that has been provided by the USPTO, results in a patent term that is shorter than the old 17 year term. Often, it takes several such continuations to result in allowed claims.

But there is another flaw in this estimate that is even more disturbing. That is, biotech patent applications take significantly longer to get through examination than do those in any other field. I have had colleagues tell me they have biotech applications pending for 10 years or more. My company also falls into this category. Under the new system, the patent term would be greatly decreased as a result of a term measured from the date of filing. Thus, the average patent term under the new system will be significantly shorter for one industry than for others. But biotech products also take the longest amount of time to achieve regulatory approval, and cost the most to develop. Their value increases near the end of the patent, as opposed to an industry where the product is obsolete and abandoned in just a few years (i.e. the computer industry). Given these factors, the biotech industry, as a whole, has just been dealt a fatal blow by the provisions in GATT. It seems unjust that one particular industry be so adversely affected by the new regulations. More particularly, it is appalling that our government could do this to an industry in which the U.S. has a clear advantage over the rest of the world. Regardless of what the averages are, or appear to be, all patents deserve to have equal protection. This can be achieved through the reinstatement of the 17 years from grant or the 20 years from filing term, whichever may be greater.

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The dual term also benefits the small businesses and nonprofit research organizations who lack the capacity to develop their new technologies rapidly. Their patent applications often contain the most embryonic research. When the term of a patent is measured from the grant date, subsequent improvements to the core technology will not be diminished simply because the initial patent was filed several years before. Furthermore, these types of institutions often need to form partnerships with larger companies who will finance their later and most expensive phases of development. This cannot be achieved until the product is partially developed, and patent coverage is secure. Likewise, a shortened patent term will undoubtedly result in higher product prices, as companies try to recoup their investment over a shorter period of time.

Another way in which the dual term benefits companies is that securities markets can more easily assign value to a company's intellectual property. This is especially important in the biotech industry. Over the past few years, investors have turned away from biotech for a number of reasons. For the most part, many were scared off by the inevitable failures that result from the spawning of any new technology. Others did not realize the delays on their return that would result from the regulatory approved process. For those investors who may still be considering the biotech industry, finding out that there is no way to determine the patent term, but that it will probably be shorter than it used to be, is devastating for investor relations. An additional way the dual term benefits the U.S. is that Americans are traditionally credited with pioneering technologies, while foreign companies excel at the improvements thereon. It is easy to see that any decrease in length of the initial patent opens the door to earlier foreign improvements. When the patent term is shortened in any way, the bottom line is there will be less money for American inventors and more money for foreign ones. An American is partially robbed of the benefits that would have been awarded to the inventor of a core technology under the old system. As a result, there will be less incentive for American inventors to forge ahead and develop the many revolutionary technologies that have made this country a world leader in technology.

Publication

In the United States, patent applications have traditionally been maintained as secret until they grant. This stems from the provision in the Constitution whereby an inventor receives a patent as a reward for disclosing his discoveries to the public. It follows that if, for some reason, a patent could not be allowed, the inventor should have the right to keep information private, rather than make it available for public use. I have found that while there is an overwhelming consensus in favor of the patent term restoration, the views regarding publication are very mixed. Many are not in favor of any type of publication. This may be attributed to a basic resistance to

any change. Yet, most agree that, should publication be required in order to combat the submarine patent issue, the preferred method would be publication of continuing applications at the 60 month mark.

The second provision in H.R. 359 provides for publication of continuing applications which claim the benefit of parent cases which were filed more than 60 months prior. These applications generally result in three different instances. The first involves refileing the original application in order to continue prosecution rather than proceeding to appeal. These are referred to as "continuations." The second occasion results from a USPTO imposed restriction requirement. This requirement divides an original application into two or more distinct inventions. In order to obtain patent coverage on everything that was originally filed, subsequent "divisional" applications must be filed with the pieces of the application that were separated from the original. The last type of continuing application results from improvements or other additions which have been combined with a previously filed applications. These are termed "continuation-in part" applications. "

There have been a few occasions whereby an inventor deliberately filed continuation applications rather than giving the examiner the opportunity to allow his case. This was done in order to allow the particular industry to build up and begin using the invention so that when granted, it took everyone by surprise. Corporations already using the technology owed the patentee an automatic royalty. This late-issuing patent has come to be known as a "submarine."

A few practitioners contend that this is a significant problem within the system. I have worked on both sides of the USPTO and am confident that, although none of us wish to experience the effects of a submarine patent, few people believe it to be a serious obstacle. Many have related to me that they have not experienced a submarine patent. Neither have I. My company has several applications pending that were filed 10-14 years ago. In the mid-eighties. Molecular Biosystems shifted direction and began to pursue unrelated technologies. I have not purposely created

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a submarine patent situation. In fact, I would prefer to clear my docket of these applications dealing with a technology that we do not intend to pursue. Many who contacted me related similar stories. I have no knowledge of any patent practitioner who would intentionally delay patent prosecution. Practitioners with whom I am acquainted are doing everything possible to get their applications allowed. This is especially true for those companies needing to form strategic alliances with investors. This concerns the majority of biotech companies. It is more difficult to arrange funding for technology that is patent pending rather than having a solid patent portfolio with which to bargain.

It is estimated there currently exists approximately 670 pending applications in

the USPTO greater than 20 years old. Granting all of them would still represent a small percentage of the 5 million plus patents granted to date. Approximately 35 submarines have actually surfaced. Many of the potential submarine patents have acquired long-term pending status because of government imposed secrecy orders. Still others have been diligently prosecuted during the entire length of time. Some applications require a long time to fully examine. Many such applications have foreign counterparts filed and published in other countries. In these cases, it is difficult to believe that they have acquired true submarine status.

However, only a few bad situations can spoil the system. A remedy to this situation would allow for the publication of continuing applications based upon patents filed at least 60 months prior, thus permitting industry to get an indication of the vessel before it surfaces. The potential users of the technology could take various precautions avoiding exposure to infringement. Earlier (18 month) publication of all original applications is detrimental to the inventor. This would cause automatic dedication to the public of any technology not resulting in a patent and would eliminate the practice of the inventor exercising the option to withdraw the applications and maintain their secrecy. Publishing only continuing applications allows the inventor the benefit of some prosecution of the applications, thus indicating what obstacles need to be overcome in order to obtain a patent. Publication at the 18 month period would not allow the applicant the benefit of an educated decision. Although it may happen infrequently, I have filed applications that did not receive a First Office Action until well after 18 months. Publication without that benefit would be unfair to inventors.

The fear of publication without any corresponding benefit may drive a great deal of technology underground. Some inventors may opt to maintain trade secrets rather than file patent applications. Or, since we still operate under a "first to invent system," the applicant may try to somewhat delay filing the application. This would be contrary to the purpose of the patent system. Publishing only continuing applications at the 60 month period would allow the inventor to feel more comfortable knowing that there exists an opportunity for some prosecution and sufficient time to withdraw the application.

Automatic publication of all applications at 18 months would hurt the small inventor the most. It would allow large companies to institute lengthy and costly interference proceedings. Many small inventors would simply lack the resources to fight back. It would also create publication of technology that may not have been foreign-filed due to the extremely high cost. If the invention was not able to be patented, the inventor would automatically forfeit technology that could have otherwise been maintained as a worldwide trade secret.

By publishing only continuing applications, there is the further benefit that some of the previous patent applications may have already granted. The prior patent

claims can then be reviewed. This will be helpful to the public, as the main claim that is published may not be representative, either deliberately or otherwise, of the truly marketable invention.

Early publication further hurts the American inventor by allowing foreign companies to begin working on improvements to the technology at a much earlier stage. This is most true for technologies with a notoriously long prosecution process, as is the case in the biotechnology arena. Foreign competitors who have access to the information through early publication may have a second generation product developed by the time the patent issues on the cure technology. Once again, the American inventor would be harmed by the very system provided for in our Constitution that was originally set up to benefit him.

One additional benefit of publishing only continuing applications at the 60 month period is there will be fewer applications requiring publication. Many applications will have either granted or been withdrawn by that time. It also avoids wasteful publication of swiftly examined applications that are due to grant and republished soon after the 18 month mark. Therefore, it will be less expensive and easier to administer publication by the provisions set forth in H.R. 359.

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H.R. 1733

It should be noted that another bill, H.R. 1733, proposes the early publication of all applications based upon the 18 month time period. Some of the problems associated with early, automatic publication have been noted above. However, there are certain other provisions in the 1733 bill which are additionally detrimental to our patent system.

Proposed section 122(b)(1) grants too much power to the Commissioner. There are few areas where no appeal process is allowed. This would create a new one. The Commissioner should not be transformed into an autonomous entity. Rather, the patent system should function to protect and serve the inventor, especially in situations where there may be opportunity for abuse of authority or where there could be a question as to the propriety of a decision affecting the rights of the inventor.

Proposed section 122(b)(2) appears to authorize delay of publication in cases which a first rejection has not been issued until 3 months after such rejection. The applicant is required to certify that the application has not, nor will be foreign filed. This goes against public policy. It is improper for the USPTO to bargain away an inventor's right to file for protection of technology in foreign countries. This is even more problematic in that it is only available for the small inventor. It is difficult to determine if this provision is set up to favor or to discriminate against the small inventor. In either situation, there would no longer be equal protection for all inventors. For this reason, alone, this provision should be rejected.

Proposed section 154(d) should not limit reasonable royalty rates to cases only where the invention claimed in the patent is identical to the invention claimed in the original published application. Patent practitioners agree that those patents are virtually non-existent. Almost every response made to a USPTO rejection involves an amendment to the claims. Reasonable royalty must be determined in some other fashion for it to be available at all to the patentee.

Finally, if early publication were to exist, there needs to be a commensurate prohibition against public use proceedings. Without such prohibition, there would be a high percentage of public use proceedings filed by well-financed competitors, effectively creating a pre-grant opposition system. USPTO examiners are ill-equipped to deal with such matters, which should be left to validity challenges in the Federal District Courts. The U.S. has strongly opposed stipulations to initiate a pre-grant opposition practice here. This provision would effectively do that, and should be rejected.

Alternatives to both publication plans should also be considered. One remedy would be to base publication upon the First Office Action response deadline or by administrative means within the USPTO. For example, it would be simple to avoid submarine patents created by divisional applications if all divisionals resulting from a restriction requirement were required to be filed within a given time period, for example one year, from the date of the restriction. The current practice involves filing each divisional application sequentially, just prior to the grant of the one preceding it. Thus, an original application divided five ways can be prolonged for the cumulative time it takes to prosecute all five of the applications. Continuation applications could also be monitored for substantial prosecution by examiners, who should have discretion to send warnings to those applicants who do not have good and sufficient reason for filing a continuation. Accordingly, it can be seen that there are several ways to remedy the submarine patent problem. All should be considered carefully. While each may be equally effective in curing the problem, the resulting cost and detriment to our American innovators should be afforded great weight.

CONCLUSION

America's greatest asset is our people's creative genius and entrepreneurial spirit. Our historical lead in innovation is due, in large part, to our strong rigorously enforced, constitutionally mandated patent system that was designed to reward such drive. Strong patent protection encourages businesses to invest in this innovation. Without that protection, many industries cannot justify the enormous amounts of money that are required to develop new products and bring them to market. We must ensure that companies will have the security of a full-length patent term. H.R. 359 gives the best of both worlds. It assures our inventors that they will have adequate patent protection as a reward for their efforts, and it avoids the "submarining" of patents. My company, Molecular Biosystems, and other members

of BIOCOM, wholeheartedly support the provisions in H.R. 359 and urge its enactment into law.

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Prepared Statement of the Biotechnology Industry Organization (BIO)

This statement is submitted on behalf of the Biotechnology Industry Organization (BIO) ' regarding Section 8 of H.R. 1733 and the patent term for biotechnology and other inventions. We ask that it be included in the hearing record for the November 1, 1995, hearing regarding the 20 year GATT patent term.

the bottom line

As all entrepreneurs must do, we should start with the bottom line: the biotechnology industry and BIO will support, and will urge others to support, the new 20 year patent term if safeguards are adopted which ensure that diligent patent applicants are not penalized for delays which are beyond their control. Section 8 of the Chairman's bill, H.R. 1733, includes some safeguards and we propose that they be strengthened.

With the adoption of BIO's proposed amendments we believe that all legitimate issues about the new 20 year term will have been resolved and that there would be no need to set a minimum 17 year patent term from grant. H.R. 1733 with the BIO amendments means that patent applicants who are willing to diligently prosecute their patent applications will be able to secure a patent term of at least 17 years. If they are dilatory in their prosecution, they will end up with a shorter patent term, but they will have no excuses and no basis for complaint.

To be clear, the guaranteed minimum 17 year patent term would resolve all of our concerns. The amendments we propose to the 20 year term would achieve the same result while not opening up opportunities for submarine patents, but they are presented as an integrated and comprehensive package. All of these amendments must be adopted to ensure that the 20 year term will not erode the patent term for diligent applicants. We are open to different technical formulations of these amendments to the 20 year term, but the critical issue is whether taken as a whole the amendments protect diligent applicants. If they do not, then the only available alternative becomes the guaranteed minimum 17 year term.

In addition, we recommend that the amendments to the GATT patent term provisions be paired with amendments to the Hatch-Waxman Patent Term Restoration Act. This law provides compensation for delays in approval of a drug by the Food and Drug Administration which erode the patent term in very much the same way as the patent term can be eroded by the 20 year term. When a company has been granted a patent by the PTO, it cannot begin to market the product until it is approved for sale by another agency, but the patent term begins to run as soon as the patent is granted. The Patent Term Restoration Act provides partial compensa-

tion for delays which erode patent term, but, like the safeguards written into the GATT implementing legislation, these safeguards do not provide fair and complete protection and patent terms have been eroded. In both cases the inventor should not be penalized for delays — at the PTO or at the FDA — over which he has no control.

There may be no industry which is more sensitive to the length of the term of a patent than the biotechnology industry. The rate of investment in research and development in this industry is higher than in any other industry. Any law which undermines the ability of biotechnology companies to secure patent protection for a full term undermines funding for research on deadly, disabling and costly diseases. Capital will not be invested in biotechnology companies if they are not able to secure intellectual property protection to ensure that they have a full term for a patent in which to recoup the substantial investments they must make in developing a product for market. This is why BIO has been so active in seeking a fair resolution of the patent term controversy and amendments to the Hatch-Waxman Act. The concern arises from a 20 year patent term measured from the date of application for a patent. The patent system in effect prior to the enactment of the GATT implementing legislation provided for a 17 year patent term measured from the date a patent is granted. It is easy to see if the patent application process takes more than three years, an inventor under a 20 year term could end up with a patent of term of less than 17 years from grant. The critical issue becomes how long it takes the PTO to process a patent application and whether the applicant's patent term will be less than 17 years when the processing time at the PTO exceeds three years.

iRIO is the international trade organization to serve and represent the emerging biotechnology industry in the United States and around the globe. As the leading voice for the biotechnology industry, BIO represents over 560 companies, academic institutions, state biotechnology centers and related organizations in 47 states and more than 20 nations engaged in the development of products and services in the areas of agriculture, biomedicine, diagnostics, food, energy and environmental applications.

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Without safeguards to protect the applicant from delays which are beyond his control, it is certainly possible for the applicant to end up with a patent term of less than 17 years. This is how a 20 year term can be less than a 17 year term.

To ensure that the new 20 year term does not penalize diligent patent applications, BIO proposes five specific amendments to Chairman MOORHEAD's bill, H.R. 1733, and subsection 154(b) of Public Law 103-465, the GATT implementing Act. The terms and rationale for these amendments are outlined in detail in this statement.

Finally, biotechnology inventors who have received a patent can still see their patent term eroded if there are delays at the Food and Drug Administration in approving the sale of the product with respect to which the patent or patents have been granted. Delay at the FDA can erode patent term just as delay at the PTO can under a 20 year term measured from the date of the application. To ensure that patent term is not eroded due to FDA delays, BIO proposes nine specific amendments to the Hatch-Waxman Patent Term Restoration Act which are outlined in this statement. These amendments are just as important as the amendments to the GATT 20 year patent term and both have the same justification; inventors should not be penalized due to government regulatory delays over which the applicant has no control. Both sets of amendments should be paired in one bill and enacted into law together.

PATENTS AND CAPITAL FORMATION

To understand our industry's position on the patent term issue, you need to understand one simple fact about the biotechnology industry; most of our firms fund research on deadly and disabling diseases from equity capital, not revenue from product sales. Without investors taking the risk of buying the stock of our companies, much of our vital research would end. Almost without exception our industry cannot borrow capital. Our principal, and for most of us our only, source of capital is equity capital.

Intellectual property protection is critical to the ability of the biotechnology industry to secure funding for research because it assures investors in the technology that they will have the first opportunity to profit from their investment. Without adequate protection for biotechnology inventions, investors will not provide capital to fund research. There is substantial risk and expense associated with biotechnology research and investors need to know that the inventions of our companies cannot be pirated by our competitors. Therefore, less patent protection means less biomedical research on deadly and costly diseases because there will be less time to recoup the investment and make a profit.

A June 1994 report by Dr. David H. Austin of Resources for the Future [^] specifically documents the vital economic importance of intellectual property protection and its relationship to research expenditures, including the value of patents, and their effect on competing companies and on the biotechnology industry in particular. The results of Dr. Austin's study indicate that there is a significant reaction in the stock market when broad categories of patents issue. When a patent is listed in the Wall Street Journal, it positively affects the value of the stock for the company receiving the patent, and negatively affects the stock price of competitors to that company. Dr. Austin defines a "significant" increase in valuation as \$1.7 million on a company capitalized at an average of \$400 million. The report found that there is a positive correlation between stock price, when a patent is filed and issued, and

research and development expenditures. In addition, the report indicates that the granting of an important patent appears to raise the net value of the entire industry. These findings are consistent with the March 20 Washington Post article entitled "A Biotech Company is Granted Broad Patent and Stock Jumps." ^

Intellectual property protection for biotechnology inventions is particularly important as the amount of capital biotechnology firms must raise is so large. The biotechnology industry is one of the most research intensive industries in the civilian manufacturing sector. The average biotechnology company spends \$71,000 per employee on research, more than nine times the U.S. corporate average of \$7,650. In a 1995 survey by Business Week, the top five firms in the U.S. in terms of research expenditures per employee were biotechnology companies: Biogen (\$210,724), Genetics Institute (\$114,943), Genentech (\$112,030), Immunex (\$102,719), and Amgen 2 "Estimating Patent Value and Rivalry Effects; An Event Study of Biotechnology Patents," Dr. David H. Austin, Fellow at Resources for the Future (RFF) (Washington, D.C.). Discussion Paper 94-36 (June 1994).

3 The patent was granted to Genetic Therapy Inc. of Gaithersburg, Maryland for ex vivo gene therapy. GTI's stock jumped 17% the day after the patent was granted.

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(\$91,266). Ernst & Young"* reports that biotechnology companies spent \$7.7 billion on research and development in 1995, up eight percent over 1994.

We must sustain investor interest over a very long holding period. Bringing a biotech drug product to the market today in both a lengthy and expensive process. From the initial testing of the drug to final approval from the Food and Drug Administration can take 7-12 years, and this process can cost anywhere from \$150 to \$359 million. Both the length and cost of this process are a tremendous impediment for small biotechnology companies attempting to bring a product to the market.

Today, because of strong intellectual property protection and investor confidence, the biotechnology industry consists of more than 1,300 companies, of which 260 are publicly traded. The overwhelming majority of companies in this industry have 500 or fewer employees and less than five percent are profitable. The industry currently employs over 108,000 people in high-skill, high-wage jobs, a five percent increase over 1994. There are currently 32 biotechnology therapeutics and vaccines on the market. Ernst & Young reports that there are 270 in human clinical development, but there are over 2,000 in early research stages. All of this research is dependent on strong intellectual property protection. You must remember that the biotechnology industry did not exist twenty years ago and without strong intellectual property protection it would not exist today.

This is a particularly sensitive time for the industry. The biotechnology industry experienced a net loss of \$4.6 billion in 1995, and has lost over \$12 billion in the

last three years. A September 1995 Ernst & Young report finds that biotech companies, on average, have 16 months of capital left at their current burn rates (the rate at which capital is being expended), a 36 percent decrease from 1994.[^] According to a March 1994 report by Dr. Robert Goldberg of the Gordon Public Policy Center at Brandeis University, 75 percent of biotechnology companies have 2 or fewer years of capital left.[^] Ernst & Young estimates that are 1,308 companies. If 75 percent have two or fewer years of capital left at their current burn rates, a staggering 981 companies would need to return to the market for more capital.

This Congressional action on intellectual property protection for biotechnology inventions will have a critical impact on whether these companies survive to continue their life-saving and life-enhancing research or fold at a time when inadequate federal funds are available to continue this research.

INTERNATIONAL COMPETITIVENESS AND FOREIGN COMPETITION

The United States currently has the dominant biotechnology industry when compared with any other country in the world. Precisely because the U.S. is preeminent in the field of biotechnology, it has become a target of other country's industry policies. In 1991, the Office of Technology Assessment (OTA) found that Australia, Brazil, Denmark, France, South Korea and Taiwan (Republic of China) all had targeted biotechnology as an enabling technology. Furthermore, in 1984, the OTA identified Japan as the major potential competitor to the United States in biotechnology commercialization.[^]

The OTA also identified the manner in which Japan had targeted biotechnology. The report stated, "In 1981, the Ministry of International Trade and Industry (MITI) designated biotechnology to be a strategic area of science research, marking the first official pronouncement encouraging the industrial development of biotechnology in Japan. Over the next few years, several ministries undertook programs to fund and support biotechnology." One of the Japanese ministries, the Ministry of Health and Welfare (MHW), instituted a policy whereby existing drugs would have their prices lowered, while allowing premium prices for innovative or important new drugs, thus forcing companies to be innovative and to seek larger markets.[^]

It is widely recognized that the biotechnology industry can make a substantial contribution to U.S. economic growth and improved quality of life. For example:

*A fiscal year for Ernst & Young is from July 1 through June 30. Therefore, 1995 indicates July 1, 1994 through June 30, 1995.

[^]"Biotech 96: Pursuing Sustainability," 10th Anniversary Edition, Ernst and Young (September 1995).

® "Price Controls and the Future of Biotechnology: The Results of a Survey," Dr. Robert Goldberg, Senior Research Fellow, Gordon Public Policy Center, Brandeis University (March 1994).

■^ U.S. Congress, Office of Technology Assessment. Biotechnology in a Global Economy 243
(October 1991).

^U.S. Congress, Office of Technology Assessment. Biotechnology in a Global Economy 244-
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(October 1991).

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The National Critical Technologies Panel, established in 1989 within the White House Office of Science and Technology Policy by an Act of Congress,[^] calls biotechnology a "national critical technology" that is "essential for the United States to develop to further the long-term national security and economic prosperity of the United States." »"

The private sector Council on Competitiveness also calls biotechnology one of several "critical technologies" that will drive U.S. productivity, economic growth, and competitiveness over the next ten years and perhaps over the next century. ^^

The United States Congress' office of Technology Assessment calls biotechnology "a strategic industry with great potential for heightening U.S. international economic competitiveness." OTA also observed that "the wide-reaching potential applications of biotechnology lie close to the center of many of the world's major problems — malnutrition, disease, energy availability and cost, and pollution. Biotechnology can change both the way we live and the industrial community of the 21st century." 12

The National Academy of Engineering characterizes genetic engineering as one of the ten outstanding engineering achievements in the past quarter century. ^^

The competitiveness of the U.S. biotechnology industry means that U.S. patients with rare deadly and disabling diseases have hope. It means that they can look to American biotech companies to develop the therapies and cures which will ease their suffering.

One of the great strengths of the U.S. biotechnology industry is the intellectual property protection afforded to biotech inventions. The U.S. is widely acknowledged to have the strongest patent protection in the world. It is critical for the U.S. to continue to set the highest standards for intellectual property protection and to strengthen one of the pillars on which our biotechnology industry rests.

BIO'S POSITION ON GATT PATENT TERM LEGISLATION

BIO has taken a consistent position on the patent term issue since the debate began in the middle of last year. We have always pressed for protections to ensure that diligent patent applicants are not penalized for delays which are beyond their control. While we have said that a guaranteed 17 year term from grant would be desirable, we have always proposed ways for patent applicants to achieve a similar

result without insisting that there be a minimum 17 year patent term from grant and without providing opportunities for submarine patents.

There are almost always at least two ways to achieve a given result. One of them may be more complicated and indirect than the other, but the more complicated and indirect approach may be the better option given all of the circumstances. Sometimes simplicity is not the greatest imperative. This is the case with the patent term issue; the biotechnology industry can live within a 20 year system measured from the date of application if it includes safeguards which protect the legitimate interests of diligent patent applicants.

On June 27, 1994, we wrote to Ambassador Mickey Kantor and many in the Congress expressing our "serious concerns relating to draft legislation to implement the agreement." We said that "limiting the patent term to 20 years from filing, without adopting either a package of safeguards or other reforms, will seriously disadvantage our industry, which is particularly prone to lengthy delays between the filing of a patent application and subsequent issuance of the patent." We outlined two alternatives which would ameliorate our concerns. We said that the Congress could set a minimum 17 year patent term from grant or it could adopt a series of amendments to protect diligent applicants.

At this point in the process the draft legislation provided for five years of compensation for time lost due to interferences, but it did not provide for any compensation for time lost due to appeals to the Board of Patent Appeals and Interferences or the Court of Appeals for the Federal Circuit (CAFC). BIO's proposed focus on these very serious omissions.

9 National Competitiveness Technology Transfer Act. Pub. L. No. 101-189, 103 Stat. 1352 (42 U.S.C. §6681 etseq.).

1" White House Office of Science and Technology Policy, Report of the National Critical Technologies Panel 7 (1991).

11 Council on Competitiveness, Gaining New Ground: Technology Priorities for America's Future 6 (1991).

12 U.S. Congress, Office of Technology Assessment, New Developments in Biotechnology: U.S.

Investment in Biotechnology-Special Report 27 (July 1988).

13 National Academy of Engineering, Engineering and the Advancement of Human Welfare: 10 Outstanding Achievements 1964-1989 2 (1989).

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On August 12 the House and Senate Judiciary Committees held a hearing on the proposed GATT-TRIPS implementing legislation. BIO wrote a letter to the Committee reiterating our concerns. At this point in the process there was an agreement

to provide for some compensation for delays due to CAFC appeals but none for coverage of appeals to the Board, appeals which tend to take much more time than CAFC appeals.

On September 20 we wrote to the House of Representatives regarding a Dear Colleague letter circulated by Congressman Joseph Kennedy. We noted that, "The Clinton Administration has offered to ameliorate the impact of the 20 year term by providing some compensation for delays due to interferences and appeals to the Court of Appeals and it may guarantee that pending cases are not hit retroactively by the new limits. But, it has been unwilling to provide relief for delays due to appeals within the Patent Office, appeals which account for much of the delay."

On September 24 we received a call from the PTO saying that it would finally agree to provide for compensation for delays due to appeals to the Board of Patent Appeals and Interferences. This concession represented substantial progress and, as a direct result, when the GATT implementing legislation was then introduced early the next week, BIO wrote to the entire House and Senate on September 27 urging them to "vote in favor of the legislation."

In this letter we praised the Administration for including provisions addressing each of our concerns, but we could not endorse the 20 year patent term or state that the safeguards met our standards. It was obvious that we could not do so due to the five year cap on compensation for time lost in interferences and appeals, a cap which we had consistently opposed.

After the implementing legislation was adopted and signed into law, our concern over the 20 year patent term was ameliorated by the decisive action of Patent and Trademark Commissioner Bruce Lehman in resolving the long-standing dispute over utility rejection of claims to biotechnology inventions. He organized a hearing in San Diego on this and other issues involving biotechnology patents and in early December the PTO proposed guidelines on utility rejections of biotechnology claims which would conform the requirements in the PTO to those articulated by the supervisory courts and make the utility requirements for biotechnology inventions the same as those required for all other inventions. This was intended to end the virtually automatic rejection of biotechnology patent claims until and unless the inventor had data from human clinical trials to support a claim. This biotechnology utility standard was substantially higher than the utility standard for nonbiotech inventions and it was causing substantial delays in the processing of biotechnology patents. These guidelines have now become final and they have made a difference. Although we have seen the rejections now appear in other guises, we are hopeful that this practice will end soon. The result should expedite the processing of biotechnology patents.

In our letters in June, August and September, BIO had consistently raised the utility rejections as one issue to be resolved in connection with the 20 year term.

The Commissioner's action responded to our concern and vindicated BIO's support for the GATT legislation.

Along with everyone else in Washington we had thought the patent term debate was over when, to our great surprise, in December the Administration reopened the debate. It stated in a letter to Senator Dole that it would not oppose an amendment to the BIO implementing legislation which would guarantee a minimum 17 year term from grant. The Administration had adamantly opposed a 17 year minimum throughout the debate to that point. We considered this Administration statement to be an invitation to continue the process of securing safeguards which we had begun the previous April. If it would not oppose a 17 year minimum term, we believed it could certainly support safeguards within the context of a 20 year patent term from application. This is why we are here today.

Responding to the dramatic and surprising change in the Administration's position, in March BIO proposed a series of additional amendments to the GATT implementing law to strengthen the safeguards which had been included at our request in the September bill and December law. It is these proposals which are outlined in this statement.

We are delighted that some of these proposed safeguards are incorporated in the Chairman's bill, H.R. 1733. We believe that our amendments to the Chairman's bill will achieve the result we all desire, a resolution to the patent term debate through the adoption of a package of safeguards sufficient to protect diligent patent applicants from the loss of patent term.

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ADDITIONAL SAFEGUARDS PROPOSED IN K.R. 1733

Let US begin by praising Chairman MOORHEAD for the proposals he has made in H.R. 1733 to provide additional protections for diligent patent applicants. We believe his proposal vindicates the approach BIO has been taking since last year. We have always thought that it is possible to avoid erosion of patent term within a 20 year patent term measured from the date of an application by providing safeguards. We have never thought that the only way to achieve this result was to set a 17 year minimum term from grant.

We believe that the only way to retain the 20 year patent term is to provide additional safeguards. The safeguards included when the GATT implementing legislation became law are drastically better than those included in the initial drafts, but they do not provide complete protection. There is nothing inconsistent between the 20 year term and a regime of safeguards, and nothing in the safeguards which we propose which would enable patent applicants to intentionally delay the issue of a patent to surprise the marketplace.

We recognize that the issue of "submarine" patents is central of this debate. There

are applicants who will intentionally delay the issuance of a patent, amend their claims very late in the prosecution process, and surprise the marketplace with exorbitant demands for royalties. We do not believe that this is a pervasive problem, but there are some notorious examples which can be cited. We do have to guard against "Taad facts" making for "bad law."

The proposals in H.R. 1733 and by BIO do not provide refuge for those who would seek to secure submarine patents. We take this as an essential limitation on any amendments to the GATT implementing law. We have taken great care to "game" our own proposals to ensure that they do not open up opportunities for abuse and we do not believe that they lend themselves to abuse. We remain open to any modifications of our own proposals which will clarify their application to individual cases. We are pleased that at the June 8 hearing of this Subcommittee Chairman Moorhead repeatedly and emphatically solicited additional proposals for safeguards. None of the witnesses testifying at the hearing in support of the Chairman's proposals expressed opposition to further proposals which might be advanced. Our own proposals are made in direct response to the Chairman's invitation.

Let us briefly describe the additional safeguards proposed in the Chairman's bill and then describe BIO's proposed safeguards:

First, it safeguards applicants from delays which last longer than five years by raising the cap on extensions from five years to ten years. For biotechnology inventions five years was grossly inadequate to compensate applicants for typical delays occurring in the processing of biotechnology inventions. Although we appreciate the increase in the cap to ten years this is still inadequate in some instances.

Second, it safeguards against delays within the Patent and Trademark Office by providing for extensions that are necessitated by administrative delays within the Patent and Trademark Office. This is important to this industry because biotechnology inventions are typically more complex than other inventions and consequentially the typical time it takes to process an application through the Patent Office is longer than for other inventions.

Finally, it safeguards the public from a dilatory patent applicant by denying that patent applicant an extension if the applicant fails to make reasonable efforts to secure a patent. The bill does this by requiring the Patent and Trademark Office Commissioner to prescribe regulations establishing what activities constitutes failing to engage in reasonable efforts to secure a patent.

The Chairman's proposed safeguards are outlined in the chart printed after the executive summary of this statement. The chart compares the current law, the Chairman's proposals and BIO's proposals.

Again, we could not be more pleased that the Chairman has taken the lead in this debate and is seeking to resolve the controversy with constructive proposals. We do have some of our proposals to perfect his.

BIO's FIVE PROPOSED AMENDMENTS TO H.R. 1733

BIO's five proposals build directly on the Chairman's proposals. They do not introduce wholly new issues. We believe our proposals are administratively less complex and provide greater certainty than the Chairman's proposals that diligent patent applicants will not, in fact, lose patent term for delays while the application is beyond their control. This proposal is largely consistent with the intent and terms of the Chairman's bill. The legislative language for our proposals and a section-by-section analysis is enclosed in the appendix.

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BIO's proposed safeguards are outlined in the chart printed after the executive summary of this statement. The chart compares the current law, the Chairman's proposals and BIO's proposals.

Let us discuss each of BIO's five proposed amendments in turn.

1. Cap on Compensation for Delay. First, BIO believes that applicants should receive full compensation for delays due to interferences or appeals. Unlike the Chairman's bill, H.R. 1733, and P.L. 103-465 BIO's proposal does not contain a cap in BIO's proposed subsection 154(b)(1)(A).

Raising the maximum compensation from five to ten years, as the Chairman has proposed, will help, but it will not solve the problem. There is no valid principle which justifies a five or a ten year, or a fifteen year, cap. The principle here is that this source of delay is beyond the applicant's control and the applicant should be compensated for lost time, period.

It is important to remember that the compensation is only provided in the case where the applicant prevails in the interference or on the appeal. The classic case where a patent applicant should be compensated is the case where the government acted illegally in denying him a patent. If compensation is not provided, it would, in effect, permit the government to win even if it loses in court and, permit it to penalize an applicant for taking the appeal. In these cases the sole cause of the delay is the government's failure to grant a patent to an applicant who has made a valid claim. A cap on compensation for delay due to appeals has the effect of discouraging patent applicants from asserting their legal rights against the government. The cap has the effect of undermining government accountability to the law. It is difficult for any citizen to take on the government, but it would be outrageous when the citizen does so and is penalized with the loss of patent term because he brought the case in the first place.

In addition, the five or ten year cap is for any combination of appeals and interferences. Cases where there are both would be especially vulnerable to lost patent term. In the appendix to this statement BIO has documented cases of lengthy interferences and appeals. There is absolutely no reason based on principle which justi-

fies there parties losing patent term when the Patent and Trademark Office is in control of the patent application throughout this period. It would be patently unfair and confiscatory to reduce their patent term simply because they were involved in protracted interferences or appeals.

Unfortunately a five or a ten year cap actually provides an incentive for parties to prolong interferences when they know that they will lose. If they can prolong the interference beyond ten years, they can cut into the patent term for their competitor. And, it is not difficult for parties to do this. If there is no cap on the compensation for interferences, parties which suspect that they will lose have a much greater incentive to settle early. There is no competitive advantage gained by prolonging the interference proceeding.

Interferences are proceedings where the delay is largely beyond the control of the patent applicant. Interferences are proceedings that are set up by the Patent and Trademark Office to determine which of two or more parties was the first party to invent a particular invention. Under the 1984 revision of the Interference laws [^] the Administrative Patent Judge (also called the "examiner-in-chief") or the Board of Patent Appeals and Interferences (which the Administrative Patent Judge is a member) can decide all patent issues raised by the parties without dissolving the proceedings. Under the rules that implement the law ^{^^} each proceeding is assigned to an Administrative Patent Judge who is expected to exercise control over the interference proceedings so that the proceedings will not be pending longer than two years. The rules provide both flexibility and for appropriate sanctions that may be used by the Administrative Patent Judge to assvire each party compUes with the Administrative Patent Judge's orders. The rules provide the Administrative Patent Judge the ultimate sanction of an adverse decision against a party. ^{^^}

Similarly, applicants do not have control over the time it takes to successfully prosecute an appeal to the Board of Patent Appeals and Interferences (Board) or the Court of Appeals for the Federal Circuit (CAFC). Appeals to the Board are ex parte proceedings based upon a record that is in front of the Board ^{^^} therefore, applicant has little opportunity to influence the time in which the Board renders its decision.

1" Public Law 98-622 amended 35 U.S.C. 135(a)(1995). This paragraph was amended to allow the examiner-in -chief the opportunity to determine patentability issues during interference proceedings so as to streamline the interference process.

[^]The rules for interference proceedings are set forth in the rules 37 CFR §§1.601-1.690 and in the Manual of Patent Examining Procedures (MPEP) chapter 2300.

i<37 CFR §1.616.

"35 U.S.C. §7(c)(1995).

An applicant dissatisfied by a decision by the Board can appeal a decision to a federal court, but there the Federal Judge overseeing the appeal oversees the course of the litigation.

Finally, while there are not many cases where interferences and appeals will take more than ten years, the few cases which fall into this category would tend to be the most important. These would tend to be the patents which can generate a \$500 million or a \$1 billion annual market. To cut into the patent term for these blockbuster patents fundamentally undermines the economics of the entire biotechnology industry, which must demonstrate to investors that the potential for blockbusters does exist. Without the possibility for blockbusters, investors would be much more reluctant to take the considerable risk and the long holding periods involved with investing in biotechnology research. The cap on compensation is essentially a cap on the investors potential profits. It has the same effect as government imposed controls on the prices for the product, the mere threat of which during the health care reform debate helped to crush our industry's capital markets. ^^

The fair and equitable solution is to lift the cap entirely, which is what BIO proposes, not simply raise it from five to ten years.

The issue of whether this compensation is awarded where patent applicants are partly successful in an appeal is discussed below as part of BIO's fourth proposed amendment.

2. Compensation for Miscellaneous Delays: Second, while interferences and appeals are the most obvious sources for delay, there are innumerable other ways in which the issuance of a patent can be delayed during the review period at the Patent and Trademark Office. This is why the Chairman's bill contains a "catch-all" provision which will provide compensation in case of "unusual administrative delay" in his proposed subsection 154(b)(1)(D). We believe that BIO's proposed "catch-all" provision will be more appropriate, fairer and much easier to administer.

Some of the miscellaneous causes are applications abandoned by PTO error; backlog of unexamined applications delayed by loss of files or responses by PTO; suspensions of prosecution by the PTO; delays caused by PTO's failure to consider arguments/evidence; withdrawal from issue by the PTO; reopening of prosecution involving a new ground of rejection or new rationale after final rejection or appeal; and new restrictions among claims to the same type of subject matter as were pending prior to the first restriction requirement or first office action.

There is an obvious need for the provision proposed by the Chairman. It is well intentioned and important, but it would be extremely difficult to administer in practice. What may be "unusual" in one case, or for one art group at the Patent and Trademark Office, may not be "unusual" in another case or art group. The PTO would, of course, seek to define the term "unusual" in regulations, but we would expect that the regulations would have to be extensive. No matter how long or de-

tailed, they would not cover every case and they would certainly not cover every combination of cases. There would always be substantial interpretation required to determine the equities in an individual case. Lots of paper would be exchanged between applicants for compensation and the PTO would need to justify its determinations in writing.

The key issue for compensation for delays, however, is not what is "usual" or "unusual." That is a relative concept — unusual by comparison of what? The issue is whether applicants are losing patent term for reasons which are beyond their control. If losing patent term becomes "unusual" because, for example, the Congress drastically cuts appropriations to the PTO to hire staff— a real issue in the current budget climate — then that should not justify a denial of compensation for the resulting delays. Similarly, the PTO is now experiencing a "bubble" of applications from those who filed to beat the June 8 deadline, a "bubble" which will significantly delay processing of applications filed after June 8. That may be "usual" but it should not come at the applicant's expense.

A more appropriate, fairer, and much more workable solution is to set an objective standard to determine whether and how much compensation for delays is warranted. This is what BIO is proposing in our proposed subsection 154(b)(1)(D) and subsection 154(b)(1)(E).

The way to understand BIO's proposal is to think of a chess clock. Chess clocks have two clocks, one for each player. There is a mechanism to ensure that only one

18 During the 1993-1994 health care reform debate, the ability of biotechnology companies to raise capital was significantly reduced. From February 1993 through December 1994, the American Stock Exchange Biotechnology Index (AMEX) dropped over 30 percent. In addition, post-offering market capitalizations for companies completing offerings in 1993 were worse than in the previous three years. Finally, in 1994, biotech companies raised 40 percent less from public equity markets than they raised in 1993.

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clock will be running at any given time. The clock which is running is the clock for the player who must make the next move. When he or she makes the move, he or she taps the mechanism to stop his or her own clock and start the other player's clock. Pictures of chess clocks are printed in the first appendix to this statement. This is exactly how BIO's proposal would work. We propose that the PTO have two years on its clock for processing an application in BIO's proposed subsection 154(b)(1)(D). If it takes more than two years to make all of the moves it must make to take final action on an application, the applicant is compensated for the delay. There is no need to make any judgments about whether the PTO's actions were "usual" or "unusual," or to make any determinations about "who shot whom," who

was at fault, or about any individual actions which contributed to the delay. Two years, period.

A similar clock is set up when applicants petition for the withdrawal of the finality of a rejection in BIO's proposed subsection 154(b)(1)(E). This separate clock would function similarly to the two year clock for processing the application, but only when applicant files a petition to withdraw the finality of a rejection. This separate clock merely insures that the applicant or PTO can not remove an application altogether from all clocks.

The applicant has one year to make all the moves it must make to secure a patent and if it takes more than one year, it is cutting into its own patent term.

Let us outline what this proposal means in practice by describing the patent application process.

The chart on page 20 of this statement shows a typical time line of an application through the Patent and Trademark Office and illustrates our idea of a chess clock. In the chart an applicant for an invention files his application with the Patent Office and receives a filing date and serial number. Upon the receipt of the patent application the Patent Office's clock starts. The Patent Office examines the content of the application and discovers items missing and mails a notice of missing parts. For instance, in biotech applications an applicant may not have included a computer readable disk containing all the sequences that appear in the application as required by PTO rules. Upon the Patent Office's mailing of that notice the Patent Office's clock stops and the applicant's clock starts. Typically it takes six months for an applicant to correct the errors. Upon responding to the notice of missing parts the applicant's clock stops and the Patent Office's clock restarts. The Patent Office then forwards the application to the appropriate group and appropriate art unit and then to an appropriate examiner. The examiner then examines the application and issues an opinion regarding the patentability of the invention called an Office action. Upon mailing of the Office action the PTO's clock stops and the applicant's clock begins. The applicant typically takes six months to respond to the opinion, by amending claims, and overcoming objections made by the examiner. Upon mailing the response to the Patent Office the applicant's clock stops and the Patent Office's clock restarts. The response is forwarded to the examiner who is given 60 days to consider the application. The examiner then either agrees with the applicant and allows the case or finally rejects the application. Upon mailing the final rejection the clock stops. Therefore, if an application is processed in a normal manner in the PTO will have taken only seven months to finally reject an application, and would have to spend seventeen extra months in processing the application prior to the applicant begin awarded an extension for administrative delay.

It is easier to understand this narrative when it is represented in a chart. Presented on the following page is a chart which calculates the running chess clock

time for the applicant and the PTO in the example just given.

CHESS CLOCK APPLIED TO TYPICAL PROSECUTION OF A PATENT

[In months]

Chess Clock Time

Month

Applicant's Clock

PTO's Clock

Patent application is filed at PTO

1st PTO issues missing parts notice ..

2nd

3rd

4th

5th

1³⁷ C.F.R. § 1.821 requires applicants supply a sequence listing of amino acid and nucleotide sequences in computer readable form.

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CHESS CLOCK APPLIED TO TYPICAL PROSECUTION OF A PATENT— Continued

[In months]

Chess Clock Time

6th

7th Applicant responds to the notice

8th Within the PTO the application is transferred to an appropriate examiner for examination.

9th

10th

11th Examiner issues Office action

12th

13th

14th

15th

16th

17th Applicants respond to Office action

18th

19th Examiner issues final action

Total Chess Clock Time

Applicant's Clxk PTC

IS Clock

5

1

6

1

6

2

6

3

6

4

6

5

7

5

8

5

9

5

10

5

11

5

12

5

12

6

12

7

12

7

The point of the chart on page 20 and example is simple: a two year standard for the PTO's chess clock is not unreasonable. In this example the PTO would be required to grant a petition from an applicant for compensation only if it somehow takes an additional 17 months of time to process this patent. This is surely a reasonable margin for error which permits it 1x) avoid any possibility that the applicant will secure a submarine patent.

The validity of this example is borne out by the statistics which the PTO so often cites in defense of the 20 year term. It has repeatedly said that the average patent is issued in 19 months. ^o but this, of course, includes both the PTO and the applicant's time. If the 19 month figure is valid, then it is clear that providing two years for the PTO to act on a patent application is reasonable. If the average total time taken to issue a patent is much more than two years, then it should still be reason-

able to expect that the PTO to take no more than two years to complete the actions for which it is responsible.

BIO has "gamed" our own proposal with experts to determine if there is any way in which an applicant might be able to force the PTO to take more than 24 months on its clock to process an application. We find that an applicant who was willing to pay fees for repetitive petitions to the Commissioner might be able to secure — at most — a month or two of compensation, but would never be able to secure anything approaching a submarine patent.

An applicant might, for example, file numerous petitions contesting a restriction, the appropriateness of a compliance with the sequence listing requirement, changing the inventorship, the finality of the restriction requirement, the finality of an action, an objection to a claim, or several other requirements made during examination, but in each case there is no reason why the PTO can't quickly respond to the petitions as the applicant is paying for the right to petition. Further, the mere filing of a petition does not stay the period for response for an applicant.^{^i}

But, again, the bottom line is the same. Two years is plenty of time for the PTO to process a patent application and it would have no excuses not to be able to do so. An applicant can attempt to trigger the compensation provision and force the PTO to take more than two years to process his application, but it would be very difficult to gain more than a minimal additional patent term. The provision would catch the cases where the PTO inaction is truly egregious without opening up an opportunity for the applicant to cause the delay through his own actions.

This is very important. It is only fair for the PTO to be under some pressure to complete action on an application. It should not be only the applicant who feels the pressure. We need an even-handed, balanced system of incentives and safeguards

20 In the Annual Report of the Patent and Trademark Office for fiscal year 1993 at page three indicates pendency at 19.5 months for fiscal year 1993 and 19.1 months for 1992. In a conversation with BIO on November 3, 1994, then Group Director of the Biotechnology Group. Barry S. Richman, indicated that the pendency for a biotechnology application was 20.8 months. 2137 CFR§1.181(D).

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to ensure that both parties proceed expeditiously to process a patent. It is unfair if the only party which feels the pressure is the applicant.

It is not also fair for the PTO to be the sole judge of when its actions have been "usual" or "unusual." There might be some tendency for the PTO to resist admissions that it has been responsible for "unusual administrative delay." Such admissions might be cited by the Congress or critics of the agency. It is better to use an objective standard which does not carry any mark of opprobrium for the agency.

What BIO is proposing is an objective standard which defines what is "usual" or "reasonable." This is a standard which is easy to administer. There is no need to detailed regulations, subjective judgments, or blaming one party or another. If the applicant believes that the PTO has taken more than two years, the applicant will petition for compensation. It could not take more than a few minutes by a clerk to determine whether the petition should be granted. Administering the "unusual administrative delay" standard will be tedious and distract the PTO from its primary mission, the expeditious processing of patent applications.

One great advantage of the chess clock over the "unusual administrative delay" criterion is litigation. Any decision of the PTO to grant or deny compensation can and often will be litigated. In fact, in litigation under the "unusual administrative delay" standard it would be entirely appropriate for an applicant to engage in extensive discovery of the PTO to determine whether its actions in a given case were, in fact, usual or unusual. A litigant could, for example, legitimately request internal documents about the management of the PTO Generally and art group about its customary practices, and about the actions with regard to the specific application in question. There is, of course,, nothing to litigate with a two year chess clock. The 20 year patent term measured from grant and this chess clock safeguard surely will protect against the issuance of a submarine patent. If the Subcommittee wishes, however, to provide additional protections against submarine patents, BIO invites it to review the holding in the recent magistrate's decision in *Ford Motor Co. v. Lemelson*, Civil Action Nos. CV-N-613-LDG(PHA)&CV-N-92-545-LDG(PHA) (D. Nev. June 16, 1995). The magistrate found a Lemelson patent unenforceable due to delay in prosecution. To the extent there remains any concern about H.R. 1733 and the BIO amendments and/or any concern that the magistrate's decision may not be adopted by the district or higher courts, then BIO could support legislation to make the grounds of the magistrate's decision a statutory defense or another legislative proposal specifically aimed at an abuser of the patent system. The key point is that in addressing the submarine patent issue we must not unintentionally penalize diligent patent applicants. That is an approach which aims at the guilty and harms the innocent.

Finally, BIO believes that the two year chess clock, coupled with the lifting of the cap on compensation for appeals and interferences, will reassure those who have railed against the new 20 year term. These two provisions provide objective, clear, nondiscretionary protections against the erosion of patent term. This is what is needed to douse the firestorm of concern.

Assuming that the PTO does, in fact, take the full two years, the applicant is under great pressure to take no more than one year. If the PTO takes only 18 months, the applicant could take 18 months and still end up with a 17 year patent term. But, if the applicant takes up more than its share of the three year period,

it will lose patent term. This is fair as this would be a voluntary action, not one which results from inadequate safeguards to protect the applicant from delays beyond its control.

BIO's proposes a "no excuse" provision which guarantees that patent applicants will not be penalized with shortened patent term for delays which are beyond their control. It is not a guarantee of a 17 year patent term, but it — along with the compensation for delays due to interferences and appeals — provides a guarantee that the patent application can secure such a patent term. Whether the patent applicant secures a 17 year or longer term is within his or her control. If they do not secure one, it is because they delayed their own patent application at the PTO, not because of PTO delays or delays due to interferences and appeals. Patent applicants have "no excuse," and no reason to complain, about the new 20 year term.

3. Clock Starting and Ending Points and Partial Success on Appeal: Third, BIO's proposed amendments clarify the starting and ending points for the calculation of delays where extensions are available for secrecy orders, interferences, and appeals, eliminates the possibility that applicants can be "off the clock," and clarifies that compensation is provided where applicant is partly successful on appeal.

BIO's proposed subsection 154(b)(1)(A) details when the clock on an interference begins and ends. BIO's proposed subsection 154(b)(1)(B) details when the clock on a secrecy order begins and ends for the purposes of patent term extension. Similarly, BIO's proposed subsection 154(b)(1)(C) details when the clock on an inter-

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ference begins and ends for an appeal and makes clear that the successful appeal of a decision by the commissioner is appropriate to get an extension. Each of these amendments merely clarifies those patent term extensions that are contained in the Chairman's bill.

Additionally, BIO's proposed amendment contains an amendment that will initiate a new clock when an applicant pays for the withdrawal of the final rejection in BIO's proposed subsection 154(b)(1)(E). This additional clock corresponds and replaces subsection 154(b)(1)(D) in the Chairman's bill which provides extensions for "unusual administrative delays" and completes the clock set-up in BIO's proposed subsection 154(b)(1)(D). This subparagraph insures that the applicant cannot be off the clock, and insures applicant that if the PTO takes an unusually long time to process an application the patent applicant will be compensated with the patent term extension. This subparagraph is merely a technical amendment to close a hole in the proposed clock as without this paragraph an applicant would pay for the withdrawal of the finality of a rejection, effectively paying to continue to prosecute an application before an Examiner, and thus would be off the clock with no time limit for the PTO to complete examination and no possible patent term recoupment

for the applicant if the PTO takes an unusually long time to process the application. Finally, in addition to clarifying the beginning and ending point of a period for patent term extension because of an appeal, BIO's proposed subsection 154(b)(1)(C) clarifies that any decision by a federal court or by the Board of Patent Appeals and Interferences that reverses a decision adverse to the patent applicant results in a possible extension of the patent term and allows for the submission of a final response to the opinion of the reviewing Court or by the Board. (The importance of this latter provision in protecting applications filed prior to June 8 is discussed in the next section). This amendment is designed to indicate that it is not required that each and every decision adverse to the applicant need to be overturned by the court for applicant to earn an extension as the presence of one improper rejection is sufficient to delay the issuance of a patent. Again, this subsection merely clarifies the conditions or patent term extension already found in both the Chairman's bill and P.L. 103-465.

4. Rolling Over Patent Term Extensions: Fourth, BIO's proposed amendments provide for rolling over extensions into a subsequently filed applications where the same invention is prosecuted in both applications and the extensions were earned in a previous application. This issue is covered in BIO's proposed subsection 154(b)(1)(F).

These amendments are particularly important to protect patent applications which were filed prior to June 8, 1995, the effective date for this provision. Millions of dollars have been invested in the inventions with respect to which these patent applications have been filed. It is not fair to change the rules of the game in mid-stream and potentially reduce the patent term which these applicants expected prior to the enactment of the GATT 20 year term. Applicants were given advance notice of the June 8 date and many of them filed continuing applications, but this is not sufficient to ensure that they will receive a 17 year term from grant. In lieu of providing a guaranteed 17 year minimum term BIO is proposing that extensions can be rolled over into future filed applications without loss of patent term due to actions of the PTO. This provision is supplemented by our proposed subsection 154(b)(1)(C)(ii), which similarly allows the continuation of prosecution before the PTO without loss of patent term after appellate review.

Another way to protect these applications is to provide that all such applications received prior to June 8 would receive a guaranteed minimum 17 year patent term from grant. The BIO proposal does not provide this guarantee, but if all elements of BIO's proposal are not adopted, protection for diligent applicants who filed applications prior to June 8 would not be provided. This would be patently unfair and BIO would then have no alternative but to support a guaranteed 17 year minimum term for these applications.

The Chairman's bill recognizes that diligent patent applicants should be com-

compensated for delays that result from the prosecution of a patent application that are not within the control of the patent applicant. In the Chairman's bill it is unclear if an applicant would lose a patent term extension earned in an original application merely by continuing to pursue the invention in a second application when the patent term is determined by the filing date of the original application.

BIO's proposed amendment clarifies this by providing for the rolling over of an extension into a subsequent application if the applicant is diligently pursuing a patent and the delay in the previous application is tantamount to a delay in the subsequently filed application. Rolling an extension into a subsequently filed application is needed to provide applicant the ability to pursue the patenting of an invention through several applications which is the typical procedure in pursuing a patent.

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BIO's proposed amendment identifies four instances where continuing to prosecute an invention through a subsequent application might otherwise be jeopardized if rolling over extensions is not specifically provided for in BIO's proposed subsection 154(b)(1)(F) clauses (i)-(iv).

Providing an applicant the ability to roll an extension into a subsequently filed application does not benefit a would be submariner. In the twenty year term from filing, an applicant does not gain any benefit from refiling an application as the refiled application will have the same effective filing date from which the twenty year term is measured. In fact, the patent applicant faces the possibility of losing two years of patent term when the PTO processes the application and where no extension is available under BIO's proposed subsection 154(b)(1)(D).

In each of the clauses in BIO's proposed subsection 154(b)(1)(F) clauses (i)-(iv) an applicant is specifically allowed to roll over the extension from the previous application. In clause (i) rolling an extension into a divisional application is provided for. In divisional applications the delay that occurred in the parent application necessarily related to the delay in the subsequently filed divisional applications. In most instances, the patent applicant will not know how the PTO will restrict the application until after the restriction is made final. In clauses (ii) and (iii) rolling an extension into a subsequent filed continuation or continuation-in-part application is provided for. In these continuation applications the prosecution of the new application is really the continuation of the prosecution of the same invention. It is important to allow an applicant the ability to continue to pursue a patent in front of an examiner instead of forcing the applicant to appeal the decisions of the examiner in the early stages of prosecution which is generally a slower and more expensive process for the applicant and for the PTO. Finally in clause (iv) rolling extensions into subsequently filed applications is provided for if the continuation is specifically directed to claims that the examiner has indicated is allowable. Providing for rolling

extensions over into allowable continuation applications allows applicant to go to issue on some claims while others are still pending.

To further accommodate the issuance of some claims while other claims continue to be pursued BIO's proposal contains subsection 154(b)(1)(G). This section provides that an application can get the benefit from a patent term extension despite the filing of a terminal disclaimer. This amendment is important to allow a patent applicant to go grant on certain claims while the patent applicant continues to argue the patentability of others. If applicant cannot claim patent term extensions when a terminal disclaimer has been filed, applicant is discouraged from appealing the PTO's adverse determination in regard to some claims when others have been indicated as allowable because if applicant does not win on appeal the patent applicant cannot get a patent term extension for the unsuccessful appeal and loses patent term for both the claims that the examiner has indicated are allowable and the contested claims.

5. Limitations to Patent Term Extensions. Fifth and finally, BIO's proposed amendment limits the maximum pre-issue plus post grant protection a patent applicant can get to the maximum amount of protection an applicant could receive had there not been any delay beyond the control of the patent applicant. Without a limitation it would be possible for an applicant to enjoy longer than twenty years of protection and longer than a 17 year patent because of pre-issue protection and a patent term extension. BIO's proposal includes a provision to prevent this from happening. These proposals are found in BIO's proposed subsection 154(b)(2)(A) and subsection 154(b)(2)(B) which has been added to cap the protection that an invention could receive at the maximum pre-issuance and patent term protection a non-delayed patent could receive.

So, these are BIO's proposed five amendments. They are summarized in the side-by-side chart at the beginning of this statement. We believe that these five amendments are reasonable, consistent with the intent of the Chairman's bill, and do not provide opportunities for applicants who seek to secure submarine patents. A detailed explanation of these five amendments and the text of the amendments themselves are printed in the appendix to this statement.

Consistency with the GATT: The five BIO proposed amendments are all consistent with the GATT treaty itself. The GATT treaty requires that the patent system of signatories provide a patent term which is at least 20 years from application. Signatories can provide a patent term which is longer than 20 years, but not shorter. There is no requirement that the patent term be set at a maximum of 20 years.

In this sense the GATT implementing law sets the shortest possible patent term consistent with the GATT. It is, therefore, clear that the United States can provide compensation to diligent patent applicants for delays which are beyond their control. The GATT implementing law from December provides some compensation and that

is consistent with the GATT, so providing additional safeguards is certainly consist-

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ent with the GATT. The issue here is not the GATT treaty; it is equity for patent applicants under a completely new patent system.

BIO'S NINE PROPOSED AMENDMENTS TO THE HATCH-WAXMAN ACT

Patent term for biotechnology companies can be eroded by government action even when the patent term granted by the PTO is seventeen years. Biotechnology patents for drugs to cure deadly and costly diseases do not permit the company immediately to begin to market the product with respect to which the patent was granted. The Food and Drug Administration must grant approval and when this approval comes many years after the patent has been granted, the company effectively loses patent term. When one agency, the PTO, grants a patent, the patent term begins to run even if the other agency, the FDA, will not permit the product to be marketed.

The Hatch-Waxman Act addresses this second cause of patent term erosion by granting partial compensation — an extension of patent term — for delays experienced by the company in the approval of a product by the FDA. But, as with the safeguards written into the current GATT patent term law, the Hatch-Waxman Act safeguards are in need of reform. They provide only partial compensation for delays and this is just as unfair to the inventor company as the delays at the PTO in granting a patent in the first place. Both are essential issues. The Hatch-Waxman Act simply restores patent term lost due to FDA delays; it does not extend the term of the patent beyond that which is set by the PTO. So, we remain concerned about the initial patent term, not just the Hatch-Waxman Act provisions. In short, amendments to the Hatch-Waxman Act are not a substitute for amendments to the GATT implementing law. At the same time, we must amend the Hatch-Waxman Act to ensure that what is protected by safeguards at the PTO is not then lost due to inadequate safeguards at the FDA.

The existing Hatch-Waxman Law has failed over the past ten years to consistently afford meaningful post-marketing patent terms. One effect of the inequities and uncertainties in the current patent term restoration law has been the consideration in the Congress over the past decade of a number of private extension bills. In order to provide commercially meaningful and equitable patent terms in regulated industries and address the issues raised by P.L. 103-465 amendments, BIO proposes that the following amendments to the Hatch-Waxman Act be enacted:

1. The current limitation on patent extensions of two years or five years for regulatory delays should be repealed. First, the period of time between discovery of a new regulated entity and the initiation of the patenting process is typically quite short. However, the period of time required thereafter to obtain regulatory approval for marketing can typically be very long, often 10 year or more. The two-year or

five-year limitation on extensions is wholly inadequate to restore lost patent term and establish parity in the typical post-approval patent term enjoyed in non-regulated industries.

2. The current provision on patent extensions limiting the extended patent term to 14 years from the date of regulatory approval should be repealed. Second, like the five-year limitation discussed above, the 14-year post-approval limitation has resulted in truncated patent extensions (for less than the otherwise applicable five-year limitation). The truncation of the patent extension has the effect of providing inventors in regulated industries with less effective post-marketing patent term than patentees in non-regulated industries. Normally, a patentee is free to begin marketing a patented product immediately upon completion of the development of the invention. This can be at or near the time of patent filing. Under the contemplated provisions for publication of pending patent applications not later than 18 months from the priority date of the patent application, patentees in non-regulated industries will enjoy 19½ years of enforceable patent rights. Similarly, domestic applicants using "conversion-to-provisional" patent application procedures can expect issuance of a patent within approximately 18 months of the provisional application filing date, resulting in an actual post-issuance, post-marketing patent term of 19½ years. Thus, parity for inventors in regulated industries requires that the post-approval (or post-marketing) limitation on patent extensions afford a similar opportunity for a 19½ years of enforceable rights. The existing provisions on patent restoration in Europe and Japan (enacted after the U.S. law covering patent term restoration), in fact, provide for post-approval limitations in excess of the current 14-year limitation.

3. The restoration period should include the entire period of regulatory delay, with no deduction for the regulatory delay occurring before the formal application for regulatory approval to market. Third, current law denies restoration for fully one-half of all the regulatory delay attributable to the period from the beginning of the regulatory review period (e.g., the initial application for approval for testing) to the ac-

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tual filing of the application for approval to market. The deduction in this regard is purely arbitrary. It discriminates in the pharmaceutical field with a particular vengeance against inventors who require substantial periods of time in which to determine a precise approvable indication, develop a particularly unusual or innovative therapy where few models exist for conducting appropriate clinical trials, and focus on a chronic (as opposed to acute) indication for use. The better public policy would afford such innovators a longer, not a shorter, period of restoration for the exceptional nature of the risks and difficulties encountered in the development process.

4. The regulatory review period should include any regulatory review time during the pendency of the application for the patent extended, not just the time after the patent was issued. Fourth under the 17-year patent term measured from grant, a patent is eligible for restoration as soon as the patent is granted. Under a 20-year patent term from filing, a patent should likewise be eligible for restoration as soon as the patent is filed. The filing of the patent application fixes the expiration date of the patent and, thus, limits the post approval patent term. In order to provide meaningful restoration, the entire regulatory review after the patent term has begun to run should be included in the restoration period. The failure to start the restoration clock at filing under the patent term based on filing was apparently an administrative oversight in the drafting of the GATT legislation that must be corrected. For example, if an unsuccessful appeal delayed the issuance of a patent for 12 years for a product that required 13 years to develop to approval, the patent restoration period would be limited to one year. The patent term after approval could be as short as nine years. Had the appeal not been taken and the patent issued in two years, a full five-year patent restoration would have been possible under current law.

5. Patent restoration should be broadly available for all regulated industries that are subject to substantial marketing delays attributable to regulatory review. Fifth, the current patent term restoration act is limited to specific types of products regulated under specific laws. For example, regulated agricultural products (e.g., pesticides, herbicides, and fungicides) are not covered, even though safety and other tests result in substantial delays in commercialization on account of regulatory review. While more study is needed to identify industries and/or regulatory schemes that should be included under a reformed patent term restoration law, regulated agricultural products may present an immediate and compelling case for inclusion.

6. A single patent should be capable of being separately extended for each distinct entity claimed in the patent that requires a separate regulatory review. Sixth, if a patent claims multiple and distinct products that are separately developed, then each product will be associated with its own regulatory review period during which the testing and other pre-marketing approval requirements unique to that product will be undertaken. In such a situation, multiple extensions for the same patent should be afforded with each such extension limited to the distinct entity, with the term of extension limited in each case to the particular regulatory review period in question, and with the extension based on the expiration of the patent determined exclusive of any other extension granted based on another regulatory review.

Such a reform would remove a superfluous technical limitation on the effectiveness of the patent term restoration law that could result in complete denial of any patent restoration opportunity for a new drug (or other entity) in the situation where the inventor elected to obtain a single patent on the distinct products, instead

of seeking multiple patents, each limited to a single approved drug. While this provision may have been an oversight in the drafting of the patent term restoration law in 1984, at least one example has emerged of a patent in which three different NDA-approved drugs were specifically claimed. In this case, only one of the three products would have qualified for an extension.

7. Interim extension opportunities should be expanded and the process simplified where a patent could expire before approval of the regulated product. Seventh, a rare, but egregious limitation of the existing restoration law is the very limited opportunity for interim extension in the situation where a patent to be extended would normally expire before the regulatory approval to market. The opportunity to extend the patent on an interim basis for up to five years should be possible, following which the full patent restoration opportunities should be afforded at the time of regulatory approval. Thus, after one or more interim extensions, an innovator could have much of the patent term restored.

8. A late-issuing patents should be extendable. Eight, with U.S. patent interference practice and other complex features of U.S. patent prosecution, the issuance of a patent can be delayed until substantially after the date of regulatory approval. In order to afford meaningful extension opportunities, and innovator should be ac-

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corded a more prolonged period than 60 days from the date of regulatory approval, e.g., up to two years before the date of expiration of the patent.

9. The "due diligence" requirement should be repealed. Ninth and finally, since 1984 the Patent and Trademark Office reports that essentially no substantive challenges have been made by members of the public under the due diligence provisions. No patent term extension has been reduced even one day for lack of due diligence. Despite this the Patent Office must obtain from the applicants for extension sufficiently detailed information on regulatory approval efforts to determine if the required diligence is present. The net effect of the "due diligence" requirement is the creation of a more complex procedure that is more expensive for the applicant and the government.

BIO believes that these are modest amendments to the Hatch-Waxman Act and that they should be adopted. It is particularly appropriate that they be adopted at the same time as amendments to the GATT patent term are adopted. Both sets of amendments address the same issue — erosion of patent term due to government action which is beyond the control of the patent applicant.

THE LOG JAM ON PATENT LEGISLATION

It is essential that we resolve the controversy over the 20 year patent term. Without a resolution we fear that the Congress will be unable to return to a business-Uke consideration of the other patent issues which need to be addressed. Patent

term is a critical issue, but there are other important issues. In addition to amendments to the Hatch-Waxman Act the following patent issues need to be addressed:

1. 18 Month Publication and Prior User Rights: There is a strong consensus in favor of conforming U.S. patent law to the system in Europe and Japan where the substance of patent applications is published 18 months after the patent is filed. The same legislation must define the user rights of others who are practicing the invention but who have no patent protection for this practice.
2. Reexamination of Patents: Useful reforms can be adopted to strengthen the process for securing reexamination of a patent. This might reduce the tendency of competitors to invalidate a patent through litigation.
3. PTO User Fee Diversion: BIO has been very active in seeking to end the diversion of PTO user fees and interested in the proposals to restructure of the PTO.
4. Scope of Patents in Japan: The Subcommittee has been helpful as the U.S. seeks to secure adequate patent protection for biotechnology inventions in Japan.
5. GATT Negotiations: BIO is already working on the next round of negotiations on international treaties on patents, Article 27. The current article does not provide sufficient protection for many biotechnology inventions.
6. The Ganske-Wyden Bill: BIO testified at the October 19 hearing of this Subcommittee regarding the Ganske-Wyden bill and explained the damage it could do to biomedical research.

The log jam on patent legislation arising from the controversy over the 20 year patent term is imposing a very real cost for all of us who care about patent policy. It is time to resolve the controversy by ensuring that patent term is not eroded due to government action beyond the control of the applicant.

CONCLUSION

The Chairman and Members of the Subcommittee have demonstrated their understanding of the importance of patents for biotechnology inventions. They have led the way in strengthening patent protection for our innovative industry.

BIO's proposals to amend H.R. 1733 form the basis for a resolution to the patent term issue and would enable all of us to turn to other important, and pressing, patent policy issues. BIO's proposals addresses the legitimate interests of patent applicants without opening up opportunities for abuse by those who seek to secure submarine patents.

With the adoption of these amendments there is no longer any need to guarantee a 17 year minimum patent term from grant. Such a minimum term might be the simple solution, but safeguards for diligent patent applicants achieve the same result and are functionally equivalent.

With the adoption of these amendments to H.R. 1733 BIO is ready to enthusiastically endorse the biU and explain why the 17 year minimum patent term is not necessary.

To be clear, the guaranteed minimum 17 year patent term would resolve all of our concerns. The amendments we propose to the 20 year term would achieve the same result while not opening up opportunities for submarine patents, but they are presented as an integrated and comprehensive package. All of these amendments

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must be adopted to ensure that the 20 year term will not erode the patent term for diligent applicants. We are open to different technical formulations of these amendments to the 20 year term, but the critical issue is whether taken as a whole the amendments protect diligent applicants. If they do not, then the only available alternative becomes the guaranteed minimum 17 year term.

Thank you very much for your support for the biotechnology industry and the opportunity to submit this statement.

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D. Tilt-back design

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The Jerger 5 quality construction and beautiful blond wood case have made it a favorite for decades! The large, easy-to-read faces tilt backward slightly for optimal visibility. Measures

4 1/2" x 1 1/2" x 1 1/2" 60-day warranty

? LSC-35 Tilt-Back Clock - , !'. ^TW)

\$?4.95

...sr pri r Member's prit

E. Holland clocks offer
precision and style!

Even pushing both buttons down at once won't harm this high-tech clock!

Solid, flat-topped brass buttons are a real advantage in time scrambles.

Same size as BHB clock above, but high-precision — holding is thick!<er than 3H3 1-year warranty'

5 LSC404'- Black Knight

=00^55 S46.50I

? L=C4044 See-Through
,«0 555 \$46.50!

F. All- wood tilt-back design with brass
trimmings - only \$59!
Rolland tiitback
design and clear
large clock face
reveal the time at a
glance. Measures

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Appendix A: Explanation of BIO Proposed Substitute for Section 8 of H.R.

1733 To Protect Diligent Patent Applicants From Loss of Patent Term

The following analysis explains the terms of BIO's five proposed amendments to Section 8 of H.R. 1733. The five amendments were incorporated into one substitute for Section 8. The text of the substitute is presented following this analysis.

The BIO substitute ensures that diligent patent applicants filing new applications for patents will not lose patent term, when such term is 20 years starting on the date of application, due to delays beyond their control. It does not guarantee a 17 year patent term from the date a new application is granted. All these amendments are consistent with the GATT treaty itself. The treaty provides that signatories must provide no less than a 20 year term from application, so it is clear that setting a patent term of 20 years with safeguards for diligent patent applicants is permitted.

Like H.R. 1733, the BIO proposed amendment provides additional safeguards to those already found in the GATT implementing law (P.L. 103-465). Both H.R. 1733 and the BIO proposed amendment seek to protect patent applicants by providing greater than five years extension for delays that occur at the PTO, protecting applicants from miscellaneous delays at the PTO, and limiting the maximum term of enforcement of a patent. The BIO proposed amendments go beyond the amendments in H.R. 1733 by providing additional safeguards for diligent patent applicants by removing the cap on total extensions and by setting an objective standard to compensate applicants for delays that occur at the PTO. Further, the BIO proposed amendment protects the diligent patent applicant by allowing the continuation of prosecution in subsequently filed applications without losing a patent term extension earned in a previous application. Most important, the BIO proposed amendment provides no safe harbor to those who would want to use patent term extensions to submarine an industry or competition.

The terms and intent of the amendment is stated in the following analysis.

The BIO proposed amendment amends subsection 154(b) of P.L. 103—465. The BIO proposed subsection 154(b)(1) provides for extending the term of patents on six different grounds: subsection 154(b)(1)(A) through subsection 154(b)(1)(F). Further, the amendment specifically states that a terminal disclaimer will not eliminate the possibility of term extension in subsection 154(b)(1)(G). The BIO proposed subsection 154(b)(2) provides that a patent term is extended on the "back end", it will not enjoy full "front end" provisional protection. This limits the cumulative period of pre- and post-grant protection.

BIO's proposed subsection 154(b)(1) includes the following six instances in which term extensions are granted:

Subsection 154(b)(1)(A): delays due to interferences (including appeals from such interferences);

Subsection 154(b)(1)(B): delays in grant of a patent caused by a secrecy order;

Subsection 154(b)(1)(C): delays in grant caused by any judicial review of a PTO determination (including mandamus actions) where the reviewing court makes a decision adverse to the applicant;

Subsection 154(b)(1)(D): administrative delays at the PTO;

Subsection 154(b)(1)(E): administrative delays in the PTO after applicant petitions for the withdrawal of finality; and

Subsection 154(b)(1)(F): delays that occur in a parent application.

The first of these amendments — BIO's proposed subsection 154(b)(1)(A) — amends subsection 154(b)(1) of P.L. 103—465 to eliminate the 5 year cap on total extensions.

H.R. 1733 recognizes that the five year cap on extensions of patent term was unfair to some of the most innovative inventors and therefore amended the cap, from five to ten years. This amendment takes that idea one step further by eliminating the cap. It is unfair to applicants to prevent them from recovering a patent term when they could not prevent the delay. Any cap 5 or 10 years or any other number is arbitrary.

BIO's proposed subsection 154(b)(1)(A) also clarifies the dates used in calculating the various causes of delay. This obviates some problems in P.L. 103—465 and the PTO regulations. For example, it is not uncommon in PTO practice to suspend prosecution of an application for a considerable period of time before actually declaring an interference. BIO's proposed subsection 154(b)(1)(A) requires calculation of the extension period from the time the PTO suspends prosecution, declares an interference or when the patent applicant proposes an interference, whichever is first. Similarly, BIO's proposed subsection 154(b)(1)(B) clarifies the calculation of the extension of time for a secrecy order to specifically include the time and application was suspended.

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There is a similar problem in the calculation of extensions due to an appellate review which is clarified in BIO's proposed subsection 154(b)(1)(C). P.L. 103—465 provides that the period of extension ended on the date on which the decision was rendered by the Board or reviewing court. However, applicants can still wait a considerable time before the PTO resumes actions on an application after a successful appeal. For example, a decision reversing all rejections of the claims, *In re Bell*, was handed down by the Federal Circuit on April 20, 1993. The patent, however, did not issue until April 11, 1995, a delay of two years. The vast majority of that 2 year period was spent waiting for the PTO to issue a notice of allowance following the appeal so the applicant could pay the issue fee.

The extensions for appellate review in subsection 154(b)(2) of P.L. 103—465 employs the language "reversing an adverse determination of patentability" as the prerequisite for an extension. Some have interpreted this language (incorrectly we believe) as requiring that all adverse decisions must be reversed in order for the applicant to qualify for an extension. Since only one erroneous reason for rejecting an application will delay the grant of a patent, this narrow interpretation of the statute is at odds with the original purpose.

BIO's proposed subsection 154(b)(1)(C)(i) clarifies this issue. Furthermore, the proposed alternative would qualify for extensions those periods of delay caused by judicial review of any PTO action that has an adverse impact upon an applicant, not just decisions on patentability. For example, the new provision would apply to a review by way of mandamus of a Commissioner's decision (e.g., the correct filing date of an application) not normally appealable if that decision adversely affects an applicant. An applicant who successfully seeks judicial review in such circumstances should not be penalized for delay which was the result of correcting an erroneous PTO decision. If, however, the PTO proceeded with the prosecution of such an application while the other matter was under review, there would not be an extension since the period of extension is only for the time when there is no *ex parte* prosecution.

BIO's proposed subsection 154(b)(1)(C)(ii) allows the submission of an additional response by the applicant to the decision of the appellate Court or the Board to quickly resolve issues raised by the Court or the Board. This proposed amendment allows a promptly filed response to allow the continuation of prosecution of an application without the filing of a new application.

BIO's proposed subsection 154(b)(1)(D) provides for patent term extension when administrative (including examination) delay in the PTO exceeds 2 years on a cumulative basis. P.L. 103—465 does not provide extensions to diligent applicants for administrative delay outside applicants control. H.R. 1733 does for extensions caused by "unusual administrative delay," and "requires the Commissioner to prescribe reg-

ulations to govern the determination [of unusual administrative delay]." This amendment provides an objective basis for all patent applicants to determine if the administrative delay at the PTO was undue. There are a number of reasons in the future why the PTO may not be able to handle patent applications expeditiously. Whether the cause is lack of funding, a national emergency, the mishandling of the application files, or a deUberate decision by the PTO to refuse the grant of certain applications pending the decision by an appellate court in a test case, applicants should not be penalized.

BIO's proposed subsection 154(b)(1)(E) provides for extension when administrative delay in the PTO exceeds six months on a cumulative basis between applicants petitioning for the withdrawal of a final rejection (not on the merits) and the final rejection or allowance of that application.²² Like BIO's proposed subsection 154(b)(1)(E), this subparagraph replaces extensions for unusual administrative delay provided for in H.R. 1733 and which is not included in P.L. 103-465. This amendment assures the patent applicant that he can pay for the withdrawal of a final rejection and the PTO will still compensate applicant if there are delays in the PTO prosecuting his application. Instances where applicant petitions and pays a fee under 37 C.F.R. 1.129(a) for the withdrawal of finality of a rejection should not remove the requirement that the PTO must process those patent applications promptly. As in the prosecution of patent applications above, there are a number of reasons why the PTO

22 During the prosecution of a patent application before the PTO, each application is examined twice. Frequently, during those examinations progress towards patentability is made without the allowance of the application, for instance by the PTO, and the patent applicant agreeing on issues involving the claim language. In these instances the applicant can refile a continuing application which would continue the prosecution of the that invention or in certain instances petition and pay an amount equivalent to the price of filing a new application and have the second or final rejection withdrawn, giving the applicant two additional examinations.

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may not be able to handle patent applications expeditiously but in any of these instances applicants should not be penalized for delays beyond his control.

BIO's proposed subsection 154(b)(1)(F) provides for rolling extensions into subsequently filed application in instances where the prosecution of a subsequently filed application is really merely the continuation of prosecution of the same invention within the PTO. Neither P.L. 103-465 nor H.R. 1733 clearly indicates if rolling extensions into subsequently filed applications is permitted. In this subparagraph rolling extensions over is permitted in four different instances identified in clauses (i)-(iv).

In BIO's proposed subsection 154(b)(1)(F)(i) rolling extensions into divisional ap-

Applications³ is provided for as long as applicant quickly files the application that the Patent and Trademark Office has indicated is separable. For these applications the delay in the prior application is necessarily a delay in all the divisional applications and therefore each extension should be transferable to the subsequently filed application.

In BIO's proposed subsection 154(b)(1)(F)(ii) rolling extensions into a continuation-in-part application²⁴ is provided for if the same invention is being pursued. The requirement that the same invention is pursued will prevent applicant from getting a benefit from a previously filed application on claims directed to a new invention which was not involved in the original delay.

In BIO's proposed subsection 154(b)(1)(F)(iii) rolling extensions into a continuation application²⁵ is provided for if applicant is merely continuing the prosecution of the same invention as was prosecuted in the prior application. Extensions in clauses (ii) and (iii) allow applicant to continue to prosecute the same invention without jeopardizing the extensions that they earned in the previous applications.

Finally, in BIO's proposed subsection 154(b)(1)(F)(iv) rolling extensions into a continuing application is provided for if applicant quickly files the continuation patent application thus allowing applicant the opportunity to continue to prosecute some claims while others are allowed. This clause will allow applicant to get patent protection while continuing to prosecute other claims within the same application.

BIO proposed subsection 154(b)(1)(G) assures extensions are available for cases where a terminal disclaimer²⁶ is required. This subparagraph specifically contradicts both P.L. 103-65 and H.R. 1733. This amendment is necessary to allow a diligent applicant to patent certain claims and to be able to continue to contest others. This amendment would not provide any patent term extension to would-be submariners as the patent term extension is dependent upon circumstances beyond the applicant's control and in the instance where the applicant decides to appeal the extension is dependent upon a decision adverse to the PTO from a reviewing court or the board. Without such a provision applicant would effectively have no ability to recoup patent term in cases requiring a terminal disclaimer. Similarly, without this amendment, applicant would have no motivation to accept the patent to a narrow claim, that the Examiner might offer, while a broad claim was pending.

BIO's proposed subsection 154(b)(2) puts certain limitations on patent term extension. First, BIO's proposed subsection 154(b)(2)(A) provides that during a particular period of time a patent qualifies for extension under more than one provision of paragraph (1), only one period of extension will be permitted. In other words, there

²³ A divisional application is an application that is directed to subject matter that the PTO deems is patentably distinct subject matter from subject matter contained in a pending application. Frequently, the PTO determines that a single patent application contains multiple distinct

inventions that are each able to support an independent application and that it would be to administratively burdensome for the PTO to examine all the inventions in the same patent application. Upon such a finding the PTO requires the applicant to decide which single invention will be prosecuted in that application. The applicant can, at that time, pay the PTO and file a new application which is the same as the previous application. This new application is called a divisional application. The applicant can then pursue the previously non-selected inventions.

2" A continuation-in-part application is an application directed to the same subject matter in the previously filed application, but which also includes additional information within the body of the patent application.

25 A continuation application is an application that contains the exact same information as a previously filed application, but allows the patent applicant to continue to prosecute the invention. Continuation applications are useful when an applicant is making progress towards patentability, but the application has been rejected twice, or when the examiner has indicated certain claims are allowable and others are not and, therefore, the applicant wants to have some claims issue while the patent applicant continues to contest the patentability of other claims.

26 A terminal disclaimer is a notification to the public that the applicant forgoes the full term of a patent because the claims are directed to an invention that is similar to an invention that the inventor already has patented. The terminal disclaimer is designed to prevent the patent applicant from having an effective patent term that last longer than the term of the first issued patent.

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will not be any double counting. Second, in no event will extension provide a patent term in excess of 17 years of date of grant. This is different from current caps which are measured from filing date.

Finally, BIO's proposed subsection 154(b)(2)(B) provides that a patent term is extended on the "back end", it will not enjoy full "front end" provisional protection. Under the proposal, the provisional protection cannot begin to run for an extended patent earlier than 18 months prior to the end of the extended patent term. Assuming a patent does not issue in the first year and one-half after it, or a provisional application is filed, the normal cumulative period of pre- and post-grant protection will be no more than 19 1/2 years. Thus, an extended patent's cumulative period of pre- and post-grant protection should be similarly limited.

Following is the text of BIO's proposed amendments to H.R. 1733 and subsection 154 of the GATT implementing law 20 year patent term.

Appendix B: BIO Proposed Amendments to H.R. 1733 To Protect Diligent Patent Applicants From Loss of Patent Term

Following is the text of BIO's proposed amendments to Section 8 of H.R. 1733 to protect diligent patent applicants from the loss of patent term. It amends subsection 154 of the GATT implementing law 20 year patent term.

(A) congressional findings

(1) The Congress finds that the patent term provisions of the GATT implementing law (P.L. 103-465) may inadvertently erode patent term of diligent patent applicants and that safeguards should be incorporated, consistent with the GATT, which ensure that diligent patent applicants do not lose patent term under the new twenty year patent term due to delays that are beyond their control.

(2) The Congress finds that these safeguards for diligent patent applicants should not provide opportunities for patent applicant to intentionally delay the issuance of a patent.

(3) The Congress finds that the following amendments are consistent with the GATT, protect diligent patent applicants, and do not provide the opportunities to delay the issuance of a patent.

(B) amendment to HR 1733

On pages 5-6 of H.R. 1733 delete section 8 and insert in lieu thereof the following: Paragraphs (3) and (4) of subsection 154(b) of Public Law 103-465 (GATT implementing law related to 20 year patent term) are deleted, and paragraphs (1) and (2) of Public Law 103—465 as amended to read as follows:

"(b) Patent Term Extension to Compensate Applicants for Delays Beyond Their Control. —

"(1) Basis for Patent Term Extensions. — Subject to the limitations of paragraph (2) of this subsection, if the grant of a patent is delayed due to any of the following, the term of a patent determined pursuant to paragraph (2) of subsection (a) of this section shall be extended for the period indicated:

"(A) Patent Term Extensions for Delays Due to Interferences. — If an application is involved in one or more interference proceeding under Section 135(a) of this title, the period of extension shall be the same as the period beginning with the earlier of (i) the declaration of the interference, or (ii) the suspension of ex parte examination in order to permit the interference, or (iii) in the circumstances where the interference is between the application and an unexpired patent, on the date when the applicant proposes a count for interference whether or not the interference is ultimately declared with the unexpired patent and ending on the resumption of ex parte proceedings in the Patent and Trademark Office after the termination of the interference proceeding including any appeals thereof.

"(B) Patent Term Extensions for Delays Due to Secrecy Orders. — If an application is the subject of a secrecy order pursuant to Section 181 of this title, the period of extension shall be the same as the period during which the grant of a patent was withheld or prosecution was suspended.

"(C) Patent Term Extensions for Delays Due to Appeals. —

"(i) If an applicant for a patent seeks review by the Board of Patent Appeals and Interference or a Federal Court of a decision by the Patent and Trademark Office,

including the review of a decision of the Commissioner, and such review results in a reversal of a determination adverse to the applicant, the period of extension shall be the same as the period beginning on the date on which the applicant initiates the review and ending on the resumption of ex parte proceedings in the Patent and Trademark Office;

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"(ii) Regardless of the result of any such review by the Board of Patent Appeals and Interference or a Federal Court, an applicant shall be entitled to submit in the application that was reviewed a response and/or amendment and evidence within six months of the date of the decision or review was made, and ex parte prosecution shall resume on the basis of such submission. The Patent and Trademark Office shall not be obligated to consider any more than one such submission.

"(D) Patent Term Extensions for Delays Due to Unusual Delays at the Patent and Trademark Office. — Unless the application is pending before the Board of Patent Appeals and Interferences, if the Patent and Trademark Office has taken, on a cumulative basis, more than 2 years, to take any and all steps necessary to advance an application to (1) grant, or (2) final rejection, and to process the application for issue then the period of extension shall be the same as the cumulative period in excess of 2 years an applicant has waited for the Patent and Trademark Office to take an action necessary to advance the application to grant or final rejection and to process the application for issue.

"(E) Patent Term Extensions For Delays Due to Delays at the Patent Office After Withdrawal of Final Rejection. — If the Patent and Trademark Office has taken, on a cumulative basis, more than six months to take any and all steps necessary to advance an application to (1) grant, or (2) final rejection from the date of the Patent and Trademark Office's receipt of a petition from the applicant for the withdrawal of the finality of the rejection (other than petitions on the merits of the final rejection) then the period for extension shall be the same as the cumulative period in excess of six months an applicant has waited for the Patent and Trademark Office to take action necessary to advance the application to grant or final rejection.

"(F) Patent Term Extensions Maintained in Subsequently Filed Applications for the Same Invention. — Delays which are the basis for patent term extension under paragraph (A), (B), (C), (D) and (E) of this Section shall include:

"(i) in divisional applications, delays occurring prior to the later of (a) the finality of a restriction requirement made under 35 U.S.C. § 121, or (b) the denial of an appropriately filed petition for the reconsideration of the finality of the restriction requirement, or (c) the election by applicant without traverse in a prior patent applications which is the priority basis of the divisional application if the divisional application is filed within six months of the later of (a), (b) or (c);

"(ii) in continuation-in-part applications delays that occurred in the priority application, if the continuation-in-part application is filed with claims directed to inventions previously claimed and not directed to new matter (with respect to the priority application) and the claims have been finally rejected;

"(iii) in continuation applications delays that occurred in the priority application, if the continuation application is filed with claims directed to inventions previously claimed and the claims have been finally rejected; or

"(iv) in continuation applications delays that occurred in the priority application, if the continuation application is filed within six months of the indication of allowability of any claim and the continuation application only includes claims that have been indicated as allowable or are dependent on those claims.

"(G) Patent Term Extensions Availability Despite Terminal Disclaimers. — ^Any patent whose term has been disclaimed beyond a specified date will be extended under this section beyond the expiration date specified in this disclaimer by means of the extension granted to this patent under this Section.

"(2) Limitations on Patent Term Extensions. —

"(A) Maximum Periods of Patent Term Extension. — The total of all extensions under this subsection shall not extend the term of a patent beyond 17 years from date of grant. To the extent that multiple grounds for extension specified in paragraph (1) of this subsection apply to the same period during which the application was pending, the patent shall be entitled to an extension based on only one of such grounds for such period.

"(B) Provisioned Protection. — With respect to any patent term which is extended under this subsection, the period of provisional rights provided by subsection (d) of this section shall not begin until the later of the publication of the application as described therein, or that date which is 19 years and 6 months prior to the end of such extended patent term."

Appendix C: Delays Due to Successful Appeals for Biotechnology Patents
TO the Court of Appeals for the Federal Circuit (CAFC)

Following are some examples of long delays in cases appealing PTO actions to the Court of Appeals for the Federal Circuit (CAFC). A five or ten year cap on the compensation due to patent applicants for delays at the CAFC would be inadequate to compensate the companies in these and other cases.

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4V2 years In re Vaeck 20 USPQ 2d 1438 (CAFC)

8 years In re Goodman 29 USPQ 2d 2010 (CAFC)

10 years In re Wright 27 USPQ 2d 1510 (CAFC)

13 years Fiers v. Sugano 25 USPQ 2d 1601 (CAFC)

14 years In re Bell 26 USPQ 2d 1529 (CAFC)

Appendix D: Delays Due to Successful Defense in Interference Proceedings
FOR Biotechnology Patents at the Patent and Trademark Office

Below examples of long delays in cases involving interferences. A five or ten year cap on the compensation due to patent applicants for delays for interferences would be inadequate to compensate the companies in these and other cases.

(a) Case One: Interference originally declared between multiple parties. The Administrative Patent Judge indicated when rendering an interlocutory decision that without settlement the interference could last at least 11 years. At that time the application was some eight years old. The junior and thus likely losing party was already on the market and had every incentive to delay the interference and not to settle. Under the new law this invention would be lucky to enjoy one year of effective life with a possible 5 year extension. Although interferences are relatively rare those involving important inventions usually last a long time. The situation will become even worse if GATT is implemented like NAFTA by making 35 USC 104 international or possibly repealing it altogether. The prospect of "tactical" interferences is alarming.

(b) Case Two: Another biotechnology based company has 20 declared interferences with the furthest progressed of those contested (i.e. not settled) which comprise more than half of the total pending now for 10 years and not expected to be decided within the PTO for another two years. This decision is then subject to the loser's right of appeal to the district court (2-3 years for final decision) and then the CAFC! As with the first example effective life could be reduced to little or none.

(c) Case Three: Chief Counsel of yet another of our member companies has had more interferences declared in the first few years with that company than in twenty years with a major pharmaceutical company.

Mr. MOORHEAD. Mr. Crilly.

STATEMENT OF PAUL B. CRILLY, Ph.D., ASSOCLVTE PROFESSOR, ELECTRICAL ENGINEERING, UNIVERSITY OF TENNESSEE, KNOXVILLE

Mr. Crilly. I'm thankful that I can be here. With your permission, I'd like to enter another additional written statement in the record.

Given the tremendous fruits of the American patent system, and we are in a so-called information age, it seems peculiar that there has been such unprecedented attack on this system and the patent rights enjoyed by Americans. This attack has been led by those same persons who were downsizing and exporting jobs overseas. They, and some of those in authority in the U.S. Department of Commerce and other government agencies, view U.S. patent rights as a trade chit, something to be negotiated away to foreign com-

petitors. Bill H.R. 359 is corrective legislation that will restore the patent protection Americans have had for over 200 years, and it should be quickly passed by this Congress.

H.R. 359 is not a new bill. We've had this protection for a long time. Back in 1790 the patent term was 14 years from grant and routine extensions were given for 7 additional years. In 1865 or so, the 17-year-from-grant term was put in place. Thus, a grant-based term has been around for a long time.

We received \$20 billion in 1993 alone in patent royalties from other countries. I'm afraid that unless H.R. 359 passes, the system will be further weakened and we'll lose many of these royalties, and this will increase our trade imbalance.

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And I think, on a more personal note, I'd like to see us keep our patent system the way it is because I think it's the mechanism we create products to save our lives. I'd like to see a cure for AIDS, a cure for Alzheimer's, and a cure for heart trouble. Those are going to come about because people invent things that will cure these diseases. The United States is a leader in lifesaving technology, whether it be penicillin, or other antibiotics, or whether it be MRI's, and other biomedical devices. We are the leader in biotechnology because of our patent system.

I think we can have the benefits of the 20-year term that Mark Lemley alluded to with the ROHRABACHER bill because this bill specifies a 20-year-from-filing or 17-year-from-grant term, whichever is longer. We will get those benefits of a 20-year-from-filing term with the ROHRABACHER bill but we will also get at least a guaranteed term of 17 years. That's what we need to have. Why would you invest in something if the term is uncertain? With the 20-years-from filing term, the applicant is at the mercy of the patent examiner. When you apply for a patent, you are dealing with a large government agency and, as Dr. Rines alluded to, you're somewhat at his mercy, but, eventually, when you go back and forth with the patent examiner and when all is said and done, if you have a patent, your patent is good for 17 years.

Let me give an example. When you apply for a patent, you may want to make it as broad as possible. The patent examiner will try to narrow your claims down and that may require you to file a divisional or continuing application and possibly go through an appeal

process. The point is that ultimately you get a patent or patents that are fairly broad and are worth a lot of money. If we have a system of a 20-years-from filing term you'll take the first thing, you'll take the first scrap that they throw at you, you'll take whatever they give you because the 20-year clock is ticking.

H.R. 359 is in compliance with the GATT and the Uruguay Round agreements. In the letter that Congressman ROHRABACHER alluded to from Clayton Yeutter, the intention of those patent provisions was to strengthen every country's intellectual property laws. And we've seen that with the copyright laws. I think that it's fascinating to see that the copyright laws, as we speak, are being strengthened. And I think that's good. We should protect our copyright holders. But why are we picking on the inventors? Why are we demonizing the inventors like I've heard in earlier testimony when these are the people that create things? We don't do this to the copyright people. They're allowed to keep their works for 50 years after they die, and they still have rights to it. Inventors just get 17 years from grant or 20 years from filing.

But the intent on the Uruguay Round and the GATT agreements was to strengthen other countries intellectual property laws. And so they set a floor of 20 years from filing. Countries could go with a longer term, and in fact the United States, for 6 months after GATT was passed by the Congress, went with 17 years from grant or 20 years from filing, whichever is longer. So it's not they precluded a longer patent term, and I think that's the point. The Uruguay Round was not to harmonize the patent laws of all the countries; it was to strengthen other people's protections.

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Patent protection is a constitutional right, not a trade chit to be negotiated away. And I guess that leads to my next comment, and that is, who cares about average pendency? The Patent Office claims 19 months average pendency. Some other people claim 36 months average pendency. Some people claim 6 years average pendency. Who cares? What about the guy that invents the revolutionary device? He should get the same patent protection, even though it may have taken him a long time to issue as someone who files an incremental invention that issues in 18 months.

When I was at Hewlett-Packard, some of the patents issued in 1 year or 2 years. That's great, but they were very incremental

ones. And yet, the polypropylene plastic patent took 27 years to issue, and by the way, just to clarify the record, it was held up because of interferences. After it was filed in 1956 it took almost 17 years for the Patent Office to figure out who deserved the invention in an interference. It went to Monty Edison. Phillips didn't agree with that decision, and they took it to court and it took them another 10 or so years, and finally in 1983 it went to Phillips Petroleum. So it was not some malicious inventor holding up the process. I believe that was also the case with the laser.

U.S. citizens are entitled to equal protection under the law. So I should get the same patent protection if I have a major invention that someone gets who has an incremental invention. Patent protection, like free speech, levels the playing field between the big and the little guy. And Dr. Rines has already alluded to that. Big corporations have a lot of attorneys and they can take advantage of that. The little guy doesn't have that. And patent protection protects the little guy from the big guy.

The current bills, 1733, 1732, and the prior user rights bill will encourage trade secrets. The intent of the Founding Fathers was you get a limited period of protection, but that after that it's published and everybody can enjoy it. By pregrant publication, you are going to encourage trade secrets. These bills will favor the large corporations and they will encourage or even only allow for incremental patents to be issued.

As Dr. Damadian said, "Patents were put in the U.S. Constitution to enable an individual to create new industries." And I really admire what he's done. He created a new company from nothing and it provided all kinds of jobs and taxes and revenues to Long Island and New York State.

Now, from my perspective, and I have an insider's view because I worked for the Congressman, I saw this whole process and I thought it was done in a very dishonest fashion. Since 1966 with the Lyndon Johnson Patent Commission, and then with the Mosbacher Commission in 1992, the big companies have sought to weaken the patent system. They wanted things like 20 years from filing, but the Congress has always rejected these. And on both of those Commissions there were no independent inventors represented. The universities weren't represented even, except in the 1992, one. And even then, it was the president of the university who was a former vice president of General Electric. But Congress

has always rejected these recommendations. It wasn't until it was snuck into the GATT and put on the fast-track process, where Members of Congress couldn't amend the GATT, that they were

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able to get this thing through. None of these bills would probably pass on their own merits. They were certainly tried in the past, but they wouldn't. So they took advantage of this fast-track process. Another point I want to make is the PTO-published 19-month application pendency is misleading if not incorrect. That 19-month figure does not take into account the original filing date. Let me give an example of that one right there [pointing to charts]. You file a patent in 1980. The Patent Office issues restrictions, and that, by the way, is oftentimes why a whole string of patents get issued; it isn't the applicant's fault that those things get done. It's because the Patent Office issues restrictions, and what that means is they're saying that your patent is too broad. You've got to refile some narrow applications. In 1984 you file some divisionals and some continuing applications. In 1986 they require you to refile again for appeals or appeal of a final rejection. And in 1988 your patent has been issued. So three Office actions that took four Office actions, that over an 8-year period will be counted as four actions averaging 2 years each, when in fact it really took 8 years for that patent to get issued. So, again, that 19-month figure does not include the original ancestor date. It includes all the Office actions in that.

And let me give another illustration of that with the next one. Somebody filed a patent in 1950 and the PTO imposed a secrecy order on it right away, which means that it's a threat to national security, and so it's imposed for 40 years. In 1990 the Government lifts the secrecy order, the application is refiled, and the original one is abandoned. Now when people say that applications are abandoned, it sounds like something really terrible. It's routinely done because when you refile then you also abandon the original application. And then the patent issues in 1990. So, as far as the PTO is concerned, the average pendency on that patent was 6 months. It was not 40 years plus 6 months. And that's a critical point. As I said before, the laser and the plastic for beverage containers took over 20 years to issue; they would have not gotten a patent term under today's system. None of those were due to the fault of

the patent applicant. These delays were due to interferences or PTO-imposed delays.

On August 12, 1994, Commissioner Lehman claimed there were 627 submarine patents that took over 20 years to issue. We called up the Patent Office and we said, "Tell us why were those 627 applications delayed. What was going on? Were they due to divisional applications? Were they due to continual applications? Were they due to secrecy orders?" They couldn't tell us why they were delayed.

I said to Lee Skillington, "So you based changing the patent law and you don't even know why those 627 were delayed? You have no idea?"

He said, "No, no."

I said, "Well, we want to know why those were delayed."

He said, "We can't do that. It will take forever to do. It'll take our entire staff months to do."

Well, after Congressman ROHRABACHER wrote a letter requesting that, they came up with some numbers. And it's in the written record here, but I will show here the pie chart. Two-thirds of the

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pie chart shows delays were caused by secrecy orders. They were not inventors who were elongating the process. And of the total amount, only 167 or 26 percent were due to continuing applications. But even then, we can't prove, and the PTO has not proven, that those continuing applications were done by malicious inventors seeking to elongate their application process. So as a citizen I am quite insulted by that statement.

And the other thing I point out, along the same lines is, there is only anecdotal evidence of submarine patent abuse. Every time a lobbyist would come to our office and complain about our bill H.R. 359, they would always bring up Jerry Lemulson's name. That poor man has been demonized to some unbelievable degree. He's never had a chance to defend himself. I don't want to defend him myself, either. But we're going to change the patent term based on one person who has allegedly abused the system? I find that incredible, because, again, we punish the guilty; we don't punish the innocent to punish the guilty. There has been no comprehensive analysis of why patents are delayed.

Finally, it's ludicrous to suggest that weakening our patent sys-

tem will improve our trade imbalance. The idea is that we'll weaken our system, and hopefully Japan will be a better trading partner or Japan will enforce their patents better. I think it's interesting to note, in the DeConcini study by GAO, American companies had a difficult time in Japan getting patents and getting the patents enforced. I don't think that there is anything to suggest that all these concessions we're doing to our system is going to make Japan behave better.

It took Texas Instruments 17 years to get their integrated circuit patent issued, when they applied for it in 1960. They didn't get their patent issued until 1977. So, TI only got a 3-year patent term on their integrated circuit.

So I don't see how Japan will, again, improve their behavior if we weaken our system. Let them improve their system. If we want harmonization, fine. Let's let all the other countries bring their systems up to our level, where a person with a creative idea can get good protection for their idea.

I'm speaking mostly for myself, but I have been authorized to speak for the Tennessee Inventors Association, of which I expect to serve on the board of directors. Many universities — the list is as long as the day have endorsed this bill, including Cogar, AUTUM, MIT, Harvard, and various other schools, as well as many inventors' groups.

Thank you very much.

[The prepared statement of Mr. Crilly follows:]

Prepared Statement of Paul B. Crilly, Ph.D., Associate Professor,
Electrical Engineering, University of Tennessee, Knoxville
introduction

Abraham Lincoln stated that patent and copyright protection was one of the greatest innovations of Western Civilization. Given the tremendous fruits of the American patent system and that we are in the so-called information age, it seems peculiar that there has been such an unprecedented attack on this system and the patent rights enjoyed by Americans. This attack has been led by those same persons who are downsizing and exporting jobs overseas. They and some of those in authority in the U.S. Department of Commerce view U.S. patent rights as a trade chip to

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be negotiated away to our foreign competitors. Bill H.R. 359 is corrective legislation that will restore the patent protection Americans have had for over 200 years and it should be quickly passed by the Congress.

H.R. 359 preserves the mechanisms so that American entrepreneurs and inventors can obtain venture capital at no cost to the government in order to invent a cure for heart disease, or AIDS; create alternate energy sources or a host of other inventions that improve our lives.

Let me illustrate with a recent example of what the founding fathers had in mind when they put intellectual property protection in our Constitution. One of this committee's recent witnesses, Dr. Raymond Damadian, invented and patented a MRI for medical diagnosis. When Dr. Damadian started his company, he had no corporate or manufacturing infrastructure, only an invention that was protected by the world's best patent system. He then set up a research and manufacturing operation on Long Island to build MRI systems, and in the last 15 years or so, numerous MRI systems have been sold, thousands of jobs have been created, good American jobs I might add, and countless lives have been saved. The profits from this company have stayed in America and the taxes paid have benefited Long Island, New York State and our Federal government. Dr. Damadian's MRI patent created a multibillion dollar industry! During this time, a large Japanese and a major U.S. corporation saw this success and sought to infringe on Dr. Damadian's patent. These companies were unwilling to invest in the R&D or take the capital risk to create a MRI system, and yet once the little guy took the risk and made his venture a success, these companies wanted to take over the market. This story is repeated countless times, and is presently occurring with our biotech industry. Just as free speech protection in our constitution is supposed to level the playing field between the little guy and the big guy, such as the intent of the U.S. patent system. America's patent system is our crown jewel. In 1993 alone, the U.S. received 20 billion dollars in patent royalties from other countries. Unless H.R. 359 passes, our patent system will be further weakened, our trade imbalance will be further increased and our ability to exploit emerging technologies such as biotech will be significantly damaged. This will kill the proverbial goose that lays the golden eggs.

Not passing H.R. 359 will have the unintended consequence of causing inventors to lose confidence in patent system and revert to trade secrets. This is contrary to public policy where in exchange for a limited exclusionary period, the patent is eventually published for all to use.

I want to present the necessity of H.R. 359, and refute the arguments of its opponents.

BACKGROUND OF H.R. 359

I was an IEEEI-USA/AAAS Congressional Science Fellow from January 1994 to August 1995 and was assigned to the office of Congressman ROHRABACHER. I had an insider's view on the process in which the patent term was shortened.

In early summer of 1994, a constituent told us that there was a proposal to change the patent term and it was part of the GATT enabling legislation. I con-

tacted the House Judiciary Committee staff about this, but they did not give me any specific information except to suggest I contact the office of U.S. Trade Representative (USTR). The USTR person was hesitant to give me any specific information, but after I insisted, she sent me a draft copy of the patent provisions. Sure enough, this bill contained language to eliminate the guaranteed 17 year patent term, and change it to a lesser 20 year from filing term.

It should be noted that during this time, the House Ways and Means, Agriculture, and Foreign Relations Committees were holding hearings on the GATT legislation and had provisions for House members to amend it. I asked the committee staff members about the patent provisions of the GATT enabling legislation, but was always referred to the Judiciary committee. Again, when I contacted the Judiciary Committee, they said hearings were not planned, and there would be no opportunity for other House members to amend this legislation other than through informal meetings in House members offices.

This is absurd! This is legislation that makes a major change in patent protection, but neither the public nor the House members are informed nor were permitted to amend the legislation.

Representatives Bentley and ROHRABACHER heard about this and wrote a letter that was signed by 38 House members from both parties to President Clinton protesting these hidden changes to our patent protection. This outcry led to a joint House/Senate hearing, but no markup and no opportunity to amend the bill. The witness list was stacked in favor of the large multinational corporations; those that favored a guaranteed 17 year patent term were permitted only one witness. Because

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the GATT was on Fast-Track, once it was submitted for a vote, it could not be amended. While many members of Congress supported our position, they were unwilling to vote against GATT because of just one provision. And so on December 6, 1994, the GATT enabling legislation became law.

Almost every part of the GATT enabling legislation except for the patent provisions got a full and public hearing with an opportunity for House members to amend the legislation. If the patent provisions could not see the full light of day, then something was seriously wrong!

It was also my observation that those who opposed the guaranteed 17 year patent term were many large multinational companies that were either technology users, or had no use for the patent system and depended on trade secrets. In my experience having worked for a large corporation, these companies will not create revolutionary inventions unless faced with like competition, and feel threatened or at least inconvenienced by the little company that has an innovative product. Starting in 1966 with the Lyndon Johnson Patent Commission, these large entities have sought

to gut patent protection, but were unable to do so through the usual legislative process. Only through the GATT fast-track process were they able to change the law. A patent attorney for a large multinational corporation explained to me the difference between how large versus startup companies view patents. Established companies often use patents as a defensive measure so they won't have to do basic R&D and yet can still participate in the market. That explains in part why companies such as IBM have thousands of patents, many of which are incremental and have no significant economic value. Even when these big companies have patents that turn into major products, they already have the manufacturing and sales infrastructure to quickly establish the market. They don't need much of a patent term. Conversely, a small startup company views a patent as a means of protecting their position while creating a new industry. A limited, but guaranteed patent term allows them to establish a manufacturing and marketing infrastructure and to develop a customer base. Thomas Edison was a classic example of this. He used his light bulb invention to establish an entire electric utility industry. There are still a large number of Thomas Edisons in our society.

WHY H.R. 359 AND A GRANT BASED PATENT TERM

For 200 years the United States has had a system where the patent term clock has started the date the patent was granted. In 1790, the patent term was 14 years from grant, but seven year extensions were routinely given. In 1861, the law was changed so the patent term was 17 years from grant. This has been the case until June 1995.

Conversely, the weaker patent systems of Europe and Japan have a term of 20 years from the filing date.

Having a term measured from the filing date is a bad idea, except for those who want to copy. Delays in the application process detract from the term length and thus the patent's economic value. The United States is a country where we have equal protection under the law. Why should a person who has filed a revolutionary patent application which will inherently require a long examination period have a shorter patent term than one who has filed an inconsequential patent that is quickly issued? Let me cite an example of why a 20 year from filing term is a bad idea. In 1956, Phillips Petroleum applied for a patent on Crystalline Polypropylene, a plastic used in soda containers. Because of delays caused by court proceedings and interferences which are solely under the control of the Patent and Trademark Office (PTO), the patent finally issued in 1983. Twenty seven years after filing. If the U.S. had a 20 year from filing patent term, the Phillips patent would have expired before it issued and Phillips would have lost \$300 million in royalties, and much of their R&D investment.

We often hear that American corporations are not willing to invest in long-term R&D, and that many managers and CEO's cannot see past the next financial quar-

ter. Reducing patent protection will only exacerbate this problem.

The PTO and others claim that they will work harder and reduce bureaucratic delays in getting patents issued. I have heard these same promises from the U.S. Postal Service about mail delivery times. While these promises are commendable, we still need a term guaranteed by statute.

On August 12, 1994 and June 8, 1995, PTO Commissioner Bruce Lehman testified before this committee that the average application pendency was only 19 months. He claimed that changing the term from 17 years from grant to 20 years from filing would actually result in a longer term. This is erroneous. Aside from the fact that protection of rights under the law is not based on averages, this statistic is highly misleading. For example, it averages in abandoned applications that never issue and

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it measures from the current filing date, not the older effective filing date from which the GATT term is measured. According to Lee Skillington, of the PTO, the 19 month pendency is the average for all office actions including patent refilings. It may not take in to account the original filing date. For example, consider a patent application that was originally filed in 1980. Continuing applications are filed in 1982 and 1984 and then the patent issues in 1986. The patent office counts the 1982 and 1984 refilings as two different applications. Thus a process that took effectively 6 years is counted as three applications averaging two years each. In another example posed to Mr. Skillington, a patent was applied for in 1950. It was under secrecy orders for 40 years. In January 1990, it was refiled and shortly after the original application was abandoned. In June of 1990, the PTO issues the patent. According to Mr. Skillington, because the PTO bases their metrics on what has occurred in any 3 month period, therefore the pendency of that application would only be 6 months even though the patent itself took over 40 years to issue.

And so, the PTO statistics do not tell the actual pendency of a patent application. However we can look at published numbers from trade groups. Using pendency figures from a 1994 issue of the Patent Gazette, the average pendency is 7 years. In a June 1994 letter from BIO, a biotechnology industry trade group, they suggest it takes an average of ten years for a Biotechnology patent to issue. The LASER patent took over 20 years to issue, and as was stated before, the Crystalline Polypropylene patent took 27 years to issue. Let me point out that these long pendencies were not due to any delay on the part of the applicant, but solely due to PTO delays. Bill H.R. 359 once again levels the playing field between the applicant and the patent examiner. The American patent system awards patent protection to the rightful creator and encourages patents that can be defended against infringement. As is often done, a patent examiner may issue restrictions or reject some or all of the applicant's claims and the applicant has to go through an appeals process. With

this new 20 year from filing term, these delays will detract from the patent term and its economic value. Now with the new rules, the applicant is at the mercy of the patent examiner. Furthermore, if the Congress passes H.R. 1733, and so adopts an 18 month pre-grant publication of the patent application, large companies who are well stocked with attorneys by citing additional prior art, can challenge the application thus causing its issuance to be delayed and shortening its term. The American entrepreneur is at the mercy of his competitor and the big multi-national corporations.

CRITICISMS OF H.R. 359

Opponents of H.R. 359 claim this bill promotes so-called "submarine patents." Few can define this term, but it is generally believed that these are patents that have issued after a significant delay in the PTO. The critics attribute this delay due to delays by an applicant.

Based on the previous testimony to this committee and letters from organizations such as Intellectual Property Owners (IPO) and the National Association of Manufacturers (NAM), there is only anecdotal evidence that any applicant has caused delays. There has been no comprehensive analysis of why patents are delayed. An administrative organization such as the PTO has many delays inherent in its operation. Patent examiners have discretion in generating restriction requirements which necessitate the filing of divisional applications and can cause significant delays. Clerks lose files. Applicants have the right to appeal unjust decisions and file continuing applications. All of these proceedings have evolved since the patent system was created in 1790.

Those who profit from reducing the patent term charge that the inventors cause the delays. This is erroneous, the PTO is a powerful government entity that controls its own operations. It drafts its own rules and publishes its own procedures.

It is not in the interest of applicants to intentionally delay the issuance of their patents. Inventors want their patents issued as quickly as possible to protect themselves against copiers and to attract venture capital. Patent pending offers no protection.

Former Patent Commissioners Gerald Mossinghoff and Donald Banner were not aware of any submarine patents. On August 12, 1994, Commissioner Lehman testified before this committee that the law on patents had to be changed because inventors had elongated the process and created 627 submarine patents in 22 years. On April of 1995, I asked the PTO for the specific reasons why these 627 applications were held up. They could not tell me the reasons, and claimed it would take their entire staff* months of time to find the specific reasons for these delays. Again this is absurd! Commissioner Lehman uses statistics to advocate weakening our system, but cannot explain his numbers.

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After numerous requests and a GAO audit, the PTO has finally given the reasons
Attached is a pie chart of their data^Sixty seven per-
cent (67%) of these delays were caused because the PTO imposed secrecy orders on
the applications and thus prevented them from issuing. Another six percent (69c)
should not have been listed or were delayed for reasons other than the applicant
Twenty seven percent (27%) remain unexplained, but there is no analysis that they
omi^Z'IZ ?f''' r ^^f 167 allegedly submarine patents represent ordy
0^0073% of the 2.3 million patents that did issue during this 22 year period Fur
ther, there is no analysis to indicate which (if any) of these 167 patents had any
commercial success. ^ -^

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As the data indicate, the excuse for changing the law because of submarine patents is based on faulty reasons and at best anecdotal arguments. We should not undermine our system of intellectual property rights based on a minuscule 0.0073% of cases that apparently have had little if any effect on industry.

Finally, when I worked for Congressman ROHRABACHER, many from the large multinational companies claimed they only opposed our bill because of submarine patents. While I think this was a red herring, Mr. ROHRABACHER promised to include any language in his bill that would correct intentional delays by the applicant.

These groups stated they did not oppose a guaranteed patent term and promised they would send us anti-submarine language to be added to H.R. 359. As far as I know, nothing productive has resulted. In fact, some representatives from these groups admitted off the record they had no use for patents.

The Uruguay Round GATT agreement stated that every country had to have a patent term of at least 20 years from filing. According to Cla3don Yeutter, USTR under President Reagan, the intent of the GATT patent provisions were so that each

member country would have some minimum level of intellectual property protection. The Uruguay Round GATT agreement did nothing to preclude a country from adopting a longer term. H.R. 359 puts the patent term at 20 years from filing or 17 year from grant, whichever is longer. This bill complies with that GATT agreement. In fact from December 1994 until June 6, 1995, the patent term by law was 20 years from filing or 17 years from grant, whichever is longer, according to the GATT implementing legislation.

According to a 1993 GAO study commissioned by Senators Rockefeller and DeConcini, many U.S. companies report significant difficulties in obtaining adequate protection of their patents in Japan and other countries. These criticisms are valid. It takes on average of over seven years for someone to get a patent in Japan, and even when granted, it may not be adequately enforced. For example, in 1960, Texas Instruments filed the patent for the integrated circuit in Japan. This was known as the "Kilby Patent," after its inventor Jack Kilby. It took 17 years for the Japanese government to issue the patent. According to former PTO Commissioner Donald Banner, this may explain why only 14% of U.S. origin patents are eventually filed in Japan. However, the opponents of H.R. 359 respond by saying that we should weaken our patent system and hope these countries improve their system. Nothing could be further from the truth.

The U.S. is one of the few countries where intellectual property is part of its constitution, a protected Constitutional right. Most other countries, particularly Japan use patents as a statement of industry policy. It is ludicrous to suggest that weakening our patent system and allowing foreign companies easier access to our technology will reduce our trade imbalance or create additional U.S. jobs. Making it easier for a thief to take your property will not improve his behavior or your assets!

CONCLUSION

The only intent of H.R. 359 was to insure that Americans continue to have a guaranteed patent term, and continue to have access to venture capital, as investors will again have a known period for a return on investment. H.R. 359 does not extend the patent term, but only keeps it from being shortened. America needs a strong patent system to remain competitive. H.R. 359 is important to America's competitiveness.

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Volume 8, Number 2 Spring 1995

The Case for a Strong Patent System

Dana ROHRABACHER and Paul Crilfy"

Introduction

Today, as we are zapping our way into the information age, intellectual property and its protection have become essential to the well-being

of our people. It is extraordinary then that the Clinton Administration has given away to foreign governments and multinational corporations intellectual property protection relied upon by American inventors and investors. Whatever the motive behind the fundamental changes being made in our patent laws, our people are the losers.

The attack on United States patent rights started under the cover of the recent additions to the General Agreement on Tariffs and Trade ("GATT").¹ Known as the Uruguay Round, it required that each member country have a minimum patent term of twenty years measured from the filing date of the application.² In response, Congress passed implementing legislation³ to ensure that the laws of the United States conformed to these new requirements.

Buried deeply in the implementing legislation was a provision that changed the patent term from seventeen years from the granting of a patent to a maximum of twenty years from the filing of the application.⁴ This provision was not well publicized until July, 1994, when the Office of the United States Trade Representative reluctantly gave our office a draft copy of this legislation. The resulting public and congressional furor over this provision forced the Senate and House Subcommittees on Intellectual Property to hold hearings on this issue.⁵ The result was a

* United States Representative (R-CA). Member, House Committee on Science.

** Congressional Science Fellow on leave from the University of Tennessee Knoxville, Department of Electrical and Computer Engineering.

1. Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations, Apr. 15, 1994. 33 I.L.M. 1143.

2. Annex IC, Agreement on Trade-Related Aspects of Intellectual Property Rights, art 33, *id.* at 1210.

3. Uruguay Round Agreements Act. Pub. L. No. 103-465, 1994 U.S.C.A.N. (108 Stat.) 4809 [hereinafter GATT Implementing Legislation].

4. *Id.*, i 532(a)(1). 108 Stat at 4984 (to be codified at 35 U.S.C. § 154(a)(2)).

5. GATT and Intellectual Property: Joint Hearings Before the Subcomm. on Intellectual Property and Judicial Administration of the House Comm. on the Judiciary and the Subcomm. on Patents, Copyrights, and Trademarks of the Senate Comm. on the Judiciary, 103d Cong., 2d Sess. (1994).

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"Rube Goldberg" fix to stop the term clock for up to five years for

delays caused by specific administrative or court appeals.* While this compromise was better than what was originally drafted, it did not fully guarantee a fixed patent term by statute. Unlike other pieces of the GATT implementing legislation, the intellectual property provisions never had a full and public markup. The GATT bill was submitted on "Fast Track" and no amendments were allowed.' Therefore, those who opposed this one specific provision had to vote against the entire trade bill. Most were not willing to defeat GATT because of this single provision.

The negative effects are not hard to predict. If the effective shortening of American patent terms goes into effect on June 8, 1995, as provided by the GATT implementing law,* private research and development firms will dwindle as shorter patent terms and weaker patents result in reduced royalties from new inventions. Business startups that are predicated on innovative patents will be especially adversely affected. Universities that license the benefits of their research and technology transfers from our federal laboratories will also be hurt. The only beneficiaries will be foreign and multinational corporations who will pay reduced royalties to America's inventors and investors.'

I. Twenty Years from Filing Term

The concept of a fixed and guaranteed patent term has existed for over 200 years. Since 1790, America has had a patent term measured from its grant date which guaranteed a fixed period of at least fourteen years of protection after the patent was granted.'" Congress later added a provision for extending the term for another seven years." Partly because extensions were so common, the law was changed in 1861 so the patent term was seventeen years from grant. '^ Conversely, the weaker

6. GATT Implementing Legislation, *supra* note 3. 5 532(a)(1), 108 StaL at 4984 (to be codified in 35 U.S.C. § 154(b)).

7. H.R. Res. 564, 103d Cong., 2d Sess. (1994).

8. See Patau Office Official Says Final Rules to Implement TRIPs to be Issued by May, *Infl Trade Rep. (BNA)*, Mar. 15, 1995, at 515 (quoting Richard C. Wilder, attorney-adviser of the PTO's Office of Legislative and International Affairs).

9. Robert Rimes <fc Skip Kaltenhueser, *Uncorking the Genie Bottle* (forthcoming Feb. 1995).

10. Act of Apr. 10, 1790. 1 StaL 109. 110 J 1.

11. Act of July 4, 1836. 5 Stat. 117. 124-25 S 18.

12. Act of Mar. 2, 1861. 12 StaL 246. 249 i 16.

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European and Japanese patent systems have a twenty-year term measured from the filing date.

Starting the clock at filing has always been a bad idea. When the term starts at the filing date, any delays in the application process will detract from its length and therefore its economic value. For example, in 1961 Texas Instruments filed the basic patent in Japan for the integrated circuit, known as the "Kilby patent" after its inventor, Jack Kilby. The Japanese Patent Office ("JPO") required that the application be divided into fourteen separate parts of which twelve were ultimately rejected.

The first patent was granted in 1977, approximately seventeen years after it was filed. It thus expired just a few years after it was granted. *

There may be a significant time delay between filing and grant both here and abroad. According to a General Accounting Office ("GAO") report, on average it takes five to six years from the filing date to get a patent issued in Japan. ^ Similarly, although the United States Patent and Trademark Office ("PTO") claims an average pendency of only nineteen months," these pendency statistics are misleading. Revolutionary patents in areas such as biotechnology, which often require a relatively long examination process, are averaged with the ninety percent of patents which are relatively incremental or inconsequential. This simple averaging itself skews the statistics. An inventor who files a revolutionary and complicated patent that takes years for the PTO to process should not be in the same category as one who files a relatively simple and inconsequential application that is quickly processed.

But even more damaging to the credibility of the PTO's use of statistics is that the claimed nineteen-month average is based on the most recent continuation date, not the original or ancestral filing date. For example, consider a patent application originally filed in 1980. Continuations are applied for in 1982 and 1984, and then the patent issues in

13. See Leslie Helm, Chip Manufacturer is Denied Patent by Japanese Court; Computers: Ruling that Fujitsu Chips Don't Infringe on Texas Instruments' Patents May Ignite Trade Concerns. L.A. TIMES. Sept 1, 1994. at D2.

14. See David P. Hamilton. Texas Instruments' Loss in Patent Case Sets Up Extended Battle With Fujitsu, WALL ST. J., Sept. 1, 1994. at B8.

15. See Intellectual Property Rights, U.S. Companies' Comparative Patent Experiences in Japan, Europe, and the United States: Hearings Before the Subcomm. on Int'l Trade of

the Senate Comm. on Finance. 103d Cong.. 1st Sess. (1993) (statement of Alan L Mendelowitz, Director. International Trade. Finance, and Competitiveness Issues, General Gov't Div., U.S. Gen. Acct. Off.. Doc. No. GAO/T.GG-93-36. July 22. 1993) [hereinafter Mendelowitz].

16. Id.

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1986. The patent office uses the 1982 and 1984 refilings as two additional applications. Thus, a process that effectively took six years is counted as three applications averaging two years each. The PTO uses these metrics to overrate their efficiency and the quantity of applications processed.

The PTO has not issued official pendency figures based on when original patent applications were filed, so we can only use reported experiences. Using pendency figures of thirty patents from a recent 1994 Patent Gazette, the average pendency period is seven years." A letter from BIO, a biotechnology industry group, suggests that many of their member company patents take an average of ten years to issue. "Starting the clock from filing would be a financial disaster for many of these patent holders.

In 1953, Phillips Petroleum applied for a patent on Crystalline Polypropylene, a plastic used for beverage containers." Because of delays caused by court proceedings and interferences (which are solely under the control of the PTO), the patent issued to Phillips in 1983.* According to Allen Richmond, the company's Manager of Patent and Licensing, Phillips so far has collected \$300 million in royalties.^ This return on investment would not have been possible if the United States had a twenty-year-from-filing term, because the patent would have expired in 1976.

Changing to a term based upon filing date will damage the value of our patents in other significant ways. The American system is based on awarding broad protection to the rightful creator and encouraging and providing a means to make the strongest possible application that can be defended against infringers. United States public policy regards patents not as trophies, but as a means for the creation of new industries and jobs. When an inventor files a patent, he often continues to perfect his invention. As new Improvements are made, the applicant can file continuations-in-part which will strengthen his technology and provide a

better defense should competitors challenge or infringe on his patent. In

17. Pat. and Trademark Off. Official Gazette (Aug. 9, 1994).

18. Letter from Carl B. Feldbaum, President, and Charles E. Ludlam, Vice President for Gov't Rel., Biotechnology Industry Organization (BIO), to Mickey Kautor, U.S. Trade Representative (June 27, 1994) (on file with the Harvard Journal of Law and Technology).

19. See Phillips Patent, PUMT'S OilGRAM News, Mar. 17, 1983, at 5.

20. See Phillips Finally Wins Its Patent. CHEMICAL Wk., Mar. 23, 1983, at 13.

21. Interview with Allen Richmond, Manager of Patent and Licensing for Phillips Petroleum, in Washington, DC. (Feb. 10, 1995).

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In some cases, the patent examiner may require a divisional application in which the inventor must refile and break his original application into two or more separate parts. The PTO supports these refilings because they are a good revenue generator and inflate their productivity numbers.

The above procedures encourage solid applications and may be required by the PTO but will significantly detract from the patent's life with a term based upon the filing date. However, the above actions do not detract from the patent's life with a seventeen-year term from grant. Under a term based upon filing date, the inventor will be at the mercy of the patent examiner and will take any protection offered by the examiner in order to prevent unnecessary delays in the patent issuing process. The end result will be weaker applications that will be more susceptible to infringement. Independent inventors, who are often the backbone of new companies, will be especially vulnerable against large multinational corporations who can afford to mount continuing legal challenges.

n. Submarine Patents and Those Malicious Inventors

Proponents of the twenty-year-from-filing patent term, such as the Intellectual Property Owners ("IPO"), a patent lobbying group of large multinational corporations, claim this change eliminates so-called "submarine patents." These are patents that have issued after a significant delay in the PTO. It has been conceded that there are only a few "submarine patents." The reasons for the delays have never been fully analyzed. However, it is clear that an administrative organization like the PTO has many delays inherent in its operations. Patent examiners have discretion in generating restriction requirements which necessitate the

filing of divisional applications and cause significant delays. Clerks lose file histories. Applicants have a right to appeal unjust decisions and to file continuing applications. All of these proceedings have evolved since the original patent system was started in 1790.

Those who profit from cutting down patent terms charge that the inventors cause the delays. Clearly, this is erroneous because the PTO, a powerful government entity, has the ability to control its own opera-

22. See Joint Hearings of the House Judiciary Subcomm. on Intellectual Property and Judicial Administration and the Senate Subcomm. on Patents, Copyrights, and Trademarks, 103d Cong., 2d Sess. (1994) (statement of Robert E. Muir on behalf of the National Association of Manufacturers).

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tions. It drafts its own rules, and it publishes its own procedures?*

Also, it is not in the interest of the majority of applicants to intentionally delay the issuance of their patents. Most inventors want their patents issued as quickly as possible to protect themselves against copiers and to attract venture capital. A patent pending on a device offers no protection. Many, if not most, license agreements provide that no royalties would be payable if a patent is not issued within two to three years, and few, if any, such agreements call for royalties payable until after the patent is issued.

Gerald Mossinghoff, former United States Commissioner of Patents under President Reagan, was not aware of any submarine patents."

According to the testimony on August 12, 1994, Bruce Lehman, United States Commissioner of Patents, stated that from 1971 to 1993 there were 627 cases out of approximately 2.3 million patents issued (or 0.027%) where the patent pendency has exceeded twenty years. Commissioner Lehman inched that these were filed by malicious persons interested in elongating their patent term. Examination of these allegedly submarine patent cases by Donald Banner, former Commissioner of Patents under President Carter, reveals that 257 of these are owned by the U.S. government and their issuance was probably delayed because of secrecy orders. The remaining 370 applications may have been held up for reasons other than intentional delays by the applicant such as interferences and secrecy orders imposed on the applicant." A letter received from the IPO cites a few examples of alleged abuses, primarily by a Jerome

Lemelson who had a patent in process for over thirty years." Obviously, the IPO has not stated his side of the story. Why did it take the PTO so long to process his patent application? Even if abuses do occur, what has

23. 37 C.F.R. §5 1-150 (1994).

24. Pat. and Trademark Off., U.S. De?T of Com., Manual of Patent Examining Procedures (5* cd., 16threv.. 1994).

25. See Hamilton, supra note 14. See generally Hearings before the Subcomm. on Intellectual Property and Judicial Administration of the House Convn. on the Judiciary, 103d Cong., 2d Scss. (1994) (statement of Biuce Lehman. Assistant Secretaiy of Commerce and Conmissioner of Patents and Trademarks) [hereinafter Lehman]; Hearings before the Subcomm. on Intellectual Property and Judicial Administration of the House Comm. on the Judiciary, 103d Cong.. 2d Sess. (1994) (statement of Gerald Mossinghoff, former Commissioner of Patents).

26. Lehman, supra note 25.

27. Telephone Interview widi Donald Banner, former Conuissioner of Patents (Mar. 20. 1995).

28. See Yomiuri Shimbhn. First-To-Fde vs. First to Invent on Patent, THE DAILY YOMIURI. Feb. 1. 1994. at 9.

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been presented is anecdotal and should not be the basis of undennining an entire institution that has made the United States the world's technological leader.

When explaining how submarine patents occur. Commissioner Lehman stated that when an inventor receives a Notice of Allowance from the PTO, informing him the patent will soon issue, the inventor then refiles, and thus prevents his patent firom issuing.^ The PTO could easily prevent this abuse by declining to accept such a continuing ^plication. These reforms to control abuses can be made administratively without having to reduce the seventeen-year patent term.

m. Eighteen Month Publication

Reducing the length and certainty of the term is only the first wave of the attack on patent rights. Under the American system, patent applications are kept confidential until the patent is issued. This protects the applicant firom con:q)etitors, particularly large corporations who can afford a battery of attorneys to challenge the application or flood the patent office with incremental patents to diminish the value of the original

patent, as is often done in Japan. ^ Now there is serious consideration being given to publicizing the application eighteen months after filing — whether the patent is issued or not."

This is obviously an invitation for thievery. Setting an arbitrary eighteen-month publication date will have the unintended consequence of causing inventors to abandon the patent system and revert to a system of trade secrets. Today, because the application is kept confidential, the applicant can still keep his idea a trade secret if his patent application is rejected.

rv. Prior User Rights

Prior user rights give the person who uses an idea, but either never developed it or kept it a trade secret, the right to infringe another's

29. Lehman, *supra* note 25.

30. Mendelowitz, *supra* note IS.

31. See, e.g., Brace Rubenstein. Novell's Mother of All Prior Art SuUs Nears Court Date: Billings WSU Be Either a Billionaire or Broke. CORPORATE LEGAL TIMES, July 1994.

at 17; Patent Office Wano Authority to Print Pending Applications. FEDERAL TECHNOLOGY Report. Sept 1. 1994. at 3.

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patent. While there is nothing illegal about trade secrets, having a patent allows the owner to prevent infringement. Weakening our patent system to allow for prior user rights not only encourages trade secrets and stifles the dissemination of technology, but devalues the property of the one who has gone to the trouble and expense of obtaining the patent and disclosing it to the public."

V. Benefits of Stringent Protection

It's not just money. It's our future and it always has been. Americans have always placed a high value on this unique form of property rights. A system to protect intellectual property was even written into our Constitution." This should be no surprise considering that Benjamin Franklin, Thomas Jefferson, and so many of our nation's founding fathers were, after all, technologists. They recognized that for our vast and underdeveloped country to grow and for its citizens to prosper, our nation needed both technology and freedom.*

Our opportunity was to be limited only by our imagination. The

product of our intellect, however, would be protected by law. America's strong patent laws have served to encourage investment and technological research that has kept our country in the forefront of human progress. ^ All of this was accomplished because Americans were creating, or at least utilizing, the best technology from steam engines and reapers to microprocessors.

Thomas Edison's invention of the electric light bulb not only provided an alternative to gas and oil lamps, but spawned an entire utility industry. His motion picture and phonograph patents created a vast entertainment industry. The transistor, integrated circuit, and microprocessor made possible a multi-billion dollar electronics industry. Millions of Americans

32. See Patent User Rights: Hearings before the Subcomm. on Intellectual Property and Judiciary Administration of the House Comm. on the Judiciary, 103d Cong., 2d Sess. (1994) (statements of Ten Willey, Associate Director, Purdue Research Foundation, and Arnold Newman, President, Synxus Corporation).

33. U.S. Const, art I, S 8 ("The Congress shall have power to . . . promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries . . ."). See generally Bruce W. Bugbee, *Genesis of American Patent and Copyright Law* 152 (1967).

34. See Herbert Hovenkamp, *Technology, Politics, and Regulated Monopoly: An American Historical Perspective*, 62 *TEX. L. REV.* 1263 (1984).

35. See Lawrence M. Sung, *Comment, Intellectual Property Protection or Protectionism? Declaratory Judgment Use by Patent Owners Against Prospective Infringers*, 42 *AM. U. L. REV.* 239, 244 (1992).

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owe their jobs and prosperity to industries created by America's innovators. The competitiveness of our country is tied to our ability to take the lead technologically.

Today, for example, while other countries are trailing in biotechnology development, America's biotechnology companies are in the forefront of this historic leap. ^ Biotechnology is, after all, an American creation, financed by private American capital and brought to market by Americans. The German government tried to develop a biotechnology industry but failed, turning instead to American technology." Given the German result and similar experiences in the rest of Europe and Japan, government subsidization of industry startups has had dubious success.

Many argue that in this fast-moving technological age where product life cycles may be a matter of months or a few years, the traditional patent system is obsolete." Nothing could be further from the truth. Patents are designed to cover broad inventions such as the transistor, integrated circuit, microprocessor, and magnetic resonance imaging. While all of these and other revolutionary inventions continue to be improved, the basic patented concepts behind them are still crucial. The tremendous explosion in the sheer amount of information available to an ever-increasing number of people suggests the creation of even more breakthrough technology.

While pharmaceutical and biotechnological innovations may take years and billions of dollars to develop, once they are on the market it is relatively inexpensive for competitors to copy these products. Fortunately, our patent system acts as a strong shield protecting America's innovators from this theft, thus maintaining the incentive for the investment of venture capital in research and development. So it should be no surprise that there are both domestic and international forces at work to weaken America's patent system.

If these efforts are successful. United States patent holders, our technology creators, and their financiers will be robbed of billions of dollars in royalties by those who use technology. Huge foreign corporations will be off the hook for the licensing revenue they would owe Americans under current law. The end result will be American technol-

36. See Joan C. Hamilton. *Biotech: America's Dream Machine*. BUS. WK.. Mar. 2, 1992. at 6.

37. See David G. Scalise & David Nugent, *Patenting Living Matter in the European Community: Diriment of the Draft Directive*, 16 *FORDHAM INT'L L.J.* 990 (1993).

38. See. e.g., Dennis Unkovic, *The Trade Secrets Handbook* (1985).

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ogy being used against us, for free, just as the incentive for future investment in domestic technology creation is reduced.

VI. Patent Harmonization

The stated goals of patent harmonization are to strengthen the intellectual property laws of other nations, and to make it possible for one patent application to be valid worldwide." Who could oppose that? In theory it is laudable. In practice, patent harmonization has become a

Trojan horse that is being used to whittle down America's strong patent system so it conforms to the weaker Japanese and European systems.

Yes, uniformity of law throughout the world has a ring to it.

However, harmonization is being paid for by decreasing our guaranteed patent term. Uniformity merely for its own sake and without any quantitative benefit to Americans does not make any sense.* If the objective is to have a uniform worldwide patent system, other nations should adopt the stronger United States model.

Unfortunately, the Clinton Administration and world leaders view patent harmonization and patent laws as just another bargaining chip in trade negotiations. Just as United States trade negotiators would not consider trading away constitutional freedoms such as free speech, neither should they trade away intellectual property rights. According to testimony before the Senate Subcommittee on International Trade by the GAG, the laws and cultures of the Japanese and American patent systems are widely different.* "In the U.S. the focus of the patent system is to protect the individual patentee[s] and provide them with exclusive rights to their inventions. By contrast, many experts contend the focus for the Japanese patent systems is to promote industrial development by disseminating technology."^ Intellectual property in the United States is indeed that, property, whereas in Japan, it is just another piece of the government's industrial policy subject to political whims.

This same report states that United States companies that do file patents in Japan have expressed a high degree of dissatisfaction with the

39. See W. John Moore. Reinventing Patents. THE Nat'L J.. Mar. 20. 1993. at 694.

40. See letter from Gabriel P. Katotka, law firm of Schweitzer Conunan & Gross, to Steven M. Shore, President, The Alliance for American Innovation (Feb. 1, 1995) (on file with the Harvard Journal of Law and Technology).

41. Mendelowitz, supra note IS.

42. Id.

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Japanese patent system/^ These problems include lack of enforcement, relatively long delays in issuance, the narrower scope of patent protection granted, the cost, and the difficulty of obtaining patent protection for pioneering inventions. There is nothing to suggest these conditions will improve if the United States weakens its own patent system. The two

cultures are so widely different that it would be too much to expect that superficial legislation and trade agreements will improve the Japanese patent system for foreigners who expect the same protection in Japan they now receive in the United States. By the time Americans understand the problem, it may be too late.

Conclusion

On January 4, 1995, the Dole-ROHRABACHER bill** was introduced to restore the patent term to the longer of seventeen years from grant or twenty years from filing. This guarantees patent holders seventeen years of protection, the right of Americans before GATT, and what we still have under transitional arrangements until June 8, 1995. Furthermore, the Dole-ROHRABACHER bill complies with GATT.

As the United States fully enters into both the information age and global markets, harmonizing our patent system with those like Japan would be a fundamental mistake. The PTO is failing in its mission to protect the interests of our country and the rights of our people. It is time for Commissioner Lehman to abandon the practice of international patent policy appeasement and act to protect the value of American intellectual property.

43. Id.

44. H.R. 359. 104th Cong.. 1st Sess. (1995); S. 284. 104th Cong.. 1st Sess. (1995) (introduced Jan. 26. 1995).

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American Business Is Against H.R. 1733

H.R. 1733 is significantly detrimental to America's small businesses, entrepreneurs, inventors, universities, and the biotech industry. First, H.R. 1733 proposes to publish proprietary American technology, giving away American trade secrets to foreign competitors and causing extreme conflicts within the American patent system. Second, H.R. 1733 proposes to cure the abuses of the GATT 20 year patent term, but instead increases the problems with complicated extensions of time that do not cure the abuses.

The extreme problems with both, (a) early publication and (b) the GATT patent term, are pointed out by the Biotechnology Industry Organization (BIO) in a position paper dated June 27, 1994 and in a Statement/Proposal dated October 30, 1995; respectively. For example, BIO gives examples of the dangers of early publication and BIO establishes that early publication is significantly incompatible with the "first to invent" concept that is the cornerstone of the American patent system. Also, BIO identifies the many delays inherent in the Patent Office and the very complex

rules needed to protect the patent applicants from a significantly shortened patent term as a result of Patent Office delays. Also, BIO points out the simplicity and the fairness of the historical (200 year old) 17 year patent term that was replaced by the GATT patent term.

In the October 30, 1995 proposal, BIO demands that H.R. 1733 be amended (1) to eliminate the "Cap on Compensation for Delay," (2) to incorporate "Compensation for Miscellaneous Delays," (3) to incorporate "Clock Starting and Ending Points and Partial Success on Appeal", (4) to incorporate "Rolling Over Patent Term Extensions," and (5) to place a "Limit on Patent Term Extensions." BIO further demands that the Hatch- Waxman be amended (1) to repeal the "Patent Term Extension Limits," (2) to repeal the "Total Limit on Extensions," (3) to eliminate deductions on "Delays Included in Extensions," (4) to incorporate "Starting Regulatory Clock" early, (5) to extend patent restoration to "Other Regulated Industries", (6) to provide "Separate Extensions," (7) to provide "Interim Extensions", (8) to extend "Late Issuing Patents," and (9) to repeal the "Due Diligence Requirement." These are very complex amendments to incorporate and to administer, but these amendments only touch on the abuses of H.R. 1733.

In the October 30, 1995 proposal, BIO points out the significant complexities in amending H.R. 1733. Implicit in this analysis is the virtual impossibility of administering such complex extensions, rules, and placing of blame for delays. Conversely, BIO points out that the historical 17 year patent term is simple and fair.

The BIO positions show why millions of American small businesses are against H.R. 1733, it is bad legislation that will harm American business and that will harm American competitiveness.

Mr. MOORHEAD. Mr. Chandler.

STATEMENT OF JAMES P. CHANDLER, PRESIDENT, NATIONAL INTELLECTUAL PROPERTY LAW INSTITUTE

Mr. Chandler. Thank you, Mr. Chairman. I would like to begin by observing that your earlier remarks I appreciated very much. I agree with the chairman that worldwide enforcement is extremely important and that our country should do everything that we can to bring that about. I should observe that I don't speak for anyone except myself I am president of the National Intellectual Property Law Institute and I've been a professor of intellectual property law

for a quarter century, but I come before you today with only my expertise to offer.

I only have three brief points, Mr. Chairman. The first is with regard to H.R. 359. I observe, as I think most speakers on either side of this issue have observed, that there is no inconsistency between a 20-year-from-date-of-filing and the 17-year patent term. The GATT does proscribe 359. It's entirely consistent with the GATT. You can have 20-years-from-date-of-filing and at the same time have the 17-year minimum guarantee. I will observe that with respect to all of the testimony I've heard today that no one has come forward to assure this subcommittee that there will be a

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guaranteed minimum term of 17 years under the 20 year from date of filing. And let me explain why that isn't so.

We've heard conversations that it will be 18 V2 years on the average under the 20-year-from-date-of-filing, but that's speculation, Mr. Chairman. We don't have any trials under the reformed law that we are proposing here. Let me give you an example of what I mean. If we take all of the bills that are before the Congress and those which have been enacted, we have a different patent prosecution procedure process than we have at the moment. What are the new elements? The new elements would be that under 1733 there would be an 18-month disclosure. That would inform everyone of what's pending in the Patent Office. We've imposed under the GATT a worldwide prior art. So no longer is the American inventor who files for a patent limited to searching the prior art in the United States; they have to do it worldwide.

The third requirement is that there's now third-party interference, third-party participation, and reexamination for containing patents. When that happens, Mr. Chairman, no one knows how long that process will take. And I certainly don't think that we can anticipate reasonably that it will take place in 19 months. So I think that it's fair to say that there's a very substantial risk, that under the new procedures, when taken together, there would be a substantial increase in the time of prosecution and a correspondingly substantial increase in the time required available to the patentee at the end of the term.

I would observe, as I'm sure the chairman recalls, the words of Thomas Jefferson when he wrote the second patent law as this Nation's first Patent Commissioner. He said that "God himself had placed the invention in the head of the inventor. It's locked up there and the inventor has no obligation to disclose it to anyone." "This society, this Nation," he said, "must have a system that amply rewards the inventor so as to induce the inventor to disgorge to disclose." "And in exchange for that," he said, "the society has an obligation to that inventor, to reward him with a guaranteed minimum term."

And whether we determine that the minimum term is 14 years or 20 years or 17 years, Mr. Chairman, I think that Thomas Jefferson is correct, that we must reward the inventor with some minimum term. Seventeen years has worked well. There's no obligation under the GATT for us to change that. So the H.R. 359 would simply maintain the tradition consistent with the GATT and save us from the potential adverse consequences of which we have heard with respect to a diminution in that term under this untried procedure into which we are about to move.

With respect to 1733, I think, Mr. Chairman, it's important to think about where the suggestion originated that this country adopt 18-month disclosure, and that's the only aspect of 1733 to which I choose to address my remarks. I agree with the chairman with respect to his remarks concerning the other provisions of 1733.

Mr. MOORHEAD. Do you understand that 1733 is not the originator of the 20-year term? We have that now.

MR. CHANDLER. I understand that.

Mr. MOORHEAD. H.R. 1733 only makes it more livable.

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MR. CHANDLER. Well, I think, and my concern with 1733, I'm fully aware of what we have now under the GATT. I'm further fully aware of what 359 proposes to do. It proposes in its principal part to incorporate a minimum guaranteed term of 17 years, thereby amending the 20-year-from-filing called for under the GATT. The portion of 1733 with which I'm concerned, Mr. Chairman, is that portion which calls for 18-month disclosure of all inventions. And I recognize that there are serious and thoughtful people that have suggested that we should adopt an 18-month disclosure, but I would ask if the 18-month disclosure were such a great idea for the American people, why wasn't it proposed independent of a suggestion and an agreement with the Japanese? This proposal for 18-month disclosure came from the Japanese. And I would also in this connection ask you to consider the discussion we heard from Mr. Boucher earlier concerning first-to-file. Because they're both rooted in the same kind of concern.

As the counsel knows, the American people have both law jurisdiction and equity jurisdiction. In our patent system we have both equity jurisdiction and law jurisdiction, but in a civil law country you don't have equity jurisdiction. And what we did after World War II when General MacArthur proposed a new civil law for Japan, he did not propose the common law system which has both equity and civil law jurisprudence; he proposed only a civil law jurisprudence. And under a civil law jurisprudence, a first-to-file would appear to work well because you are dealing only with the operation of the law. Under a first-to-invent system, it requires that one evaluate the evidence and the equities involved. It's an equitable determination, and I think that where equity jurisprudence is called for in that process we ought to maintain it.

With respect to the 18-month disclosure as well, one of the questions earlier from a member of the committee, asked whether or not the United States was stealing inventions from the Japanese and that perhaps that might account for the opposition to some of this legislation. Secretary Reich, who is a member of the present administration as the Secretary of Labor, did a study when he was a professor at Harvard University in economics in which he observed that the Japanese had obtained from the American economy 500 billion to 1 trillion dollars' worth of technology at a cost to the Japanese of \$9 billion. And I believe that if one were to examine where the inventions are being made and where the prizes are being won in science and engineering, we would find that they're in the United States.

When Vice President Quayle was Chairman of the Commission on Competitiveness, he did a study of where inventions are being made in the world. And that Commission reported in one of their final reports that the United States produces 10 times more inven-

tions than any of the other G-7 nations. And by my calculations, that would mean that there are more inventions made in the United States than in the G-7 nations combined.

So when we talk about 18-month disclosure for the United States, we're talking about a very different problem from 18-month disclosure in Japan or 18-month disclosure in Europe. If I were European, or Japanese, or president of any other country in the world,

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I would urgently want the United States to place the technologies which they are inventing into the public domain.

And let me observe one other thing, Mr. Chairman. This Congress appropriates nearly \$150 billion a year for basic research in this country. Much of that research already falls into the public domain. The losses of technology which I've previously described are due to weaknesses in our laws. I'm referring to Secretary Reich's study. They were not due to wrongdoing or illegal activity on the part of the Japanese. They were simply exploiting weaknesses in our own laws, one of which of course was the Process Patent Act which significantly contributed to the loss of the steel industry. Steel companies were before this Congress year after year, asking for an amendment to that Process Patent Act because their technology could be invented here, but it could be taken out of the Patent Office, moved abroad, and manufactured there in direct competition with the steel companies. So that the losses of technology that we have sustained mightily as a nation have been overwhelmingly significant. And if the Congress wants to place this technology in the public domain, free for other nations, it seems to me that we should discontinue the massive appropriations for basic

research.

The scientists and engineers who work with those funds have done their job. We receive more Nobel prizes and more awards for successes and new inventions in science and technology than any other nation in the world. And since one member of the panel suggested that we may be stealing from the Japanese, I think it's important to observe that the American universities who have appeared in opposition to 18-month disclosure and who have also appeared in support of 359 count the number of Nobel prize winners on their faculties as an indicia of their greatness. In the last 55 years, the American people, the American inventors, the American researchers have won over 50 percent of the awards and Nobel prizes in science and engineering, medicine, microbiology. How many have been won in Japan in the last 55 years? Not one. As a Commissioner of Japan's Patent Office said on a recent visit to the United States, "Most of their work is a result of improvement patents building on technologies invented in the United States."

I use Japan as an example because they made the agreement upon which this entire proposal for change in our law originates. It didn't come from China; it didn't come from Europe; it didn't come from Latin America or Africa. It came from Japan.

And I think, Mr. Chairman, that if these two measures and the others before the committee ought to be considered in terms of their impact upon the people of the United States and the economy of the United States, I would urge the committee to consider the remarks I have made today.

Thank you very much.

[The prepared statement of Mr. Chandler follows:]

**PREPARED STATEMENT OF JAMES P. CHANDLER, PRESIDENT, NATIONAL INTELLECTUAL
PROPERTY LAW INSTITUTE**

I support H.R. 359. In my judgment its enactment is essential for the restoration of the historic strength of the United States patent system. The Uruguay Round Agreement Act was signed as part of the General Agreement on Tariffs and Trade ("GATT"). The GATT legislation, along with other provisions, amended 35 U.S.C.

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154 and altered the term of patent protection from 17 years from issuance of the patent to 20 years from the application filing date. The effect of this legislation was twofold: (1) it made uncertain the actual duration of the patent, and (2) it potentially shortened the patent term. The GATT amendments did not require either of these effects. HR 359 restores the 17 year minimum term from date of issue of the patent and thereby is a complete remedy of both defects created by the GATT legislation. HR 359 further allows the applicant the right to choose either the 17 year term or 20 year term, whichever is longer. Both are compatible with the TRIPS provisions of the Uruguay Round Agreement for Amendment of the General Agreement on Tariffs and Trade.

In the United States, under the 17 year term, it is not uncommon for patent prosecution to take three to five years and sometimes more. This is especially true if the Patent and Trademark Office ("PTO") issues a rejection which is appealed, or, if there is a need to refile the application. In these latter two cases the pendency period can be extended up to ten years or longer. Under existing law the duration of a patent after issue could be effectively reduced from 17 years to 10 or fewer years, which would impose a tremendous hardship on the patentee. Given this kind of uncertainty as to patent duration financing, development, and marketing of the patented device would become difficult if not impossible. As such, the inventor would be denied the value and benefits of the invention. The public's bargain with the inventor has to be that he or she will reap a return for their creative efforts. Under H.R. 359, regardless of how long patent prosecution takes, the patentee's right to exclusive use of the patent is protected from the date the patent is ultimately granted. The Japanese and European method of patent prosecution, upon which the 20 year term is based, usually takes thirteen and five years respectively to have a patent issued and may take longer. Under the 20 year patent term, the time required to resolve problems with patent prosecution are included in the 20 year term, effectively reducing the value of patents after issuance. Spokespersons from the PTO have stated that patents will be issued within nineteen months. However, according to a recent study conducted by Schweitzer, Comman, and Gross, a New York based law firm, "the average pendency of 30 packets picked at random * * * will be 13.3 years under the new 20 year from filing term. These in-

clude patents held by Dow Coming, Coca-Cola, and Lubrizol * * *." Legislation Bill Would Amend GATT Legislation to Provide 17 or 20 Year Patent, Pat. Trademark & Cop)T^ght J. at 3. Where patent term extensions are permissible, they are allowed only under a specific set of circumstances and are limited to 5 years regardless of the length of the delay or circumstances surrounding it.

Inventors who filed their patent application before June 8, 1995, can take advantage of the transitional period before implementation of the 20 year term, and have the option of choosing the 17 year term or the 20 year term from date of filing. Applications submitted on or after June 8, 1995 are explicitly governed by the 20 year term. This means that continued applications, appeal of rejections, and questions of infringement incurred under the 20 year term will pose new problems of inequity for the patentee.

The January 20, 1994, agreement between Japan and the United States, and 6 months later, attached to the GATT implementing legislation amended 35 U.S.C. Sec. 154 of the United States patent code, has the potential of invalidating numerous existing applications for patents. The provision provides that the change of the patent term from 17 years from date of grant to 20 years from date of application will take effect with respect to continuing applications filed 6 months after enactment of the above legislation. Thus, a patent filed in 1985 on which a continuing application is filed in August 1995, will receive a patent later, if at all, that is valid for a 20 year term measured from 1984. A patent applied for in 1975 on which a continuing application has been or is filed, could not be issued a valid patent for any term, since the patent could not issue within 20 years from date of application. Consequently, these two hypothetical patent applicants would be stripped of valuable property rights since they rightfully relied on the existing law to grant a 17 year patent term following date of issue. This issue raises serious constitutional problems under the 5th Amendment takings clause on the impact of these changes in the patent law upon the property rights of individual inventors. The power of U.S. trade in global markets could be weakened and the potential losses to American inventors who are adversely impacted by these changes could be great.

Some consider that the biggest impact of the 20 year patent term will be instances where there are continuing applications, whether they be straight continuations, continuations-in-part, or divisional applications. The patentee will be required to use the filing date of the initial patent application for all subsequent continuing applications. Some speculate that the traditional continuation practice will be curtailed if not abandoned.

Accordingly, H.R. 359 allows the patentee to weigh the pros and cons of the 17

year patent term against the 20 year patent term and determine for himself a course of action during this tumultuous time period. It will give the patentee the ability to make his own assessments of marketability, determine the impact of filing under one and not the other, the potential impact of the appellate process, and the impact of third party infringement upon his patent. Under this set of events the patent system will enable the patentee to maximize the benefit of his patent rights and generally encourage U.S. progress in the sciences and useful arts.

Mr. MOORHEAD. Dr. Hill, how does it seem to be here and be the 14th and last witness?

STATEMENT OF DAVID L. HILL, PRESIDENT, PATENT
ENFORCEMENT FUND, INC.

Mr. Hill. Thank you, Mr. Chairman. It's a privilege to speak with you today and share with you in the process of seeking policy which will be appropriate for this country.

There is a wonderful aspect of our American Government in our ability to go wrong here and go wrong there and then set it right again. And there's a process going on now in which we are seeing that happening. There's high drama, Mr. Chairman, and I believe that you sense it, as do I. It's a privilege to speak with you and to associate myself with the members of panel II here who have spoken so eloquently to the issues before us.

And I would also like to say to panel I, who have expressed somewhat different views, that those of us here at this table are not anticorporation; quite the contrary, we're in favor of those conditions which will lead to the growth of great new corporations in the future. We recognize the frailties of the corporate structure. We realize that almost all of our great corporations now have come out of the work of independent inventors and that invention plus the associated patent rights have created the ability for those corporations to protect their profit margin, to exploit the areas of technology that they own, and to become the great employers that they are.

We also recognize that as these corporations grow and develop

they tend to be programmed toward the area that was developed by the initial inventor and that as that program becomes stronger in directing the efforts of the corporation the truly creative people leave. They have more to do than follow in the tracks of others; they have their own creative work to do. And, therefore, the independent inventor that I speak for, and which my colleagues here on this table tend to speak for, is in a different position. Nevertheless, that inventor is the source of the future corporations which will provide the greatest employment and which will create the turbulence in our economy by competition with the existing corporations. These existing corporations don't have it all made and shouldn't be allowed to control the formation of policy now.

And you, Mr. Chairman, in your role as an elected Member of Congress, as part of the same constituency for which I speak, the American people generally, I'm sure, share the view that we want to follow the policy that is best for the country as a whole. We value the corporations; we value the large employment that they produce, and we seek to further the conditions that will lead to additional expansion through new corporations and the growth that they bring in our economy.

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Now there is a fascinating drama in progress, Mr. Chairman, and I would like to try to put it into perspective and ask your leave to permit me to engage in a little bit of fantasy. The United States is the greatest power in the world economically and in some other ways. Now we know that being the greatest power does not necessarily bring — is not without challenges, is not without many possible challenges to that position.

Suppose if you were considering how to challenge the position of the United States and you study the history and you see what has made it great, you will realize that the great natural resources have been part of it, but then you will realize that the patent system that we have has played a key role, and perhaps a role which is just as important as our great natural resources, because our patent system is unique in the world in providing real, enforceable

intellectual property rights to the inventor. We have systems in Europe which are substantially inferior to ours; we have a system in Japan which is far inferior to ours. And the reasons are that those systems have grown up largely under the influence of established, major financial corporate interests. .^ — >

The U.S. system was founded by people who were fleeing from the domination of individual rights by those centers of political and financial influence which can suppress the individual and prevent the individual genius from being mobilized and benefiting society as it should. We are very fortunate that we had men like Thomas Jefferson, James Madison. We are very fortunate that we had a man like Abraham Lincoln who characterized the power of our patent system as the ability "to add the fuel of economic incentive to the fire of genius." We are fortunate to have had justices like Felix Frankfurter who defined the customers of the Patent and Trademark Office as "the public." The public good is what the Patent and Trademark Office serves.

How far we have come from the first Patent Commissioner, Thomas Jefferson, to the present Patent Commissioner, Bruce Lehman. Jefferson understood the importance of the patent system and helped to create it, whereas Lehman is doing everything he can to tear it down. Now why is Lehman behaving the way he is? Most of us who look at this objectively can see that he is misstating, -misleading, he is misrepresenting to the Congress. He is clearly not fit to be a public servant. He was the first to enter into a destructive agreement with Japan, ordered by Secretary Brown.

Well, let's try to put it into perspective. Let's go back to our fantasy. Suppose that you are trying to destroy the United States or at least take the edge off its greatness. You can't change its natural resources but you can try to change its patent system. If you can find people in the Congress, if you can find people in the administration who will participate, if they can be induced by any means at all to participate, think how much damage they can do — for that patent system has created the conditions that has enabled the United States to grow as it is. If these various attacks that are now being made — and there are many of them; there are about five different simultaneous attacks being made on the patent system, and the drama focuses on this room and on to you, Mr. Chairman, because this is the subcommittee that deals with it in the House — many different attacks and they are all designed to take away

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what the patent system gave in the beginning. They are designed to cut back on the intellectual property rights of the individual, these enforceable intellectual property rights.

So, well, now we have some positions from these rather misguided corporate interests, and the reason the patent system in Japan is so poor is because we have this cultural condition in Japan in which there is a strong relationship between the Government and the major corporate entities, a very strong relationship. So that the patent system in Japan has been entirely dominated by the viewpoint that they represent. So the Japanese patent system is the worst in the world. Therefore, if your objective is to weaken or destroy the United States as a viable economic unit, why not start with an agreement between the Commissioners of the two Patent Offices which will tend to bring the United States patent system down to the level of the Japanese system?

Now the Japanese system could benefit from the association if we brought that system up to our level. The systems in Europe could benefit from being brought up to our level and that may be the most constructive outcome of this debate. But there is an attack underway, and it began with an agreement between Commissioner Bruce Lehman and Commissioner Asou of the Patent Office in Japan. And under that agreement, the patent terms were to be changed such that — and it's a very ingeniously drawn agreement, Mr. Chairman. It appears on the surface not to change very much. It says 20 years from the date of application instead of 17 years from the date of issue. Nevertheless, it really has the effect of undercutting the intellectual property rights which are granted to the inventor who creates the most significant patents for those significant patents often require 5, 10, or even 15 or more years to issue. And my colleagues here on the panel have made that point clearly as they have given you various details on it.

Now having achieved that agreement, what happens next? Is the required legislation brought to the American people to be discussed carefully and in detail, this important birthright of their own, which goes to the center of our economy? Is it given the attention that it should deserve? No. It was rushed through. It was bundled deceptively with GATT. There was no opportunity for the Congress to discuss it; it had to vote within 10 days on the entire package,

up or down. What an extraordinary display!

Now I discuss this with you, Mr. Chairman, because you are as interested in it as I, and you are aware that in our Government errors get corrected. The trends that go against the interest of the people get corrected, and we're seeing a corrective process underway now because there is increasing awareness around the country that the birthright is being taken away. It's being withdrawn.

There are editorials appearing; there's an increasing amount of attention. I assure you, Mr. Chairman, that if these considerations go on, you will see that shown even more fully.

Now there are a lot of myths that have been brought forward.

There's the myth of the submarine patent. It's pretty good rhetoric, the idea that a patent remains submerged and then it comes to the surface to torpedo industry. My colleagues have helped to explain why that's a myth. And I challenge this subcommittee, before it goes into any legislation based on the assumption that there is

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some serious problem there, to identify, to examine in detail, specific instances and to see how many of them there are, if any at all. I haven't found any and I have attempted, through the people I know and my friends, to find a submarine patent. I haven't found one that qualifies. If this subcommittee can find any, I think they should tell the American people about them in specific detail, because that myth is now being used as much of the animus for destroying the qualities of intellectual property in this country. And before we take a step as strong as that we certainly need to be able to show that we are dealing with fact and not myth, not fantasy, which in my view, is what this committee appears to be giving credence to.

Now let's look at some of the specifics. My associates have made them clear. Cutting down the term of the important patents clearly takes away the right. And so we need H.R. 359 in order to return to the guaranteed 17-year term, something we can depend upon. Now it's said that you know there is a problem there, and I appreciate your efforts, Mr. Chairman, through H.R. 1733, to apply some band-aids. You realize there is damage done there and you are trying to fix it, with band-aids. Well, we deserve more than band-aids. We should have a guaranteed term and not be in a position where any extensions are subject to the discretion of the Patent Office, so

that the applicant not only must go through the struggle of proving his patent, but then possibly with the struggle of further litigation with the Commissioner of the Patent Office in order to have his term extended. It's a very simple matter. Just have the term restored to 17 years from date of issue.

Now we come to the question of publication, publication after 18 months from date of filing. What a wonderful idea! We know that industrial espionage is a great problem in this country. The President has recently indicated his plans to appoint a task force to deal with industrial espionage. Now the plan is by law the Patent Office will begin publishing, will begin revealing after 18 months all of the most important discoveries that have been filed.

Mr. MOORHEAD. I have to leave in 2 minutes. We've got the last part of a vote on now.

Mr. Hill. Mr. Chairman, I have lots of time. I can wait for you.

Mr. MOORHEAD. Well, I don't know that I'll get back. That's the problem. We've gone for about an hour-and-a-half on this panel alone. We were going to go for 6 minutes a piece; I've given everyone 15 minutes or more. But I do have to — we've got a vote.

Mr. Hill. Mr. Chairman, I respect that. I'll be glad to wait.

Mr. MOORHEAD. But I won't be here; that's the problem. This is very important bill that they're taking up on the floor. The meeting has gone far too long. I'll take any additional information you want to give to us.

Mr. Hill. All right, I'll conclude Mr. Chairman.

If we go to 18 months publication, then we have lost one of the options that inventors have in this country. Now it's been said they have 18 months publication abroad, but, Mr. Chairman, the inventor has the option of choosing not to file abroad. He can protect his technology until he knows whether he has patent rights by choosing not to file abroad. H.R. 1733 would take that option away from

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him with regard to the United States and then he must exercise the option of not even filing for a patent.

There's always the question now: Will an inventor file for a patent or will he simply rely on trade secrets that he keeps to himself? One of the values of the patent system is that it tends to bring information into the public and to make it available. I assure you H.R. 1733, where the technology is critical, if passed, will tend to

suppress information and it will never come into the public domain. So it has exactly the opposite effect of that which has been touted. So, Mr. Chairman, to summarize, lets turn back this attack. It'll be turned back, you may be sure of it, because it goes to the fundamentals of the strength of this country, but lets you and I participate in the triumphant step of turning it back, and let's see intellectual property rights defended fully in the United States, so that they may continue to play the major role that they have played in the growth of the country, and let us use them as an example for raising the level of intellectual property rights in all of the other countries of the world because as the world grows smaller, we all benefit when there are strong intellectual property rights throughout the world.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Hill follows:]

Prepared Statement of David L. Hill, President, Patent Enforcement Fund, Inc.

Mr. Chairman, Members of the Committee, my name is David L. Hill, Chief Executive Officer of Patent Enforcement Fund. I am pleased to testify before you today at the invitation of Chairman Hyde of the Committee on the Judiciary concerning H.R. 1733, the Patent Application Publication Act of 1995, and on H.R. 359 to restore the term of patents, and for other purposes.

introduction

I shsdl testify in detail regarding those bills, but let me first step back from those details and give you a summary, as I see it, of the current debate on changing the U.S. Patent System.

We begin with the recognition that the U.S. Patent System is the best in the world and that it, along with our natural resources, has enabled the great economic miracle which has now brought the United States to be the leading world power. Despite the excellence of the U.S. Patent System, there is now a strong effort to degrade it severely, even down to the level of the Japanese Patent System which is one of the worst in the world.

Three constituencies are involved in this debate:

A. The American constituency, made up of the vast majority of American citizens who have benefited from the economic strength growing out of our Patent System. That is the constituency, I believe, which has elected to office each of the members of this Congress. I speak for that constituency as well when it refers to the ancient maxim: If it aint's broke, don't fix it.

B. A second constituency may be referred to as the corporate lobby, representing some misguided elements of corporate America which believe their corporate

interests will be best served by skewing the Patent System against the independent inventor. Yet most of those great corporations have been founded on the work of independent inventors. They face the prospect of competition from future new corporations in our expanding economy if the independent inventors of this country continue to be motivated by a strong Patent System to seed new industries through further breakthrough inventions.

C. The third constituency is the Japanese lobby which expresses the objectives of the Government of Japan and the industrial complex associated with that Government which is strongly disadvantaged in the present economic competition. Innovation proceeds at a far higher rate in the U.S. than in Japan because the Japanese Patent System has been dominated by corporate interests

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from its inception and does not provide real enforceable intellectual property rights to independent inventors in Japan as the U.S. System does.

There are immense economic values involved here, Mr. Chairman, measured in hundreds of billions of dollars in royalty fees alone payable annually plus other far greater values due to the role of the Patent System in engendering and enabling economic growth.

CONSEQUENCES OF PROPOSED CHANGES

If these two hostile lobbies succeed in their current objective of modifying and largely trashing the U.S. Patent System, then two principal results will follow.

A Long-term worsening of the present unfavorable trade balance

The present unfavorable trade balance will worsen steadily and relentlessly over the long term. In the present age we are more and more dependent on exports based on information and innovation rather than on the products of smokestack industries. The proposed changes in the U.S. Patent System will dampen the wellsprings of innovation from individual genius which have supported and enriched us up to the present time.

B. Mounting security risk to the United States

The resultant enfeebling of the U.S. economy from the proposed evisceration of our Patent System will create a mounting security risk to the United States as a nation.

For example, our ability to turn back the attack from Japan at Pearl Harbor ultimately depended on the vitality and resilience of our economic system which was the outgrowth of continual dynamic seeding from the Patent System over many decades.

A difficulty for the Congress in dealing with this vital and complex issue concerning proposed changes in the Patent System is that we do not presently, in my judgment, have a dependable and trustworthy Commissioner of Patents and Trade-

marks. Commissioner Lehman has consistently misled the Congress in his testimony and has demonstrated by his actions and his statements that he is not working for the American people but rather in the interests of the two lobbies which would undermine and largely destroy the U.S. Patent System. I return later to the behavior of Commissioner Lehman.

WHY THE U.S. PATENT SYSTEM IS THE BEST IN THE WORLX)

The items for consideration before this Committee today have to do with changes in Intellectual Property rights granted under the U.S. Patent System. We begin with the recognition that the U.S. Patent System is the best in the world. It is the envy of inventors everywhere outside of the United States. The systems in Europe are substantially inferior and the system in Japan is still worse. The criterion by which I make that judgment is the capability of the Patent System to stimulate innovation — to do what Abraham Lincoln referred to as adding the fuel of economic incentive to the fire of genius. It arises in the Constitutional empowerment to the Congress in Article I Section 8 that inventors shall have exclusive rights to their discoveries for a limited period of time. The U.S. System is superior to those of Europe and Japan because it provides clear and enforceable rights of intellectual property ownership to the individual inventor. Our system is characteristically American in growing out of the insight of Thomas Jefferson, James Madison and ofliers of our Founding Fathers who were sensitive from their recent experience to the ways in which the rights of individuals could be trampled and denied by centers of major financial and political power. Because our Constitution and the patent laws growing out of its empowerment have tended to give unique standing to the inventions of our best and our brightest, the resulting intellectual property has become a leaven that has worked throughout the U.S. economy to yield great growth and power. Those inventions which lead to entirely new products and create new industries almost always come from the work of independent inventors working alone or in very small companies rather than from those employed by major corporations. The protection and fostering of individual genius is indeed of the U.S. Patent System.

WHY MOST IMPORTANT INVENTIONS COME FROM INDEPENDENT INVENTORS WORKING ALONE

Invention comes from individual inventors thinking in original and creative ways. Most of our great corporations have grown out of the work of an individual inventor, as cited in Appendix B. A few examples which quickly come to mind are Herman Hollerith, with the invention of his tabulating machine giving rise to the enterprise

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that became the International Business Machines Corporation; Alexander Graham Bell with his invention of the telephone giving rise to the American Telephone and

Telegraph Company and the regional Bell Companies; Thomas Alva Edison with his light-bulb and many other products leading to the General Electric Company. Inventions are necessary to the successful growth of a major corporation, for the associated patent rights enable the company to protect its profit margin, to build up capital for further research and development in the area of technology that it owns and to have the capital for expansion and growth.

As the corporation grows, a transformation occurs in which most employees are directed to the established program based on the earlier inventive work. The original founders die or move on and the new employees tend to be those who are more susceptible to direction to an established program and less inclined to be innovative thinkers.

The consequence is that the vast majority of important inventions which create new products and lead to entirely new industries come from independent inventors working alone or in very small companies. This conclusion is thoroughly documented by Department of Commerce statistics as shown in Appendix D. It is true that most of the R&D expenditures are by the major companies and it is also true that many inventions are made by them and are reflected in many patents issued to them.

However, the study of those patents and inventions shows that they are almost entirely improvements on existing products. Very rarely indeed does the breakthrough invention occur in work sponsored by a major corporation. It is those pioneering inventions which arise almost always with individual inventors and which are primarily responsible for the seeding and growth of our economy through the creation of new industries. Those are the inventions which we most value as a product of our Patent System. The capability of our Patent System to foster such inventions is a primary good which is threatened by the proposed changes in the patent law and which must be preserved at all costs.

THE ANIMUS OF SOME MISGUIDED CORPORATE INTERESTS TO SKEW THE PATENT SYSTEM

As the corporation grows, it may develop hostility to invention in its chosen area of technology which originates outside the corporate walls. That hostility arises from two sources:

1. The myth develops within the corporation that it has the creative brain power to deal with everything important in its chosen area of technology. That myth is needed to support the corporate ego which is vulnerable to nagging doubts as the creative people in the corporation leave with its growth and many of the best people outside prefer an independent rather than a corporately directed program of activity. The "NIH factor" (not invented here) is well-known in corporate psychology and leads to the refusal to recognize valuable work done outside the corporation in the market area of the corporation.
2. The corporate middle-level managers tend to believe that they are serving

the corporate ownership well by denying the recognition of outside proprietary rights to intellectual property which could cause the corporation to pay a reasonable royalty for the use of that property. Accordingly, they will attempt to use financial strength of the corporation in overwhelming the individual inventor who tries to license and assert his rights against the corporation for products which are being used by the corporation without license, that is, by infringement of the individual inventor's rights. Those managers may reason that they may save the corporation money, on average, by fighting the rights of independent inventors rather than by proceeding promptly to a reasonable license arrangement.

By an extension of the same attitude, such corporate management will favor any changes in the Patent System which diminish the effective intellectual property rights of the individual inventor as compared to the intellectual property rights of the corporation.

While those misguided corporate interests are entitled to express their views through as many well-paid lobbyists and patent lawyers as they may choose to employ, those of us who are concerned with the future welfare of the U.S. economy must assure that they do not succeed in diminishing the effectiveness of the U.S. Patent System as it applies to the individual inventor. We need to protect the rights of the individual inventor because we need the future seeding of the U.S. economy which grows out of the work of such inventors. We need the new corporations which will arise from their work and grow great to compete with those established corporations which may sometimes now try to diminish the role of the individual inventor. We need the continuing turbulence of competition from the growth of new corpora-

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tions. In this way, we retain the vitality and continuing expansion of the U.S. economy.

WHY THE JAPANESE SEEK TO ENFEEBLE THE U.S. PATENT SYSTEM

The Japanese Patent System favors corporate interests and suppresses the rights of the independent inventor. Accordingly, the Japanese are at a substantial competitive disadvantage with the United States in long-term economic growth. They understand that well and also understand that for reasons of their culture, linking their major corporations with their Government, they are not able readily to change their system. Therefore, they propose to change ours. For that reason, they entered into two agreements with the United States in 1994 which, if enacted into legislation, will accomplish their objective of severely weakening the U.S. Patent System as it applies to the independent inventor. Objectives set forth in those agreements are the basis for the matters to which this Committee addresses its attention today:

1. Whether the patent term should be guaranteed to be always at least 17

years from date of issue or whether it may be sharply diminished to 10 years, 5 years or even years, as may tend to be the case for the most important pioneering inventions. H.R. 359 restores the guaranteed term to our patent laws which was destroyed when legislation was deceptively rushed through the Congress without opportunity for consideration or discussion in association with the GATT legislation. GATT did not require the changes that were made but it was used deceptively, under the influence of the two hostile lobbies above cited, to bring about a destructive change in U.S. patent law.

2. The U.S. Patent System was to be adjusted to the Japanese by requiring that applications be published after 18 months. Legislation to provide that change is before the Committee today in the form of H.R. 1733 and should be rejected, for it would serve to eviscerate much of the value of the Patent System to the independent inventor, as discussed below in some detail.

The Japanese have been quite forthright in stating their objectives for changing the U.S. Patent System. Analysis of the two 1994 agreements, entered into by Commissioner Bruce Lehman and Commerce Secretary Brown with the Japanese, indicates that the Japanese offer inconsequential and[almost trivial concessions in return. It is astonishing that they have found two U.S. officers who would enter into those agreements and who have been enthusiastically promoting their fulfillment to the great potential damage of the U.S. Patent System and consequent damage to the U.S. economy. A clear statement of the Japanese objective is given by Saburo Okita, the major architect of Japan's economic policies from the end of the war on to recent times. He was also the Japanese Foreign Minister not long before he died in 1993. He was honored by the Japanese and there is even an entire library in Nara devoted to his works. In one of his books entitled, "Japan's Challenging Years," he states, "I will actually be happy if rearmament is completely prohibited. An army in uniform is not the only sort of army. Scientific technology and fighting spirit under a business suit will be our underground army. This Japanese-American war can be taken as the khaki losing to the business suits."

Passage of H.R. 359 Is Necessary To Restore the Patent Term

Under the legislation deceptively rushed through in connection with GATT, the objective of the Japanese agreements was achieved of setting the term to run 20 years from date of application. The damage to the U.S. System from that change is profound.

Changing from the established 17-year patent term from the date of issue of the patent to a term which is 20 years from the date of the application puts the ultimate term of the patent at risk for two types of delays which occur in processing patents through the U.S. Patent and Trademark Office (USPTO).

1. Those patents which represent important advances in technology will necessarily have broad claims. The examiner may require an extended period of

dialogue with the inventor. Appeals to the Board of Patent Appeals and Interferences may be required. Further appeals to the Court of Appeals for the Federal Circuit may be required before the final determination is made to issue the patent. For a major breakthrough patent, such extended examination period can run on for years, often three, five, ten, fifteen, even twenty years. All of that time would be subtracted from the term that the inventor may hold rights to his invention which begins with the issue of the patent and runs under this agreement to 20 years from the date of the application.

2. The Patent Office may make mistakes, such as losing the file. Sometimes a file is lost more than once. Sometimes months or even years are required to get the examination back on track. All of that time will subtract from the length

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of the term which the inventor receives which now runs from the date of issue of the patent to 20 years from the date of application. The application period can easily run on for years due to the blunders of the Patent Office. Why should the inventor be charged time on the use of his property rights because of blunders by the Patent Office?

The objective of the present attack on the U.S. Patent System is to step backward as much as possible from the basic grant of rights which is empowered by the U.S. Constitution. The mode of the attack is to reduce those rights in a number of different ways as set forth in Appendix B. One such attack is to reduce the effective term of the patent — a change already made which can be set right and reversed by passing H.R. 359.

It should be noted that the change made deceptively through the GATT legislation regarding patent term in the United States is of no consequence for trivial patents. It becomes increasingly important as the importance of the invention increases, with the associated likelihood that the period for processing the patent grows longer. Those are exactly the patents which the Government of Japan would like to discourage. For they are the ones which seed the U.S. economy most and vitalize it through giving rise to new industries. Those are also patents that usually come from independent inventors which hostile corporate interests in the United States would most like to discourage. For, in their shortsighted view, they disregard the general vitalization of the U.S. economy and seek to avoid patents which might significantly encroach on what they view as their turf or areas into which they might choose to expand.

The Damage to Intellectual Property From the Laid-Open Application

HR1733 should be rejected. The requirement for publication after 18 months is a basic change in the U.S. patent procedures which currently assure that the applicant will be able to keep his filing secret until the patent is issued. If the filing is

abandoned or the patent is otherwise not issued, then the filing remains secret. This proposed change would have a disastrous impact on the rights now enjoyed by those who file in the USPTO. It would be particularly damaging to those who make the most significant innovations, for experience shows that such patents often require many years to issue, ranging from six to ten or more. Such inventions are breaking new ground and, under the empowerment of the U.S. Constitution, represent intellectual property which belongs exclusively to the inventor for a limited period of time. That period under recent law is 17 years from the date of issue of the patent. Under this proposed revision, the secrets of the inventor would be exposed to the public 18 months after filing of an application, even though he might not receive a patent for many years thereafter. Nevertheless, the significance of his discoveries would be open for all to see within 18 months. It has been said that a new idea can propagate with the speed of light, so that rapidly thereafter others could begin to develop applications suggested by the discovery disclosed by the laid-open application. For the independent inventor, the results are calamitous. Not only any major corporation in the United States, but also any other competitive inventor or corporation throughout the world, could begin poaching on territory which presently remains known only to the inventor and to the Patent Office until a patent is issued. I believe this provision flies so much against the intent of Article I Section 8 of the Constitution that it is at risk of being Unconstitutional. In any case, it would be erroneous policy to take away from the independent U.S. inventor what is presently one of his most important rights under the U.S. Patent System, namely, the right to keep his invention secret until rights to license and enforce it become available to him. Under the proposed change, any corporation that wished could begin preparing and filing applications in adjacent areas of the newly disclosed technology. If those applications involve limited and sharply defined claims, then when the original pioneering inventor finally receives his patent with appropriately broad claims, he would find that a picket fence by a multitude of minor patents had been erected around his territory so that what could have been and should have been a valuable intellectual property has effectively been taken away from him. Another consequence of the laid-open application is that competitors who oppose the grant of the patent can then employ their lawyers to unearth examples of asserted prior art to be submitted to the examiner in opposition to the application. Operating still more insidiously, the competitor could send the asserted prior art to the inventor himself with a statement of its importance to his application. Then, if the inventor concluded that the submitted prior art was insignificant and did not submit it to the Patent Office, the competitor could bring action against him for inequitable conduct after the patent issued, inasmuch as the inventor has an obligation to submit everything to the Patent Office which he thinks may be relevant to

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the application. By such procedures, a competitor could add heavily to the administrative costs of the inventor-applicant, using its corporate resources to overwhelm the financial means of the inventor during the processing of the patent application before the applicant may enjoy the benefit of a presumption of validity which he will achieve with an issued patent.

A further possible consequence of this early disclosure of an invention before the patent issues would be that those who would like to destroy the patent right through the reexamination process as soon as the patent is issued would have years of preparation for such reexamination challenges while the original inventor was waiting and struggling to have his initial application successfully find its way through the process of issuance as a granted patent.

If we wish to destroy for the independent inventor the value of the U.S. Patent System and all that it may contribute to our economic growth in the future, then this one change will largely accomplish that task. HR1733 must be rejected.

Misleading Testimony by Commissioner Lehman

In an astonishing display of bias, Commissioner Lehman has been championing those changes advocated by the Japanese lobby and by the corporate lobby. He has endorsed the changes to which he and Secretary Brown committed the U.S. Administration by the Japanese-American agreements of 20 January 1994 and 16 August 1994.

He has gone so far in pushing for the passage of the changes agreed to with Japan that his enthusiasm appears to have overwhelmed his integrity.

UNWARRANTED ASSERTIONS OF SUPPORT

On the 25th of October 1995, he testified before the House Subcommittee on International Economic Policy and Trade that there was broad support for his recommendations, citing the fact that all of the witnesses which had testified in PTO hearings were in favor of the changes. Such witnesses were evidently very carefully selected. For all of the organizations known to me and representing independent inventors have registered their adamant opposition to HR1733 and their strong support for H.R. 359.

THE MYTH OF THE SUBMARINE PATENT

It may be noteworthy that Commissioner Lehman formerly worked in a law firm which spent much of its time lobbying for corporate interests. In an effort to justify the drastic change associated with the patent term running from the date of application rather than from the date of issue, he has testified to the Congress that industry is at risk from "submarine patents" which remain submerged for a long time in the patent issuance process and then ultimately emerge to "torpedo" members of industry. The submarine patent is a myth and Commissioner Lehman's testimony itself has proven it to be so. When challenged by members of Congress to support

his assertions, he has submitted data extracted from the Patent Office files to show that one out of 7,700 (one thirteen thousandth of one percent) patent applications had been on file for more than 20 years before the patents issued. When the 627 patents which he cited were then examined, it was found that about half of them were subject to secrecy orders and a substantial part of the others were owned by Government and that substantially no patents fit into the description which he had offered as the basis for the drastic amendment to our patent laws.

It is sometimes argued by those in favor of having the patent term run from date of application that when a patent is slow to be issued, it may be due to the inventor engaging in delaying tactics that slow down the issuance. Every instance that I know of and have investigated in which a patent has had an extended period of issuance, has been one in which the ultimate issuance of the patent only occurred because of extraordinary diligence and persistence by the inventor in fighting for its issuance. I know of no instance in which an inventor has deliberately delayed the issuance of his patent nor do I know of any procedure under the patent regulations by which an inventor even has that capability. The obligation remains upon the Patent Office to move the application process forward as rapidly as possible unless it has been countermanded by an explicit secrecy order.

When we recall that the primary purpose of the U.S. Patent System is to provide enforceable property rights to those who make significant inventions, there is a situation which sometimes arises which Commissioner Lehman should have understood and should have explained to the Congress, instead of building an alarming myth about a "submarine patent." It may sometimes occur that an inventor of exceptional genius may achieve a cluster of significant inventions which are filed in one original

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disclosure with the Patent Office. If those inventions represent breakthroughs in a new field, it may take the inventor many years to get through the Patent Office procedure to a patent. The applicant must find an examiner who can understand a field of technology that has not previously been before him. For a pioneer patent, the inventor must file broad claims in order to stake out what he has achieved. Such broad claims are frequently contested at length before allowance is given. Appeals to the Board of Patent Appeals and Interferences and then to the Court of Appeals for the Federal Circuit may be required before the matter is resolved. In this fashion, 10, 15, 20 years or more may elapse before the patent is issued. Yet those patents which ultimately issue, as a tribute to the persistence and insight of the inventor, are indeed the pearls of the Patent System. They are precisely the patents that open up new industries and do most to seed our economy. They are the patents which we must promote and protect. Yet, the provision of having the patent term run from the application date of the patent would sharply reduce its value or elimi-

nate it altogether. Similarly, the provision of having the application published 18 months after date of application would destroy most of the value of the patent, as described above.

Another aspect of patent procedure which could have been and should have been explained by Commissioner Lehman to the Congress, but was not, is the following. When a number of different inventions are comprised in a single disclosure, then regulations in the Patent Office require that each invention be separated and provided for in a separate application. Thus, when a cluster of inventions are described by an exceptionally talented inventor in a single disclosure to the Patent Office, he may subsequently be required to file a series of so-called divisional applications to process each separate invention on its own merits. Thus, in the situation described above, when an inventor has broken ground in a new technology and filed a cluster of inventions in a single disclosure, he may struggle for 10, 15, 20 years or more to have his first patent issued from that disclosure. After he has notice of allowance on this first invention, he may then be required to file a divisional application for another invention and may have a period of some years of struggle with the Patent Office to have that second invention allowed in a patent. The same process may then apply for a second and a third divisional application, each of which may take some time to find its way through the Patent Office. Thus, for the exceptionally brilliant inventor — just the inventor who would be most protected by the Patent Office — the final issuance of all of the patents for the inventions disclosed in the initial cluster disclosure may take many years. That is a consequence of Patent Office regulations. While an inventor is struggling to feed his family and get his first patent issued from an important cluster disclosure, he has neither the energy, the time or the financial resources to process a second or a third divisional application. He may not even know that a divisional application is required until he is so notified by the Patent Office as he approaches allowance on one of his inventions in the cluster disclosure.

Because income from an issued patent frequently takes years to materialize, the inventor is frequently struggling to survive economically while he is going through the extended process of having a breakthrough invention patented. When there are several divisional applications then subsequently required in series, the inventor must continue his struggle with the Patent Office to obtain a sequence of patents to protect his intellectual property.

This problem with divisional patents and many inventions arising from a "cluster disclosure" is peculiar to the independent inventor and seldom, if ever, arises for a large corporation for two reasons:

1. The economic problems of supporting oneself while processing a contested application does not arise for the corporation with its ample financial resources.
2. The large corporation seldom, if ever, retains in its employ a person of suf-

ficient genius to file a major "cluster disclosure," for the reasons discussed above.

When we realize that the primary purpose of the Patent System should be to protect and to encourage those inventors who make the most significant inventions that seed the economy with new industries, we then recognize how profoundly misleading Commissioner Lehman's testimony has been in failing to explain to the Congress the needs of the exceptionally talented inventor and the importance of having the Patent System operate to protect him. Instead, Commissioner Lehman has tried to turn this situation around and use it to build the myth of the submarine patent as the excuse for attempting to destroy the System, difficult though it may be, under which the exceptionally talented inventor has been protected in having the right to process his application to a successful conclusion in patenting major breakthrough inventions, even to the extent of having several major inventions resulting from a single "cluster disclosure." For that reason, I refer to those patents from such inven-

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tive disclosure as the pearls of the Patent System which we should protect in every possible way. They are the patents which are most significant in seeding our economy and give the best promise that through innovation, the United States may ultimately become a dominant trading partner and cure the present trade deficit under which it labors. Those are also the class of patents which, through vitalizing our economy, help maintain the position of the United States as the dominant economic power of the world. Commissioner Lehman and his proposed policies to trash the U.S. Patent System serve the short-sighted interests of the corporate lobby and the Japanese lobby but betray his obligation to serve the interests of the American people in his role as an officer of the U.S. Government.

The Rush To Pass Unsound Legislation Before It May Be Considered

I find it surprising, Mr. Chairman, that the Congressional leadership would bundle with the GATT legislation and, therefore, prevent meaningful discussion by the Congress of the legislation which changed the U.S. patent term to run 20 years from date of application instead of 17 years from the date of issue, as required by the Agreement of 20 January 1994 between Commissioner Lehman of the U.S. Patent Office and Commissioner Asou of the Japanese Patent Office. It is all the more surprising that discussion of such far-reaching and profound legislative change, as discussed herein, should have been made on a deceptive basis by claiming that that legislation was required by GATT, when in fact GATT only required that the minimum term be 20 years from date of application and in no sense required that the legislation take the form which could diminish the term to zero for the most important breakthrough patents. For that reason alone, H.R. 359 is essential and must be passed to set the record straight regarding the intention of the Congress to pro-

protect the rights of the independent inventor in recognition of the essential role that the independent inventor has played in the seeding and vibrant expansion of the U.S. economy.

It was also surprising to me that H.R. 1659 to change the Patent and Trademark Office from an agency of the Department of Commerce into a Government corporation was bundled with the Budget Reconciliation Act where it could not be further discussed after one day of testimony from witnesses which were apparently selected to be supportive of the legislation. One of the risks of that legislation is that senior and highly competent personnel in the Patent Office who have been there for years and have made a career of dedicated service in the fulfillment of the objectives of the patent laws would be shunted aside and even discharged at the whim of a strong Chief Executive Officer of such a corporation, as is contemplated in the legislation. I know that there was a second day of hearings scheduled on the 28th of September at which a number of senior patent examiners were scheduled to testify and I was also scheduled to testify to reflect some of the attitude of independent inventors. To our surprise, that session was canceled two days before its occurrence and the Bill was then bundled with the Reconciliation Act where further discussion was impossible.

We take great risks with the welfare of our country, Mr. Chairman, when we take such sensitive legislation as these two Bills reflect and push it through in a fashion in which there is no opportunity for opposition views to be expressed or for the Congress to reach mature judgment. I believe you may agree, Mr. Chairman, that there are immense values at stake here, measured in trillions of dollars, and involving the future well-being of the U.S. economy. I hope that you may also agree that there is no inducement available from the powerful corporate or Japanese lobbies which would induce any of us to take hasty and ill-considered action regarding the future strength and effectiveness of the U.S. Patent System, critical as it is to the continued growth and dynamic strength of our economy.

Conclusion

The appropriate legislative action, in my judgment, is to defeat H.R. 1733 and then to provide for the passage of H.R. 359 and its companion Senate Bill S284, with appropriate amendment to avoid the hazards implicit in a laid-open application at any time during the processing of an application for a patent.

A constructive response in the international debate on patent rights would be to urge Japan and other overseas countries to cease the process of using laid-open applications at all, in view of their profoundly disruptive effect on the intellectual property rights of the inventor. Finally, the patent term should provide a minimum of 17 years from date of issue of the patent in all cases and consideration may be given to making that term somewhat longer in view of the fact that the value to the inventor increases substantially in the final years of the patent term in which

the growth of use of the invention may have occurred.

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Appendix A

TEXT OF THE TWO 1994 AGREEMENTS WITH THE GOVERNMENT OF JAPAN

The Agreements of 1 January 1994 and 16 August 1994 with the Government of Japan are appended for reference.

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January 20, 1994

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ikctlon a to b« taken hj Japan:

1. By July 1, 1995, the Japanese Patent Office (JPO) will permit for all nationals to file patent applications in the Japanese language, with a translation into Japanese to follow within two months.
2. Prior to the grant of a patent, the JPO will permit the correction of translation errors up to the time allowed for the reply to the first substantive communication from the JPO.
3. After the grant of a patent, the JPO will permit the correction of translation errors to the extent that the correction does not substantially extend the scope of protection.
4. Appropriate fees may be charged by the JPO for the above procedures.

Actions to be taken by the U.S.:

1. By June 1, 1994, the United States Patent and Trademark Office (USPTO) will introduce legislation to amend U.S. patent law to change the term of patents from 17 years from the date of grant of a patent for an invention to 20 years from the date of filing of the first complete application.
2. The legislation that the USPTO will introduce shall take effect six months from the date of enactment and shall apply to all applications filed in the United States thereafter.
3. Paragraph 2 requires that the term of all continuing applications (continuations, continuations-in-part and

divisions), filed six months after enactment of the above
legislation, be counted from the filing date of the
earliest of any applications invoked under 35 U.S.C. 120.

m. <^

-^r^ bruce V. A. Lehman

Vataru Asou
Assistant Secretary of Commerce and
Japanese Patent Office Commissioner of Patents and
Trade
United States Patent and Trademark
Office

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UNITED STATES DEPARTMENT OF
COMMERCE

WASHINGTON, D. C. 20230

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OFFICE
OF THE
SECRETARY

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American Inventors Pleased with Swiftly Stipulated
Implementation of Patent Protection in Japan

Washington, D.C. — U.S. Secretary of Commerce Ronald H. Brown and Japanese Ambassador Takakazu Kuriyama signed Letters of Agreement this afternoon in the Secretary's office ensuring

American inventors faster processing of their patent applications and overall improved protection for

owners of U.S. intellectual property rights.

"This is an important step in helping America's inventors gain better access to Japanese markets.

This

signing demonstrates progress by the Clinton Administration in resolving some long-standing issues for owners of U.S. intellectual property rights," Secretary Brown said today.

Under the agreement, the Japanese Patent Office will:

- * By April 1, 1995, end the practice of allowing third parties to oppose a competitor's patent before it is granted;

- * By January 1996, put in place an accelerated patent examination procedure that will enable applicants to obtain disposition of their patent applications within 36 months, upon request;

and,

- * By July 1, 1995, end the practice of awarding dependent patent compulsory licenses which can force patent holders to license the use of their technology to competitors, thus limiting their exclusive rights in their inventions.

The agreement also requires that U.S. Patent and Trademark Office to publish pending patent applications 18 months after filing, beginning with applications filed after January 1, 1996, and conduct

reexamination proceedings to allow greater participation by third parties.

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EMBASSY OF JAPAN
WASHINGTON, D.C.
August 16, 1994

Dear Secretary Brown:

I have the honor to refer to the recent discussions between the

representatives of the Government of Japan and the Government of the United States of America concerning the patent systems of the two countries. I am pleased to inform you that the Government of Japan confirms that, on the basis of these discussions, the Japanese Patent Office and the United States Patent and Trademark Office are to take the actions described in the Attachment hereto. In some instances, the implementation of these measures will require approval of the Japanese Diet or the U.S. Congress.

We look forward to working with you on a regular basis on these and other matters of mutual interest in the field of intellectual property. These ongoing talks will allow the Working Group on Intellectual Property or its successor to meet annually, or upon the request of either government, to discuss the implementation of the above actions.

I believe that the above-referenced actions and continued efforts will further promote the good relationship in the field of intellectual property between Japan and the United States of America.

Takakazu Kuriyama

The Honorable Ronald H. Brown
Secretary of Commerce

Attachment

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THE SECRETARY OF COMMERCE
Washington, O.C. 20230

August 16, 1994

Dear Mr. Ambassador :

I am pleased to receive your letter of today's date concerning the measures that our two governments have decided to take with respect to the patent systems of our two countries. I am pleased to inform you that the Government of the United States of America also confirms that the actions described in the Attachment to your letter are to be taken by the respective Offices.

We look forward to working with you on a regular basis and to the ongoing talks which will allow the Working Group or Its successor to meet annually, or upon the request of either government, to discuss the implementation of the above actions, I, too, believe that the actions of our two governments and continued efforts will further promote the good relationship in the field of intellectual property between Japan and the United States of America.

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Ronald H. Brown

His Excellency
Takakazu Kuriyama
Ambassador of Japan

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Actions to be taken by the JPO:

1. (a) By April 1, 1995, in order to institute a revised opposition system by January 1, 1996, the JPO is to introduce legislation to revise the opposition system.
- (b) Under the revised system, oppositions are to take place only after the grant of a patent.
- (c) Multiple oppositions in the revised system are to be consolidated and addressed in a single proceeding to minimize the time spent during opposition.
2. (a) By January 1, 1996, the JPO is to institute a revised system of accelerated examination.
- (b) In the revised accelerated examination system:
 - (i) the JPO is to allow an applicant who has filed a patent application before a foreign national or regional industrial property office to request accelerated examination for a corresponding patent application filed in the JPO;
 - (ii) applications are to be processed to grant or abandonment within 36 months from the date of the request for accelerated examination;
 - (iii) the JPO may require the applicant to submit a copy of a search report, issued by the above mentioned national or regional industrial property office separately from or associated with its first substantive action on the merits; and
 - (iv) a fee, not to exceed the fee for filing an application, may be charged in addition to the normal fee for requesting examination but no worldng requirement is to be imposed.
3. Other than to remedy a practice determined after judicial or administrative process to be anti-competitive or to permit public non-commercial use, after July 1, 1995, the JPO is not to

render an arbitration decision ordering a dependent patent compulsory license to be granted.

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Actions to be Taken by the USPTO:

1. (a) By September 30, 1994, in order to institute an "early publication" system by January 1, 1996, the USPTO is to introduce legislation to make applications publicly available 18 months after the filing date of the earliest filed application, a reference to which is made under 35 USC 119, 120, 121 or 365.

(b) The USPTO is to make publicly available applications, filed on or after January 1, 1996, as soon as possible after the expiration of 18 months from the filing date or, when priority is claimed under 35 USC 119, 120, 121 or 365, from the earliest priority date. The drawing, specification, including claims, and bibliographic information of the application are to be made available to the public. Applications that are no longer pending and applications subject to secrecy

orders are not to be made publicly available.

2. (a) By August 1, 1994, in order to institute revised reexamination procedures by January 1, 1996, the USPTO is to introduce legislation to revise current reexamination procedures.

(b) The new reexamination procedures are to expand the grounds for requesting reexamination to include compliance with all aspects of 35 USC 112 except for the best mode requirement

(c) The new reexamination procedures are also to expand the opportunity for third parties to participate in any examiner interviews and to submit written comments on the patent owner's response to any action in the patent under reexamination.

3. Other than to remedy a practice determined after judicial or administrative process to be anti-competitive or to permit public non-commercial use, after July 1, 1995, the USPTO is not to grant a dependent patent compulsory license.

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Appendix B

THE PUTSCH TO ENFEEBLE THE INDEPENDENT U.S. INVENTOR

Additional perspective on the issues is provided by the attached article entitled

"The Putsch to Enfeeble the Independent U.S. Inventor."

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THE PUTSCH TO ENFEEBLE THE INDEPENDENT U.S. INVENTOR

by David L. Hill

Patent Enforcement Fund, Inc.

1095 Sasco Hill Road

Fairfield, CT 06430

10 October 1995

The current concerted effort to weaken the rights of the independent U.S. inventor by attacking those rights simultaneously from several directions may best be understood as an effort to weaken the United States as a viable economic unit. Some groups who have been manipulated into supporting this putsch may not understand the implications of their position. Consider the following:

A. Intellectual Property in the form of patents represents capitalism at its roots. Whenever a widespread practical problem is solved, the invention creates new capital. Capital may be created from the manufacture of the new product, from sales of the new product and from services related to the new product, but the capital creation begins with the invention itself.

Real property may be a receptacle for accumulation of value but does not itself create capital. Personal property may include some tools which create capital, but personal property is mostly a depreciating asset. It is invention which is the major source of new capital in our economy.

B. Capital generation is a societal good. When those who create the new capital retain a reasonable fraction of it, then incentive is present for society to advance. New capital provides the means for raising the standard of living and creates the material platform which enables, under proper guidance, the freedom of mankind from drudgery, the development of intellectual resources and the further ennoblement of the human spirit.

C. Most significant inventions which create new products and which may lead to entirely new industries come from independent inventors working alone or in very small companies. The major R&D expenditures are by large corporations and those expenditures lead to many patents, but they are almost entirely related to improvements on existing products.

It is well documented by U.S. Department of Commerce studies that independent inventors, although their R&D

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expenditures are relatively minor, provide the spark which continually enriches our economy by creating new products and new industries. A few typical examples of such work of independent inventors are:

xerography insulin

penicillin catalytic cracking of petroleum

jet engines automatic transmissions

FM radio the microprocessor

power steering the ballpoint pen

air conditioning Polaroid camera

cellophane the digital computer

the helicopter the nuclear reactor

the zipper oxygen steelmaking process

kodachrome

D. The culture shock between the world of creative technology and the world of business licensing tends to disadvantage the independent inventor. In order to become an effective, creative inventor, a person must be deeply absorbed and committed to a highly ethical environment in which truth is valued for its own sake; the rigid sanctions of nature will punish any inventor who strays from the path of dealing honestly. The inventor who attempts to cheat and to dissemble is the first person to suffer, for he loses his ability to grapple with the realities out of which he must build a solution to the problem he has chosen to solve.

After the inventor is successful in solving a widespread practical problem, he then finds to his astonishment that in the world of business, the corporations which dominate the marketplace into which his product may be introduced will frequently deny his achievement, although it may be clear to the inventor that these corporations may be generating profits which sometimes run to hundreds of millions of dollars based on his work. Yet, the same corporations, instead of giving recognition to what he has accomplished, will employ

attorneys to argue that they are not infringing the inventor's patent and further to argue that the patent itself should never have been issued by the Patent Office.

To enable the inventor to deal with this hostile environment, strong statute and case law exist and there are now organizations such as Patent Enforcement Fund coming into being which will create an alliance with the inventor to help him find the resources to assert his rights and to exercise the judicial system to obtain justice.

Many inventors have been so depressed and discouraged by the business environment in which they found them-

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selves, after they had achieved their successful invention, that they have accepted some paltry sum for their rights. For those still less fortunate, abusive personal attacks and unfair competitive tactics have tended to drive them out of business altogether.

Whenever an inventor is thus deprived of his just reward for his work, all of society suffers, for each such event tends to spread skepticism and cynicism regarding the effectiveness of the patent system and, thus, to diminish the incentive which the patent system was intended to generate to lead to the application of genius to the solution of widespread practical problems .

When Article I, Section 8 of the U.S. Constitution empowers the Congress to provide to inventors exclusive rights to their discoveries for a limited period of time, the clear intent is that the inventor should be able to retain a reasonable fraction of the wealth created by his invention, whether he exercises his right of exclusion under patent law or whether he relaxes that exclusion in terms of a fair and reasonable license fee.

The increasing strength of case law as a result of the uniformity and codification arising from the work of the Court of Appeals for the Federal Circuit since its creation in 1982 means that there is an increasing likelihood that the inventor will obtain a just reward for his work and, conversely, an increasing risk that those corporations which have in the past profited from misappropriating the work of the inventor will now be compelled to pay a reasonable license fee. The consequent support to the patent system benefits all of society by enhancing the wealth generation through the encouragement and motivation of inventors everywhere. Partly as a result of this increasing effectiveness of the patent system, there is now a concerted effort to weaken the statute law upon which the patent system rests .

E. The present efforts to alter the patent system are targeted to weaken the position of the independent inventor.

The proposal that a patent be issued to the first to file rather than to the inventor violates the concept that the inventor himself should receive the patent and would provide a statutory process for the misappropriation of the patent ownership by any competing organization which can exceed the independent inventor in its clerical celerity

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in filing and in its ability to pay the costs of processing the patent application. The appropriate counterproposal is to retain the present system and to strengthen it when necessary to assure that the patent can only issue to the inventor himself.

GATT did not require it but GATT was used as the excuse for slipping in the change in patent term from 17 years from date of issue to 20 years from date of filing. That change targets the most important product of the independent inventor — namely, the break-through patent. Such patents may have extensive claims and may often require 5, 10 or even 20 years to find their way through the patent office process to an issued patent. Thus, the originator of the most important inventions will be the one to have the most diminished protection for his invention.

The appropriate countermeasure is to provide legislation, such as H.R. 359, which can provide that the patent term is the longer of 17 years from the date of issue or 20 years from the date of filing. At the same time, consideration may be given to the increased stimulus to the patent system if the period were lengthened still further to, say, 25 years from the date of issue or 28 years from the date of filing.

The proposal by H.R. 1733 to pass to a "laid open" application within 18 months of filing of the patent application is particularly malicious, for it would destroy the present U.S. patent law provision which keeps the application secret, known only to the inventor and to the Patent Office, unless and until the patent issues. Providing that the application be "laid open", prior to the issuance of the patent, would subject the inventor-applicant to:

- a. the heavy burden of defending his application against any and all of the counterattacks from the industry to which his invention might apply, with these attacks being made while the application

itself is being processed and before the inventor knows that he will have a patent to defend.

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b. the proposed premature exposure of the inventor's application would serve to seed the industry with his new ideas before he had obtained a patent and to generate destructive countermoves to destroy the value of any major breakthrough patent before it even existed. Such exposure gives the opposition a running start in applying for patents in adjacent and slightly modified technology and otherwise to mount its battle against the rights of the inventor, before those rights are granted to him, which would be uniquely damaging to the independent inventor. This proposal is especially destructive for the "breakthrough" patent claiming a major advance in technology, for such seminal patents often require five to twenty years to issue. Even then, their issuance is usually a tribute to the extraordinary dedication and persistence of the inventor applicant in surmounting the many hurdles created by the Patent Office against the issuance of his patent. We must do all we can to encourage such "submarine" patents, for they are the pearls of the patent system; their originators have made the greatest contributions and deserve the highest rewards .

The appropriate countermeasure is to empha-

size the importance of retaining the present U.S. system that keeps the proceedings between the inventor and the Patent Office *ex parte* from start to finish. If there is to be "harmonization" between the U.S. and the overseas patent systems, then on this feature, as well as others, the U.S. system clearly takes the lead in establishing that the overseas systems should be modified to the U.S. model. We may then stimulate creativity around the globe from which all of the interacting national economies may benefit. The present system in Japan has been constructed to favor major corporations and to depress the rights of individual inventors .

The proposal, as in H.R. 1732, to have anyone granted the standing to request reexamination of a patent and to participate on equal

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standing with the inventor in the reexamination proceedings would assure that the inventor of any important new development could be overwhelmed with administrative proceedings, attacking him from many directions as a specific consequence of his having been exceptionally inventive and having made a major contribution to society by solving a widespread practical problem.

The proper countermeasure is to assure that standing for requesting reexaminations is limited to the inventor and those against whom charges of infringement have been made by the patentee.

The proposal, as in H.R. 1659, to convert the

Patent Office from an agency of the Department of Commerce to a separate government corporation runs the risks that it may diminish the oversight of Congress and, thus, deprive the inventor of the protection he has in the present system. It may also create questions concerning the efficacy of the rights of appeal which the inventor might then have from the decision of an examiner employed in the corporation.

While the proposal to go to a government corporation for the Patent Office may have some apparent advantages in availability of personnel to the Patent Office to carry forward its tasks and in having more control over its own funds, the proposal runs the risk that the strong Chief Executive Officer for the corporation which is contemplated in some versions of the proposed legislation, may put at risk the sound administration of the Patent Office now being maintained by intermediate and senior level personnel who are civil servants. These personnel, in many cases, represent a dedicated continuity of the current system which protects the rights of the inventor against the attacks of those who would further diminish the standing of the independent inventor by adverse administrative procedures. A strong Chief Executive Officer, if so motivated, could introduce significant administrative changes that largely eviscerate the ability of the Patent System to continue its protection of the rights of the independent inventor who, as we have seen, is critical to the role of

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the Patent System in seeding the U.S.
economy .

The proper countermeasure is to assure and to strengthen the level of Congressional oversight in the U.S. Patent Office whether it continues as an agency of the Department of Commerce or takes the form of a separate government corporation.

6. Many other measures are planned, such as the Prior User's Rights Bill, all of which tend to diminish or negate the rights of the independent inventor.

The proper countermeasure is to recognize the depth, vigor and perniciousness of the current concerted attack on the U.S. Patent System and build a nation-wide army of informed and alarmed citizens who can help assure that the Congress meets its responsibilities of maintaining and protecting the U.S. Patent System.

F. The U.S. Patent System has performed a critical and indispensable role in fueling the growth of the U.S. economy .

Many, and perhaps most, major U.S. corporations have had their beginnings with one or more valuable patent rights. Examples which come readily to mind are:

1. Herman Hollerith by his invention of the tabulating machine created the enterprise that grew into the International Business Machines Corp.
2. William Burroughs by his invention of the calculating machine created the base for the Burroughs Corporation.
3. An Wang, through his contribution to computer technology founded Wang Corporation.
4. Elmer Sperry through his inventive applications of the gyroscope and many other inventions, laid the basis for the Sperry-Rand Corporation.
5. Alexander Graham Bell, through his patents on the invention of the telephone, laid the basis for the telephone industry which has developed, particularly as represented by American Telephone

and Telegraph and by the "Regional Bell"
companies .

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6. Herbert Dow, through his many inventions growing out of his study of brine, gave rise to the Dow Chemical Company.

7. Thomas Alva Edison, through his immense inventiveness, gave rise to the Edison General Electric Company and its successor, the General Electric Company.

By owning an area of technology, a company may protect its profit margin, thus accumulating capital for expansion and for further research and development, as required to carry forward its growth in its chosen field. Oddly, after the corporation grows to great size and the original founders have moved on, the successor managers, particularly at the middle level of management, tend to forget or disregard the sources of the corporations 's strength and growth. That forgetfulness, coupled with the frequent corporate culture that feeds on the myth that no one outside the area of the corporation's chosen business field can make a major inventive contribution to it, leads to the policy in which major corporations disregard and attempt to exploit the rights of independent inventors. This short-sided policy may seem to produce some short-term gain to the corporation, but any such gain is at heavy cost to the overall growth of the U.S. economy and, ultimately, to the strength and viability of the corporation itself.

The primary contribution of the U.S. Patent System has been through the continual seeding of the economy from the work of independent inventors. This diverse and widespread source of genius is the primary resource out of which the unique industrial and commercial growth of the United States can be clearly traced.

G. The attack on the continued vitality of the U.S. as a viable economic unit comes from diverse sources, some more credible than others.

1 . Much of the putsch comes from the industry of Japan as reflected in its managers and through its influence in the Japanese Government. The Japanese attacked the U.S. without warning at Pearl Harbor and received an appropriate response from the United States but at great cost. Now there is a less dramatic but even more malicious attack in progress which, if successful, would tend to rob the U.S. of its leadership in innovation and "harmonize" it at the average level of the other industrial nations. Strangely,

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Japan and the other overseas nations which are promoting the attack on U.S. patent laws, will suffer too if they are successful, for they have benefited richly from the productivity and economic strength which the U.S. has developed and often generously applied to their benefit.

A second source of attack is from organizations which speak for major U.S. corporations, such as the "Fortune 500". As observed in the preceding topic, this effort is short-sided and self-defeating and can only be justified by the myopia of the mutually indulgent corporate management elite which demonstrates its disdain for the general welfare in many other ways as well, such as the ingenious devices employed in extracting from the public stockholder group excessive compensation for members of the corporate elite.

Included in this group is the AIPLA, in which the leadership has manipulated that organization into a position that is probably at variance with the views held by the majority of its members, many of whom represent small companies and individual inventors .

In some ways, the most surprising member of the triumvirate supporting the proposed changes in the U.S. Patent System is the Clinton Administration itself. Through distortion of efforts to promote GATT, the Secretary of Commerce has taken a lead in the attack on the Patent System, with the Commissioner of Patents serving as his faithful and willing accomplice. One might reasonably inquire whether we are looking at a surprising level of incompetence or corruption at a very grand scale. The total values being attacked may be measured in hundreds of billions of dollars, so there may be a fertile basis for corruption underlying the complicity of the Clinton Administration in this putsch. The present Commissioner of Patents, Bruce Lehman, was formally employed in a law firm which spent much of its time lobbying for corporate interests. While the Commissioner of Patents is normally expected to understand and to promote the patent system as a bulwark for promoting the U.S. economy, the current Commissioner is, in many ways, a fox in the henhouse, undertaking to

Page 9

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destroy that which he was commissioned to protect and to strengthen. It is not clear whether the President himself comprehends what is being done; in any case, he is

coiranitted under -his Oath of Office to care
about protecting the future seeding of the
U.S. economy.

It is an irony that the principal product which the
U.S. now exports and which can be the clearest basis
for ultimately achieving a balance of trade is innova-
tion. The trade deficit under which the U.S. now
struggles may be expected to worsen and to accelerate
if the present attacks on the patent system succeed in
diminishing the springs of innovation which are our
best hope of returning to the role of a dominant trade
partner.

H. The present putsch goes so much against the interest of
all Americans that it provides a superb opportunity for
demonstrating how the U.S. system of checks and balanc-
es may be applied to defeat a bad idea and to lead to
the ultimate further strengthening and expansion of the
powers of the U.S. Patent System to promote invention.

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Appendix C

EDITORIAL COMMENT FROM JOHN D. TRUDEL

The 1994 Agreements were entered into without prior advice or public discussion
and have come as a great surprise to everyone. The following article by John Trudel
is typical of editorial comment which is now appearing more and more widely.

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through the eirhonge ol Inlotmalion regording both
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ond 10 identify promising directions lot lutuie le

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tions for the TED modeling requirements, physical
models and their relation to experimental observatio

QUICKLOOK

techniques and methods to avoid/mimic the effects of
TED on device structures For more information, con-
tact SRC, 79 Alexander Or , Bldg 4401, Suite 300,
PC Box 120S3, LeesMurchison Park, NC 27709;
1919) 5419400; (fax (919) 541 9450.

The EMail World & Internet Expo will be held
Nov 28-30 at the Hynes Convention Center, Boston,
Mass. This event will focus on the entire Internet, the
World Wide Web, email, and other multimedia-en-
abled applications, network management, collabora-
tive computing, and electronic commerce. The World
will feature conference sessions that will address how

to help you pull things together to use director'
services, mail servers systems, addressing policies
workflows, and collaborative support systems. Interne-
t (xpo offers management and technical sessions that
explore how the World Wide Web works and how to
use it, how to build Web pages, and how to attain cor-
porate goals through its use. The expo also addresses
commerce and how to market on the Internet, along
with up-to-the-minute information on payment sys-
tems and security. For registration and other informa-
tion, contact OCI, 204 Andover St., Andover, MA
01810; (508) 470-3880; fax (508) 470052^
e-nwll D(lconf1@ool.com).

•••••

■

Life has irony, dear readers. In my wanderings I
stumbled upon a hidden, serious, and very frighten-
ing issue. This may be the most important column

I'll ever write.

As easy as it is to loathe lawyers, not all are bad. I hope some good ones will want to take up a difficult challenge, and take on a superior adversary — our own government

At its core, high technology business needs legal protection. Since 1790, innovators have depended on the U.S. patent system to protect the unique value they created. This protection is now absolutely essential. "Knowledge has become the key economic resource and the dominant, if not the only, source of competitive advantage."

(Peter Drucker, Atlantic Monthly, November 1994) Firms like Microsoft, Intel, and Motorola derive most of their market value from intellectual property. Without patent protection, Silicon Valley and the Venture Capital community could not exist

I recently learned something astonishing. The Clinton administration has made promises to Japan that will end life as we know it for knowledge-based business in the U.S. An official from the U.S. patent office told me some startling things. The administration promised the

■Japanese that we will make U.S. patent filings public information after 18 months. If that sticks, effective January 1, 1996, all your competitors can get them.

The worst news is hidden. Embedded in the middle of the official's talk was the phrase "reexamination rights." Alarm bells went off in my mind, though he brushed by that topic. Did that mean that any U.S. firm fortunate enough to have patents will be subject to endlessly defending them against reexamination by the Japanese keiretsu?

I guarded in public, the official admitted that my worst fears were valid when we spoke privately. He likened the event to Japan's World War II surrender on the U.S.S. Missouri. Some were gleefully calling Tokyo on their cellular phones to report, "The U.S. has given us its patent system."

How could I find proof that this happened? Why hasn't

someone blown the whistle? Why didn't the press report this? It took months and many details are still unclear, but I got most of the squalid tale. It will take several several columns to tell this story, so please have patience. The proof is contained in one paragraph (on page 26) of the voluminous 1994 Commissioner's Report to Congress, "Working for our Customers." Free copies can be obtained by calling the patent office at (703) 305-8600. The sell-out occurred in letters of agreement between Secretary of Commerce Ron H. Brown and Japanese Ambassador Takahazu Kuriyama dated August 16, 1994. I urge you to get a copy of this document while it is still available. I think that Brown has sold out the U.S. patent system, and it's almost too late to stop it. My next column will discuss how Brown and his pet Patent Commissioner, Bruce A. Lehman, pulled this off, and why this is not yet front page news. Lehman is now giving road shows telling patent lawyers that this is a minor change in the U.S. system to harmonize it with international practices. The official story is that we have put one over on those stupid Japanese, who gave us concessions in exchange for nothing. Lehman lies. The unholy combination of NAFTA, GATT, first-to-invent, opening files after 18 months, and the new meaning of reexamination is poisonous. If Brown's plan succeeds, patent protection in the U.S. will be exorbitantly expensive and much less meaningful. John D. Trudel, CMC, provides business development consulting and is the author of the book "High Tech with Low Risk." He is founder and director of The Trudel Group, SH70 Chinook PL, Scappoose, OR 97056; phone (SOS) 503-5599; fax (SOS) 503-6561; e-mail johntrudel@aol.com.

THE ENVELOPE PLEASE...The winning entry in the 'Name the Column' contest will be announced in the October 24 QuickLook section. We received a number of entries, and did they ever run the gamut— from the conventional to the

wacky to the unprintable. ELECTRONIC DESIGN thanks all those who entered.

KLEITRO.Vir DESKi.V/OCTUHtR 2. 1995

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Appendix D

STUDY BY DEPARTMENT OF COMMERCE ESTABLISHING THAT MOST IMPORTANT

INVENTIONS COME FROM INDEPENDENT INVENTORS

Following is an Excerpt from an article published by a panel of the Department of Commerce reporting on invention from independent inventors and from employees of major corporations. It shows that, despite the fact that major R&D expenditures occur from the large corporations, the resulting inventions and patents are almost entirely improvements on existing product. The inventions which make a difference in the economy through creating new products and by seeding new industries come almost entirely from independent inventors.

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TECHNOLOGICAL INNOVATION:

Its Environment and Management

This report, prepared by Daniel V. De Simone, represents the views of the Panel on Invention and Innovation, an advisory committee of private citizens convened by and reporting to the Secretary of Commerce. The views of the Panel do not necessarily represent those of the Department of Commerce or of any other agency of the federal government.

January 1967

Reprinted, September 1967

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U.S. DEPARTMENT OF COMMERCE

John T. Connor, Secretary

J. Herbert Hollomon. Assistant Secretary
for Science and Technology

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C., 2(M02 - Price \$!.<

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TECHNOLOGICAL INNOVATION: ITS ENVIRONMENT AND MANAGEMENT 16

and managing technological change? What characterizes the relatively un-
innovative industries? Are they this way because they failed to exploit innovative
opportunities? Because they possess excessive built-in barriers to technological
change? Is it that their managements have not learned the importance of
utilizing technological opportunities and innovative skills?

We find that we must answer each of these questions affirmatively. The
major barrier is one of attitude and environment. It is primarily a problem of
education — not of antitrust, taxation, or capital availability.

THE SIGNIFICANCE OF SIZE

We have examined variations in innovative performance between the
public and private sectors, different regions, and different industries. We turn
now to a consideration of innovative performance as a function of company
size. Again, however — because we have no choice in the matter — we have
been forced to resort to data concerning R&D, not the total innovative
process.

CHART 12 ■ i ^ . IM " . f . * IMH I ^ k l ' - ^ M M I ■ ■ I I I L I . M I J M » M . , ^ ^ ^ ; ^ ^ | , , | ,

VARIATIONS IN R & D, BY SIZE OF COMPANY

Percent Distribution of R & D Percent Distribution of R & D

Performing Companies Expenditures

100 80 60 40 20 20 40 60 80 100

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□

1,000 to 4,999 Employses

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L ^ '] Less Than 1,000 Employses

Source: Basic research, applied research, and development in industry, Mtt

NSF (Sit. IS6S).

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The above data show that a handful of large companies (having 5000 or more employees) perform almost all of the R&D, although, as we have illustrated, this is not necessarily indicative of innovative performance.

It is important to distinguish between large and small sources of invention and innovation, for the resources available to them are different and, not surprisingly, the riskiness of a venture and the manner in which it is undertaken are generally a function of the available resources! We therefore analyzed several studies on the sources of invention and innovation. These studies were unusually consistent in indicating that independent inventors (including inventor-entrepreneurs) and small technologically-based companies are responsible for a remarkable percentage of the important inventions and innovations of this century—a much larger percentage than their relative investment in these activities would suggest.

— Professor John Jewkes, et al, showed that out of 61 important inventions

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INNOVATION IN CONTEXT 17

and innovations of the 20th century, which the authors selected for analysis, over half of them stemmed from independent inventors or small firms.*

— Professor Daniel Hamberg of the University of Maryland studied major inventions made during the decade 1946-55 and found that over two-thirds of them resulted from the work of independent inventors and small companies.*

— Professor Merton Peck of Harvard studied 149 inventions in aluminum welding, fabricating techniques and aluminum finishing. Major producers accounted for only one of seven important inventions.*

— Professor Hamberg also studied 13 major innovations in the American steel industry — four came from inventions in European companies, seven from independent inventors, and none from inventions by the American steel companies.'

— Professor John Enos of the Massachusetts Institute of Technology studied what were considered seven major inventions in the refining and cracking of petroleum — all seven were made by independent inventors. The contributions of large companies were largely in the area of improvement inventions."

Chart 13, which is based on the above studies, illustrates some of the important inventive contributions made by independent inventors and small companies in this century. One finds the range and diversity of these inventions impressive. Indeed, the mercury dry cells in our electronic watches, the

air conditioners in our homes, the power steering in our automobiles, the FM circuits and vacuum tubes in our Hi-Fi and television sets, the electrostatic-copying machines in our offices, the penicillin and streptomycin in our medicine cabinets, and the list goes on — all of these inventions, which are generally taken for granted, take a new meaning when one identifies them with their sources. The point to be made is that independent inventors and small firms are responsible for an important part of our inventive progress, a larger percentage than their relatively small investment in R&D would suggest.

* J. Jewkes, D. Sawers, and R. SiiUerman, *The Sources of iDveotion*. St. Martin's Press, 1958, particularly pp. 72-88, and Part II.

* D. Hamberg, "Invention in the Industrial Research Laboratory," *Journal of Political Economy*, April 1903, p. 96. See also. *Concentration. Invention, and Innovation*, U. S. Senate Antitrust Subcommittee, S9th Cong., Part III {Government Printing Office, 1965), p. I2S6.

*M. J. Peck, "Inventions in the Post-War American Aluminum Industry," in *The Role and Direction of Invcniivc Activity: Economic and Social Factors*. National bureau of Economic Research, {Princeton, New Jersey, J 902). pp. 279-92. See also, U. S. Senate Antitrust Subcommittee, op. cit., p. 1296 and H3S-1457. 'Hamberg. op. cit., p. 98. See also U. S. Senate Antitrust Subcommittee, op. cit.. p. 1287.

* J. L. Enos. "Invention and Innovation in the Petroleum Refining Industry," in *Rale and Direction of Inventive Activity*, op. cit., pp. 299-304. See also, U. S. Senate Antitrust Subcommittee, op. cit., p. 1287 and pp. 1481-1503.

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TECHNOLOGICAL innovation: its tNVIROMF.NT AND MANAGEMENT 18

CHART 13 mi.^m^ Sl hS^^ ;' r:^.VL>JJ!i!Si."}.!\'^

SOME IMPORTANT INVENTIVE CONTRIBUTIONS OF

INDEPENDENT INVENTORS

AND SMALL ORGANIZATIONS IN THE TWENTIETH CENTURY

Xerography

Cnoitef Carl.-on

DOT

J R GuRy & Co.

Insulin

Vacuum Tube

Ltd Oe Forest

Rockets

Robert Goddard

Streptomycin

Selmar V. Berman

Penicillin

Alexander Fleming

Titanium

V. J. Kroll

Shell Molding

Johanni Croijun

Cyclotron

Ernest O. Lawrence

Cotton Picker

John & Mack Rust

Shrinkproof Knitted Wear

Perivision

Dacron Polyester Fiber "Terylene"

J. R. M. J. T. Oicliin

Catalytic Cracking of Petroleum

Zipper

Whitcomb Judson /Gideon Sunlight

Automatic Transmissions

H. F. H. H. H.

Gyrocompass

A. Karpov, E. A. Sperry, S. G. B. Overson

Jet Engine

Frank Whittle 'Hans Von Cham

Frequency Modulation Radio

Edwin Armstrong

Self-Winding Wristwatch

John Harwood

Continuous Hot-Strip Rolling of Steel

John B. Tytus

Helicopter

Juan Oe La Cierva/Henrich Focke.

Igor Sikorsky

Mercury Dry Cell

Sjmuci Ruben
Power Steering
Fract> Davis
Kodachrome
L. Mannes & L. Godowsky Jr.
Air Conditioning
V/iiiiis Carrier
Polaroid Camera
Edwin Land
Heterodyne Radio
Rei^innld Fe>sendcn
Ballpoint Pen
Ladistao & Ceorg Biro
Cellophane
Jacques Brandenberger
Tungsten Carbide
Karl Schroeter
Bakelite
Leo Baekeland
Oxygen Steelmaking Process
C. V. Schwarz/J. Miles/
R. Durrer

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It goes without saying that the United States could not depend solely on the innovative contributions of small firms. The large firms are indispensable to technological and economic progress. From a number of different points of view, however, we are persuaded that a uni(|ue cost-benefit opportunity exists in the provision of incentives aimed at encouraging independent inventors, inventor-entrepreneurs, and small lechoologically based businesses. The cost of special incentives to them is likely to be low. The benefits arc likely to be high.

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Mr. MOORHEAD. Thank you all for coming and for waiting so long. Because there is only 7 minutes left in this vote, I really have to go.

Mr. RiNES. May I make one observation? I would like to extend to your committee and to your staff the opportunity at my expense

for them to come up to my law office in New Hampshire, Rines & Rines, and I will take a month off, or whatever is necessary to go over 50 cases with them, or as many as they want to see, and you'll see whether we're delaying it or whether the Patent Office is.

Mr. MOORHEAD. Thank you very much. The meeting is adjourned.

[Whereupon, at 3:20 p.m., the subcommittee adjourned.]

APPENDIX

Material Submitted for the Hearings

P.O. Box 15023

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VU FAX; 202-467-5591 FAX; g06-376-7753

Jane 5, 1995

To: Steven ShoJiz

Kttiance. ^OA kmiKican Innovation

TA.om: WoJith Hzitey, PA4, idznt

knoAitlo InvzntoK' i, Ki,i>ociatJ.on\

Re: LEGISLATI(/E HEARIWGS: H.R. J7Z2, & H.R. J733

AmeuiiZo InvzntoA'i A-!>4>ociatLon IA.I.A.I hai bee« invotvzd in helping pote.ntial invZYitoM w-ith thziA concepts with advice., titeAativie., vidzoi, and -ipzakzA-i ioA. ovQA 6i yejiKi. It ha-i taktn many houA-i o^ dzdication and itudy to tky to be in- ioAmzd about thz patznt pAoce-4-4. To date. A. I. A. hai had about 600 membet-i come and go ii-om all ovzA the. Tzxa-i, Panhandle and the iouA. itat&i that iWiAound the Panhandle. We have 35+ membeAi at all timzi. We do not know the exact numbeA. oi patents that A. I. A. ha4 ipaumzd, but it ii> iomewheAZ in the neighborhood o< 100. FoAtyzight [4S) have been iauzd thAu one agznt in ViAginia.

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lous 2,000% in thz last decade. Talk about dticouAaging invention, innovation,
(393)

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LEGISLATIVE HEARINGS: H.K.1732 and H.R.1733

June. 5, /995

Page. 2 oi 2.

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MIDWEST MARINE CONTRACTOR mc. COMMERCIAL DIVERS

149 GREGORY ST. / MT. PROSPECT, IL 80066 / PHONE: 708-296-1674 FAX 708-B24-7768

Confidential Carta Moortam June 2, 1995

Confidential of the United States

Home of Benjamin Franklin

Confidential BC OB dK Judiciary

2138 Rayburn Office Building

Washington, DC 20515-12

CJO : Mr. Steven Sboic

AOIG for Ancrinn Innovation

KE: *ifm^ «' 1 BT-KLATIVK heamwg

H.R. 632, to enhance & in the in cooperation of owners of patents mod
by the United States;

H.R. 1732, dK 'Patent Reformation Act of 1993';

H.R. 1733, die 'patent Application Act of 1993*.

Dear Members of the Subcommittee on Courts and Intellectual Property,

In April of 1991, I Paul G. Rufolo was issued patent number 3,008,075. This patent was
designed to control Zebra Mussel larvae and Macro-Micro Biological Organisms that enter the
underwater/raw water intake pipelines. If properly implemented and used correctly it
would solve a 200 year old world wide drinking water problem.

The furthest thing from my mind was to get involved in a matter, — "in the altercation and fight
with the industry and local government My only intent, (as records prove) was to solve the
grave drinking water contamination problem and get on with my work. The industry was given
warning with an ample time to protect their pipelines for the people's drinking water. However,
they

chose not to honor my patent that would guarantee them pure drinking water but to sway other
businesses and local government in the wrong direction on a subject they knew nothing or very
little about how the people of the United States will suffer with diseases and deaths due to the
poor quality and contamination of their drinking water. It is not too late, my patents can still fix
this serious problem. To quote a phrase from Senator Bob Dole, 'Aiguirieu Aajcnusei/omer
Ok line of effect'.

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And over this country, great inventions and great inventions are being stamped into the ground by
big business for the sake of business, and so consequently all of the knowledge of the inventor
is lost. The invention is only a small part of the inventor's knowledge, the other is the

implementation of the invention associated with years of experience and expertise in the field.
I believe that the bills brought forth to the Legislature; Bill H.R. 632, H.R. 1732 and H.R. 1733
send a strong message to big businesses that they do not have the right to destroy the patent
legacy made this country so great!
I would welcome the opportunity to go to Washington and answer any questions you may have.
Respectfully,

-^c<^x^ ^d3cyi^>^

Paul G. Ruffolo
Inventor

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Congress of the United States?
Johnston of Charleston, SC 20515-4308
June 26, 1995

The Honorable Carlos MOORHEAD
Chairman
Judiciary Subcommittee On Intellectual Property
Washington, D.C. 20515

Dear Carlos:

I understand from Martin Frost that on June 8 you held a
hearing on his bill, H.R. 632, which would guarantee fairness for
small patent holders whose inventions are used by the federal
government. This hearing was held as a follow-up to hearings
held late last year on the predecessor bill. I am very pleased
that you were able to schedule the matter so quickly, and hope
the momentum can be maintained in order to ensure that the small
Texas manufacturing company that first raised the concern is not
irrevocably hurt by the failure to correct the current law.

I am thoroughly familiar with this legislation and with the
sorry state of the law that it seeks to correct. In fact, I have
had my staff work closely with the staffs of the Judiciary
Committee members in the course of the development of the bill.
I strongly support this legislation. While H.R. 632 will aid
some small patent holders in the future, unless it is enacted
quickly the legislation will not help the Texas company that has
brought the problem to light. For that reason, I hope that you

will be able to mark-up the bill and report it to full committee
as soon as possible. It is a matter of simple justice.
Please be sure to contact me if I can be of assistance with
this matter.

rely.

FIELDS

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UNITED INVENTORS ASSOCIATION
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UNITED STATES OF AMERICA

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Vice President
Invention Workshop International
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JoiBBc Hayes
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Ray Pardy
Tampa Bay Inventors Council
Seminole, FL
Rob Versic, Ph.D.
Inventors Council of Dayton
Dayton, OH

June 7, 1995
Representative Carlos J. Moortiead, Chairman
House Subcommittee on Courts & Intellectual Property
2346 Rayburn House Office Building
Washington, DC. 20515-6216

RE: June 8, 1995 Hearing on H.R. 1733

Dear Congressman Moortiead:

The members of the United Inventors Association of the USA are firmly opposed to the publication of patent applications at 18 months after filing.

The UIA-USA opposes 18-month publication for several reasons.

First, the Patent Office proclaims that the pendency time of the majority of patent applications is 18 months. If this is correct, then what is the advantage of publishing the minority number of applications?

Second, the pendency time of patent applications for breakthrough technology inventions is more than 18 months. The idea of exposing new technology for the world to see before the patent application issues puts the inventors at an extreme disadvantage and is certainly not in the national

interest. During the prosecution period, which may last several years, the inventor could be producing and selling his invention marked 'patent pending.' In most cases he would be free to have an exclusive market because the "invention" may not be readily apparent. If, however, the US Patent and Trademark Office publishes the invention at 18 months, the exclusive market — and the resultant exclusive revenues — would be easily diluted by competitors. How can the Patent Office consider publishing breakthrough technology and putting America's Inventors at such a disadvantage?

Third, the provision in H R 1733 that an inventor has the right to reasonable royalties from any person who, during the period of publication, makes, uses, offers for sale or sells in the US the claimed invention, demonstrates an incredible ignorance of the practical realities of the business world! When introducing a new product, the entrepreneur plans to operate at a loss the first few years. By encouraging competitors to produce and sell the same product, H.R. 1733 makes the difficult task of new product development almost impossible. If the entrepreneur does survive

Joanne Hayes • United Inventors Association of the USA • 4850 Dudley Rd., Ste 209, Colorado Springs, CO 80915 • (719)573-4540 • FAX (719)573-4679

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UNITED INVENTORS ASSOCIATION
OF THE
UNITED STATES OF AMERICA
Page 2

long enough to have the patent issued, how does he go after his competitors to claim his "reasonable royalties"? With a lawyer, of course! H.R. 1733 is a lawyer's dream and an inventor/entrepreneur's financial nightmare!

Fourth, proposing early publication of patent applications as a way to eliminate the so-called "submarine patent" is nothing more than a red herring. The US Patent and Trademark Office has within its scope of authority the ability to implement procedures that would prohibit undue continuations. Also,

H.R 359, introduced in the 104th Session of Congress, provides for publication at 60 months to eliminate

the possibility of undue continuations This is the practical and responsible response to solving the

perceived problem of submarine patents; early publication is the coward's way out of assuming responsi-

bility for control of the flow and timing of patent applications.

Fifth, adding the additional cost of publishing patent applications to the already over-burdened inventor is irresponsible In the real world, business people must stay within their budgets and it is repre-

hensible that the Congress consider adding another cost to those who are responsible for the country's

economic growth.

The United Inventors Association of the USA also goes on record as protesting the speed with which

the June 6 hearing was called. Seven business days' notice is obviously too short to let interested parties

around the nation respond.

We suggest that the Subcommittee recognize the contributions made by America's independent inventors and heed their needs and concerns. There is a growing Ijelief that our elected officials are

interested only in the needs of major corporations and foreign interests. The evidence to date ~ hastily

called hearings, closed hearings, elitist commissions and other methods to exclude the voice of the

independent inventor - support this tieUel.

H R. 1733 will damage the fragile, promising businesses that will produce future jobs and future profits

and contribute to the overall health of our economy

We respectfully request that these observations be included as part of the written testimony of the

hearing.

Sincerely,

/

Joanne M. Hayes

Director. Patent Law Reform

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CATERPILLAR ^''''''''

100 NE Adams Street

Peoria, Illinois 61629

June 30, 1995

The Honorable Carlos MOORHEAD, Chairman
Subcommittee on Courts and Intellectual Property

Committee on the Judiciary

U.S. House of Representatives

Washington, DC 20515

Dear Mr. Chairman:

As your Subcommittee continues to review patent issues, I wanted you to know that Caterpillar supports your efforts to substantially improve our patent system

The requirement in HR 1733 to publish patent applications 18 months after earliest filing addresses the uncertainty about the status of rights in new technology and the unreasonable delays

in dissemination of technology information contained in our current patent system. We believe this approach balances the interests of patent applicants with those of the general public to avoid patent conflicts and facilitate early access to patent disclosures. This provision would provide English language translations of foreign-origin applications 18 months from the priority date or about six months after the US filing. The availability of such translations is an obvious benefit to U.S. manufacturers as well as U.S. inventors and the U.S. Patent and Trademark Office.

An essential element of application publication is the requirement that if asked the Patent and Trademark Office make an initial determination of patentability before the date of publication. This gives the applicant an indication of patentability while there is time to abandon the application and avoid publication while continuing to rely on trade secret protection for inventions

unable to satisfy the patent standards.

To further protect the applicant, Section 4 of HR 1733 provides that once an application is published, the applicant must have a right to compensation from competitors who learn of the publication and begin to commercialize the invention. And finally, the Commissioner of Patents and Trademarks is authorized to extend the 20-year patent term for unusual administrative delays not caused by the patent applicant. This provision should address the concerns of inventors with unreasonably delayed patent applications and eliminate uncertainty on the part of manufacturers who do not know the status of patent rights in new technologies for many years after the patent normally should be granted.

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Mr. Chairman, we commend you and Congresswoman Schroeder for introducing this legislation to improve the U.S. patent system. We look forward to working with you and your colleagues to enact these important reform measures in the 104th Congress.

Very truly yours,

Robert E. Muir

General Patent Counsel

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J#^B 9LSi National Association

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Statement on H.R. 1733

Patent Publication Act of 1995

by the

National Association of Manufacturers

submitted for the printed record

of the June 8, 1995, hearing before the

Subcommittee on Courts and Intellectual Property

Committee on the Judiciary

U.S. House of Representatives

The National Association of Manufacturers (NAM) is the nation's oldest and largest broad-based industrial trade association. Its nearly 13,500 member companies and subsidiaries, including 10,000 small manufacturers, are located in every state and produce approximately 85 percent of U.S. manufactured goods. Through its member companies and affiliated associations, the NAM represents every industrial sector, 185,000 businesses and more than 18 million employees.

The NAM is pleased to offer the following comments on H.R. 1733, the Patent Publication Act of 1995. The NAM strongly supports the basic thrusts of H.R. 1733: to publish patent applications at 18 months from filing, to provide for provisional royalty rights, and to provide patent term extension in certain limited circumstances.

18-Month Publication

The NAM has supported 18-month publication since at least 1990, when we urged inclusion of this provision in the patent law treaty then under negotiation in the World Intellectual Property Organization. We have since reiterated our support for 18-month publication numerous times, including a recommendation to the Commerce Department's Advisory Commission on Patent Law Reform in 1991 and support for legislation in the 102nd and 103rd Congresses.

The most important gain from 18-month publication is the early availability of technical data from foreign-origin patent applications filed in the United States. U.S. -origin applications filed abroad are published at 18 months in Europe and Japan, making that knowledge available to European and Japanese inventors in their respective languages. U.S. inventors have no comparable access to this data, however, since applications — both foreign and U.S. — filed in the United States are kept secret here but made public abroad. Publishing applications at 18 months (in English) would correct this asymmetry and greatly increase the amount of technical data available to U.S. inventors.

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The NAM also believes that 18-month publication will improve the U.S. patent system by reducing the amount of uncertainty that our current publication-at-grant engenders. Both patent applicants and examiners will have access to potentially relevant prior art much earlier if applications are published at 18 months. Potential interferences can be identified and resolved much earlier — and less expensively — than is the case now.

To avoid the potential problem of forcing a premature election of trade secret/patent protection, proposed paragraph 122(b)(2) of the patent code would permit independent inventors to request a three-month window between a first office action and publication, provided that they certify they will not be filing foreign patent applications. The NAM supports this concept, but believes the provision should be expanded to permit companies (and universities) to take advantage of it as well.

Provisional Rights

The NAM'S support for 18-month publication is premised on the inclusion of a right of a patent owner to obtain a reasonable post-publication, pre-grant royalty in appropriate circumstances. Although the NAM supports Section 4 of H.R. 1733, we recommend one change in the proposed language. That is, in order to obtain a reasonable royalty, an invention claimed in the patent should be "substantially identical" to the invention claimed in the published application, rather than "identical" as currently proposed in H.R. 1733.

Patent Term Extension

Although the Uruguay Round Agreements Act contains provisions to ease the transition from our former 17-year term from grant to a 20-year term measured from filing, the NAM believes further changes in the law are necessary. In particular, we believe that inventors who, through no fault of their own, have their applications subject to unusual delays in the Patent and Trademark Office should be afforded an extension of patent term commensurate with the period of delay. Section 8 of H.R. 1733 accomplishes this, but the NAM urges several changes to this section.

Most significantly, the NAM is concerned with the overly broad discretionary authority given to the Commissioner under the proposed Section 154(b) of title 35. This is particularly true with respect to determining "unusual administrative delay" and "reasonable

efforts." The NAM believes these terms should be clearly defined in the statute. We suggest the following as a guide to delineating the extent of "unusual administrative delay":

- (i) any time in excess of nine months between the filing of the patent application and the date of a first notice by the Office requiring restriction under section 121 of title 35, informing the applicant of a rejection, objection or requirement under section 132 of title 35, or informing the applicant of allowance under section 151 of title 35;
- (ii) any time in excess of six months between a response by the applicant to a rejection, objection, or requirement of the Office and the date of the next action by the Office;

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- (iii) any time in excess of six months between the date of payment of the issue fee by the applicant and the grant of the patent; and
- (iv) unusual delay should not include time spent by the Office waiting for responses from the applicant unless the applicant has to respond to the Office an unusual number of times as a result of unreasonable processing of the application by the Office.

In clarifying "reasonable effort," the NAM believes that, if an applicant pays extra to extend the time for responding to Office actions beyond the normal three months, this will not be considered a failure to make reasonable efforts. (However, extensions of time for responding to Office actions should not be counted as unusual delay when computing the length of patent term extension to which an applicant is entitled under proposed section 154(b).)

The NAM also believes additional language should be added to H.R. 1733 to provide for inclusion of the term extension on grant of the patent, rather than requiring the patent holder to submit an additional form for extension.

Other Issues

Although not included in H.R. 1733, the NAM also recommends that the Subcommittee address the issues of final rejection practice and the examination of multiple inventions in a single application as this legislation moves forward. In this regard, we support making the transition provisions on final rejection and multiple inventions (with appropriate revisions) set forth in the Uruguay Round Agreements Act permanent and applicable to all applications. In summary, the NAM commends the Chairman and members of the Subcommittee for their work in crafting H.R. 1733. As currently drafted, H.R. 1733 is a good bill that we support. We believe that changes along the lines we suggest would make H.R. 1733 an even better bill. We look forward to working with you in effecting these major improvements to U.S. patent law.

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SMALL ENTITY PATENT OWNERS ASSOCIATION (SEPO)

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A* en inventor of Medical Devices. I«nt to inform Che ConUBletee on
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It is an inventors right to challenge infringers. 'Do NOT IRBAO ON ME".

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allowed. Becauae of the opcertainty of these new rule*, I want you

to know thac I aa withholding cerCaln new technologies In the aedlcal

treaentaent area. Further, the cost of foreign filings Is beyond our

reach, and we would have to partner with a aajor flra. \Htt Is not

obvloua now, auddenly becoaes exquisitely clear once the barrier Is

juaped by Ingenloua Invention. Nhy would we agree to early publication?

A Trade Secret would be Che preferred aetbod.

Early publication la an Invitation to coapetltlon rather than proecccen

and reward for our tlae, expenae and Intellect, it defeata the purpose

of having a Patent Office. Of course. If you have a product cycle of
18 BMntha, having a patapp publshed doesn't matter le: 286, 386, 486 etc.

Certain Independent Inventora, Including ayselr have formed SEPO to

STOP the dlaalpatlon of patent rights envisioned by Thooaa Jefferson.

The opinion atated above Is that of SEPO. SEPO oppoaea early publication.

Sincerely,

S. S. Plshaaa P.T.E.

2» «-**»*• cc: AAI

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Donald G.Co«ter ^.^.^e^7^

Pho>WfW^702) 322-9936

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Booardng: H.R. 1733 'Patent Application Publication Act of 1995'

Mr. Chalnaan and Cu— Ittaa Maiharai

My nmnm la Donald O. Coatar. I'm an Indapandant Invantor who

la vary actlva In political affalri of tho Invantor cooaiunty. I

an alao tho Founder and Proaldont of Navada Invantora Aaaoolatlon.

On behalf of the Indapandant Invantora of Aaiarlaa. X wlah to

strongly object to any Congraaalonal action that would publiah our

tachnology bafora U.S. Lattara Patent have been granted to the in-

ventor- American breakthrough technology in medicine, etelectronlca

and communication aomatimaa take many yeara before a patent laauea.

Za that what we want to give freely to foreign intereata before we

even have an opportunity to develop it for the Jtmerlcan public?

I alao atrongly object to a hearing acheduled only two calen-

dar weeka after a bill la written, with no notice given to any of

the inventor community ao they may have a fair and equal opportun-

ity to prepare testimony, we, the Invantora. are the onea advera-

ly affected by thia propoaed lagialatton; not the laviyera. not the

bureaucrats, not the corporate counael, only us. the Inventora.

The aneaky language Incorporated into the QATT ImplesMntng

'Paat-Traok* legialatlon waa daatructive enough, without this sur-

prise hearing affecting the future of American technology.

I must question the Committee about their reaaona for auch a

speedy hearing. Why is there such a need for diaregarding the con-

cept of a fair hearing on mattera that are ao important to Aaierlca?

What teatimony are you afraid of? When thia prematura publication

bill is so daatructive to the American patent system, who can be the

beneficiary of auch a horrible bill? Certainly not the American in-

ventor. Certainly not the American patent ayatem. Certainly not the

American public or economy that depend on American technological ad-

vances. Who than? Could i t be that the Japaneae lobby! ata wore no-

tified in plenty of time to prepare teatlawny? We need an anawer.

Page 1 of 2

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June 9, 1995 Testimony of DoMld Cestar

Because* of the questionable manner in which uncoordinated language was amended onto the GATT implementing legislation, we're now faced with a shortened patent term and something called a provisional patent application, which is nothing more than a disclosure document that opens the door for adopting the Japanese 'First-to-File' patent system. Neither of which was required, or necessary, for the adoption of the GATT.

Now this document, which appears to be on its own 'Fast-Track' (Hurry-before-a-one-catch-on' legislation), is dangerous in that to the other problems: If this Committee, and the American public are led to believe that 18 month publication is beneficial to America, that is not only not true, it is grossly misleading. If you also believe it pertains to the date of filing of a patent application.

I refer to the language on page 2, line 13, subsection (b) of the draft copy of H.R. 1733 it specifically states, on lines 18, 19 and 20, that the period of 18 months is from the earliest filing date for which a benefit is sought. This is where it is tied to the insidious, but seemingly innocuous, language inserted into the GATT Implementing legislation: (provisional patent application) The earliest filing date for which a benefit is sought is the date of filing of the 'provisional patent application' according to information we receive from the U.S. Patent and Trademark Office. Commissioner Lehman has stated that a patent application receives the "benefit" of the filing date of the provisional patent application, which may occur up to 12 months before the actual patent application is filed to start the '20 year from filing' clock running.

Now it becomes clear that American technology may be published six months after filing. That is what the American public has come to fear from this "Fast-Track" type of political maneuvering that goes on in back room committees: deceptive and dishonest language ■

Can this Committee, in good conscience, vote to approve this H.R. 1733, now that I have exposed the danger to the American patent system? I think not.

Please kill this dangerous and inappropriate bill before it gets out of committee and attacks the U.S. patent system.

Thank you.

Donald G. Coatar. Independent inventor

Page 2 of 2

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Riley & Associates, Inc.

1323 West Cook Road - Grand Blanc, Michigan 48439

Phone (810) 655-8830 - Fax (810) 655-8832

6-2-95

Congress of the United States House of Representatives

Committee on the Judiciary, Subcommittee on Courts and Intellectual Property

As an inventor, I must speak out about multi-pronged attacks against our patent system by foreign paid lobbyists and multinational corporations. America's founding fathers recognized that innovation is crucial to a free enterprise system. Foreign governments and multinational corporations have found allies in the Patent and Trademark Office (PTO), both are spending large sums of money to change American patent law. Japan is one of the leaders but by no means is it the only foreign government trying to influence our lawmakers to make changes that are not in America's best interest. It is important that we not compromise our country's prosperity by allowing foreign interests to weaken our patent laws.

A poor bargain was made during the "Mutual Understanding" of January 1994 between the US and Japan to make a number of changes to our patent system. Some of those changes have been buried in GATT. This deal is a result of a trade with Japanese negotiators who offered the right to file American patents in English and a limited right to correct translation errors in exchange for the 20 year from date of filing language.

Results of deals with Japan over many years should have taught the United States that we never get what we bargained for. I see no benefit for Americans in this deal. Most American inventors can not afford to file foreign patents. American inventors who do file foreign patents find that it is almost impossible to enforce them.

Jack Kilby is one recent example of Japan's unfair treatment of American inventors. He invented the monolithic integrated circuit. The Japanese patent office held up the issuance of his patent for 29 years and after its release Japanese courts ruled that the patent does not apply to current chip design.

The Japanese have been studying America's educational system for years attempting to understand what makes Americans so much more creative than the Japanese. Americans make many breakthrough inventions. Japanese inventions are usually incremental or small

improvements in existing technology.

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Testimony for Legislative Hearing 6-8-95

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Riley & Associates, Inc.

1323 West Cook Road - Grand Blanc, Michigan 48439

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Japan has demonstrated the ability to successfully commercialize concepts that the U.S. and other western cultures create with breakthrough inventions. The Japanese culture places a high value on conformity discouraging the development of independent thinkers. So, their solution to the problem is to weaken our patent laws so they can take advantage of our creativity. A recent article in Japan Times Weekly titled "Intellectual property rights accord with U.S. said necessary" made it clear that changes to the U.S. patent system are important to "facilitate transfers of technology and related investments from advanced economies to the Asian nations, which would help their economic development". The 20 year change that has been hidden in GATT enabling legislation is very detrimental to small business and individual inventors. There may also be other harmful provisions in GATT-TRIPS that have escaped notice. The document is over thirty pages.

CHANGES UNDER GATT

Change of patent term from 17 years from date of issuance to 20 years from date of filing. The net effect of this change is to shorten the usable life of a patent. That is especially true of the most significant patents that often take a decade or more to issue. The twenty year language was also included in 1994 S. 1854, H.R. 4307, S. 2368, and H.R. 5110.

Currently foreign proof of inventorship within the United States is not allowed except where a patent has been published. GATT changed our laws (Section 104) to allow worldwide proof of inventorship. This is going to create many more interference's which will be extremely difficult to investigate. It will be much easier for multinational companies to avoid compensating American inventors by citing obscure evidence. It also opens the door for large scale fraud by multinationals which will be next to impossible to prove.

OTHER PENDING CHANGES

Other changes to our patent law have also been proposed in several other pending bills. These changes in their totality will cause far greater damage than the threat represented by each alone.

Publish the patent application 18 months after filing. This will encourage interference with a patent by giving potential infringers access to the information before the patent issues and will make it much easier for an infringer to fraudulently claim prior user rights, 1995 HR. 1733. "Prior User Rights" which says that anyone who claims that they have secretly developed

an idea can use it royalty free. This will prevent someone who obtains a patent covering the idea from collecting royalties from any prior user. Since there is no requirement that they publish to establish the right this will encourage large scale fraud by infringers who want to establish their right to use the idea to avoid compensating the inventor. 1994 S. 2272, expected to be introduced again this year.

Page 2

Testimony for Legislative Hearing 6-8-95

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A bill is pending that would allow third parties an active roll in reexamination of patents. Currently a third party can request a reexamination but only the inventor and patent examiner are active in the process. This change would allow third parties an active roll. Large businesses could mount a series of attacks through fourth parties and tie the invention up for many years, 1995 HR. 1732.

All of the changes cited tilt the playing field in favor of those who copy. The Japanese have always been very good at copying and I believe that is why they are lobbying so hard for these changes. The United States has always been good at making major technological breakthroughs and breakthrough patents protection is going to be disproportionately weakened. These changes will favor those who make small incremental improvements in technology at the expense of those who make more significant breakthroughs. They will favor large companies over startup companies, and favor companies with short term management goals over compames that plan for long term goals.

One example of how insidious the foreign interference is how they managed to get the patent offices backing for changes that will undermine the patent system. Proponents of weakening our patent system argue that it is being abused by inventors. They usually site "submarine patents" as an example of misuse. The term submarine patent first appeared in a Japanese publication and it is used to describe a patent which is issued after a long delay m the patent office that catches everyone in industry by surprise. Some persons claim that mventors intentionally delay their patents. There are no proven cases of intentional delay being used to create a submarine patent.

There is considerable evidence that delayed patents are the fault of inefficient bureaucrats at the patent office. When they were confronted by powerful interests over the problems created by patents that were issued after lengthy delays of up to forty years they picked individual inventors to be the scapegoat.

The patent office is specifically mandated to aid individuals who are filing for patents.

The patent office's claim that submarine patents are caused by individual inventors is proof that

they are not adequately aiding inventors as mandated by law.

There is a great deal of evidence that the PTO is in fact the cause of excessive patent delays. When an examiner receives an unusually complex or in some cases a poorly drafted patent (as can happen with pro se applications) they tend to work on it after they have processed other patents to keep their productivity evaluations favorable. The patent may go one or more years between office actions and I have heard of four and five years in extreme cases.

The examiner may leave the PTO, causing the file to be passed to another examiner. The new examiner is faced with even more work to become familiar with the patent and sticks the file

on the bottom of their pile.

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The application languishes and soon ten or twenty years, or in the worst case forty years have elapsed. This is not inventors fault and the solution is to enforce the mandate that the PTO prosecute all patents, especially pro se patents in a timely manner. This problem is the fault of PTO upper management.

Another aspect of this problem is allowance of claims. Currently the inventor or their representative and the examiner interact to determine appropriate claim language. The examiner has an incentive to complete the patent because they look bad if the case drags on. The inventor has an incentive because they rarely derive income from a patent before it issues. It is clear that the PTO upper management wants to have much more leverage over applicants and that starting the clock will give them almost absolute power over inventors claims.

Many persons who have a vested interest in a weaker patent system have claimed that inventors have a motive to delay patents until a technology is well established. It is illogical to believe that an inventor would intentionally delay their patent. Compounded interest on money earned earlier far exceeds the potential for a bigger market which is cited as a motive to delay patents and the fact is that an inventor would have to be clairvoyant to see twenty, thirty, or forty years ahead.

Prolific inventors would be foolish to defer income when cash flow stops them from filing additional patents, patents whose financial return is likely to far exceed the value of compounded interest on invested funds. It follows that prolific inventors want income as soon as possible on existing patents to fund developing their most current ideas.

The 20 year from filing provision is PTO management's dream because it gives them a huge lever to make an inventor accept whatever the PTO dictates. The five year extension they

have offered is a Band-Aid applied to a change that is not justified by the evidence or in America's interests. Obtaining the extension is dependent on the whims of a bureaucrat. The PTO gets more power and eliminates industry criticism over delayed patents.

Administrative solutions such as the five year extension are not acceptable, I would entertain the possibility of other Administrative solutions to our concerns such as replacement of several of the PTO's upper Administrators.

I suggest the following issues must be examined as a group while carefully considering what the practical implications are.

- 1) 20 year from filing.
- 2) World wide proof of inventorship, section 104.
- 3) 1 8 month publication.
- 4) Prior user rights.

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1 8 month disclosure will be used by dishonest entities to erode the patent term by third parties challenging pending patents, claiming prior user rights, and use of fraudulent evidence from difficult to investigate foreign sources. It will make our patent system subject to "flooding" as is common in Japan. Flooding is where hundreds of narrow and often questionable improvement patents are filed concerning a fundamental patent to limit the ability of the original inventor to collect royalties.

Important patents that are not stopped outright will be tied up with interference's and other delaying tactics that will eat up half or more of the 20 term.

Patents will be unenforceable for anyone except the largest companies. Inventors such as I will abandon innovation. America's declining standard of living will accelerate. I suspect that America will stop being the beneficiary of the brain drain and that we could even end up being an exporter. One encourages hard work and the other doesn't. Multinationals will use the proposed changes to crush small business and independent inventors.

PTO management has repeatedly claimed that the vast majority of inventors will enjoy a longer term of patent protection. This is another example of the PTO misrepresenting the facts. They claim the average pendency is 19.5 months based on the most current continuation. Their statistics do not take into account the previous applications that led to the last application from which the patent issues.

PTO management claims the proposed changes address abuses of our patent system. The

worst abuses have been perpetuated by the PTO management and none of the proposed changes address abuses of the system that have been perpetuated by the PTO. The PTO is a bureaucracy whose upper management is willing to compromise the source of our prosperity to cover-up it's own failures, justify burdensome fees to increase its size and budget, and to give it more power over its clients.

I believe the PTO sees the 1 8 month publication issue as a cash cow and that they see this issue as an excuse to justify removing the cap on staffing.

The end result of PTO management attempts to lay blame for submarine patents on inventors is that they have been maneuvered by the foreign multinationals into a position where they had to back measures that are contrary to America's interests.

While inventors still face many obstacles in defending their intellectual property rights, they have made progress during the past ten years. That progress is alarming to those multinational businesses and foreign governments that had become accustomed to unlawfully appropriating individual's and small business's intellectual property. They are spending large sums of money attempting to gut our patent system so that they can take the benefits of American ingenuity and the jobs for their profit.

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This is not an abstract problem that only affects inventors. The issue affects every citizen of our country. Loss of the economic benefits of Yankee ingenuity will cost Americans decent paying jobs and will doom our children to a much lower standard of living.

America's economic might is a direct result of our producing more inventors per capita than any other country in the world. Our culture is known for producing independent thinkers. Other cultures have studied our educational system in the hope of learning how to produce inventors.

A healthy economy is dependent on a diverse mix of both startup companies and large businesses. If we allow laws to be changed that benefit large companies at the expense of small companies who are the source of 75% of innovation we will have far fewer startups and fewer inventions.

Large companies have become very short sighted in the last ten to fifteen years. Their quest for ever higher short term gains has radically altered business practices. All of us have known persons who have been displaced from jobs by down-sizing. Many people are not aware

that Research and Development staff persons are being let go in greater numbers than many other

groups. The Wall Street Journal had an excellent article on May 22, 1995 titled "Top Labs Shift Research Goals To Fast Payoffs" that documents this trend. This is a result of large companies only funding small improvements that will give them an immediate return on their investment. These trends are causing many former corporate inventors to form small companies to develop ideas for which large companies are not willing to make a long term investment. The problem is that the large companies want to be able to take advantage of the small companies work without fairly compensating them.

Everyone understands that a farmer who consumes his seed corn is foolish. Small companies seed the market. If multinational companies are successful in tripping the patent system all Americans will suffer a decreased standard of living.

I have been an inventor for ten years, the last six full time. I am appalled by the actions of the current Administration and the PTO. The PTO is a classic example of a bureaucracy that is out of touch with the realities of the marketplace and the needs of inventors.

PTO management actions during the last few years have been extremely damaging to Innovators. The PTO has been convinced by lobbyists that are paid by multinational corporations and foreign governments to back measures that will allow the foreign interests to take our inventions and the jobs and profits that those inventions represent.

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A PTO official inferred in a Washington meeting that the government better understood the issues at stake than a group of several hundred professional inventors, which includes fifteen members of the National Inventors Hall of Fame, seven members of the American College of Physician Inventors Hall of Fame, three Nobel Laureates, and many other inventors and small businessmen nationwide. He stated that inventors that signed the open letter to the President that we published in both the Washington Post and Roll Call objecting to the 20 from filing provisions of the GATT enabling legislation did not understand the issues. Both I and other inventors who signed those letters object to anyone who is not an innovator suggesting that we don't understand the issues. It is unlikely that a person who is not an innovator has a better understanding of these issues than hundreds of America's most creative inventors.

The Alliance for American Innovation located in Washington, DC, founded by Steven Shore and numerous inventors groups are vigorously opposing the Japanese led attack

on our patent system. Those changes are being promoted by multi-national corporations, foreign governments, and their lobbyists or agents. Thousands of inventors and small business interests are already involved in opposing the ill-considered changes to our patent system, hundreds are joining with us every month. Numerous inventors have attended hearings and many, including myself, have lobbied in Washington against changes to American patent law that will damage American innovation.

I, like most inventors did not participate in the political process except to vote. Ten months ago I was galvanized by GATT provisions that went beyond what the treaty called for. I have made numerous trips to Washington in an attempt to make legislators aware of the implications of changes to our patent system that would cause most independent innovators to abandon innovation. I have come to appreciate that legislators' jobs are far more difficult than the majority of the public realize. My lobbying activities have altered my opinions of both political parties.

I have been pleasantly surprised by how many persons have went out of their way to educate me about the system and deeply appreciate their efforts. I have also been surprised by the arrogance displayed by a few who have refused to listen to inventors' side of the issues. I am especially disturbed by the fact that some legislators and PTO management persons have gone to great lengths to keep inventors or other persons who disagree with them from voicing their opinions.

I wish to lodge a complaint about the way patent issues are being handled by the Subcommittee on Courts and Intellectual Property. There is a clear pattern of this group attempting to pass laws to change our patent system through stealth. This hearing is a good example in that HR. 1732 and 1733 were introduced last week with the hearings scheduled for June 8, 1995. This is a blatant attempt to keep inventors from participating in the Democratic process.

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Coalition to Save Patent Term Reform

COMPANIES:

3M

Air Products & Chemicals, Inc.

Allied Signal Inc.

Aluminum Company of America

Amoco Corporation

MAP Incorporated

Analog Devices, Inc.
Apple Computer
AT&T
Baxter International Inc.
BASF Corporation
Becion. Dicldnson ic Co.
Bridgestone/Firestone. Inc.
Caterpillar Inc.
Chrysler Corporation
Coca-Cola Company
Deere & Co.
Dow Chemical Co.
EI. du Pont de Nemours & Co.
Eastman Chemical Company
Rahman Kodak Co.
Ford Motor Company
Foxboro Co.
General Electric Co.
General Moton Corp.
Haihs Corporation
Henkel Corporation
Hewlett-Packard Company
Hoechst Celanese
IBM Corporation

nilnois Tool Works, Inc.
Intel Corp.
Inteimedia, Inc.
Loctite Corp.
Lotos Developmeat Cetporatlon
Man, Incorporated
Maytag Corporation
Medtronic, Inc.
Merck & Co., Inc.
Microsoft Corporation
Novell, Inc.
Optical Shields, Inc.
Oracle Corp.
PhiUips Petroleum Co.
Polaroid Corp.

Praxair, Inc.
Procter St Gamble
Reynolds Metal Company
Ribi ImmunoChem Reaearcb Inc.
Rockwell International Corp.
Rode], Inc.
Rohm & Haas Company
Seagate Technology, Inc
Sntzennedica USA.. Inc.
Technicolor Inc.
Union Carbide Corporation
United Technologies Corp.
Western Atlas Inc.
Westinghoase Hectnc Cotp.
Xerox Corporation

ASSOCIATIONS:

Aerospace Industries Association
American Automobile Mannfactuters Association
American Electronics Association
American Intellectual Property Law Association
AMT - The Association for Manufacturing Technology
Chemical Manufacturers Association
Computer Sc Commnncations Industry Association

Electronic Industries Association
Infoemation Technology Association of America
Information Technology Industry Council
Intellectual Property Owners
National Association of Manufacturers
Semiconductor Industry Association
Software Publishers Association

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INTERNET
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The Honorable Carlos J. MOORHEAD
Chairman
Subcommittee of Courts and Intellectual Property
House Judiciary Subcommittee
2346 Rayburn House Office Building
Washington, D.C. 20515-0527

Dear Mr. Chairman:

On behalf of the membership of the Busness Software Alliance (BSA), I write to express BSA's support for your bill, H.R. 1733, the "Patent Application Publication Act of 1995". The BSA represents the leading publishers of mass market soibvare, including Autodesk, Bcntley Systems, Intergraph, Lotus Development, Microsoft, Novell, The Santa Cruz Operation, and Symantec. BSA supports H.R. 1733 for the following reasons:

(1) InDecemberof 1994, Congress approved the Uruguay Round Agreement Act which established a 20-year fixed patent term ffrom the date of filling of a patent application. H. R. 1733 would maintain a 20-year fixed patent term, with provisions for patent term extension in cases of undue administrative delay by the Patent & Trademark Office in issuing a patent BSA strongly supports the 20-year fixed patent term, as it creates a strong incentive for patent applicants to have their patents issued promptly, and would reduce the likelihood of so-called "submarine" patents that issue after having lain hidden in the U.S. Patent Trademartic Office for years. Moreover, the incentive to applicants to timely present all claims and applications stemming fi-om a single disclosure would promote additional efficiencies in the examination process.

(2) H. R. 1733 provides for publication of an application after 18 months. Early publication of patent applications will bring U.S. patent law into harmony with the patent laws of our trading partners, and will help minimize the serious market disruptions associated with the sudden appearance of patents years after the technology to which they relate have been developed and commercialized. Due to the rapid technological changes and relatively short product cycles in the software industry and the increasing nimiber of software patents being issued, the software industry stands to benefit from the early publication provisions.

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(3) The 20-year fixed term and early publication of patent applications have been sought by the PTO as part of an agreement with the Japanese Government in which the Japanese Government agreed to institute much-needed improvements in the Japanese Patent System. As Japan is a critical export market for the U.S. software industry, the changes to the patent system take on increased significance for BSA member companies.

For the foregoing reasons, BSA strongly supports these provisions of H.R. 1733 and looks forward to working with the Subcommittee as this legislation moves through the legislative process.

We ask that this letter be included as part of the Hearing Record. Thank you for your consideration of our views.

Sincerely,
Robert W. HoUeymanJn
President

cc: Tom Mooney

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IMAPM

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National Association of Pharh/iaceutical Manufacturers
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741-3696

STATEMENT IN OPPOSITION TO H.R. 359

The National Association of Pharmaceutical Manufacturers is strongly opposed to H.R. 359. NAPM is the national trade association representing independent generic pharmaceutical manufacturers and the suppliers of bulk drug chemicals to the U.S. generic drug manufacturing industry. NAPM is the oldest and most respected representative of the U.S. generic drug industry, and has helped develop and foster a fledgling industry into a mature one over the past 45 years.

H.R. 359 would imdermine many of the improvements made to U.S. patent law by the Uruguay Round Agreements Act (URAA), which implemented the patent and related provisions of the General Agreement on Tariffs and Trade (GATT). Under prior law, U.S. patents had a

term of 17 years from the date of issue. Under URAA and current law, U.S. patents have a term of 20 years from the date of first application. H.R. 359 would establish patent terms as the longer of 17 years from date of issue or 20 years from date of application. If enacted into law, H.R. 359 would be a big step backwards for the U.S., as it would defeat harmonization of U.S. patent law with the patent laws of other countries. Of particular importance to the generic drug industry, H.R. 359 would bring back to life two widespread abuses of the patent system that were effectively eliminated by URAA.

The first abuse under prior U.S. patent law is commonly known as "submarining." An applicant could delay the issuance of a patent by continually abandoning its pending application in favor of a new application that contained some new or related matter. Once the patent finally issued, it would be entitled to a 17-year term from the date of issue without any regard for the length of time the patent or its predecessors were in the review queue or the reasons for such lengthy review time. Under URAA and current law, patents are valid for a term of 20 years from the date of earliest application. Thus, "submarining" is not permitted by current law.

The second widespread abuse of the U.S. patent system under prior law is commonly known as "evergreening." An applicant could apply for and obtain different patents covering, for example, the drug substance, a product formulation containing the drug substance, a method or process for manufacturing the drug product, and the use of the drug product. Before URAA, each of these patents would be valid for 17 years from its date of issue. By staggering the patent application process, it was often possible to obtain significantly longer patent protection than the original 17 years from the grant of the first patent. This practice is not allowed under current law, as all related patents expire 20 years after the date of application for the first related patent.

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NAPM's member firms manufacture and distribute generic drug products that can only be sold after they have been affirmatively approved by the U.S. Food and Drug Administration on the basis that they are equivalent to the brand name drug, properly manufactured, and correctly labeled. The availability of safe and effective, but lower cost, generic drug products offers annual savings in the billions of dollars to American consumers, third-party payors, and federal and state health care reimbursement agencies. A generic drug product cannot be marketed until after all valid patents covering the brand product have expired. Thus, a return to a system under which "submarining" and "evergreening" -- two abuses of the U.S. patent system that provide a windfall

for patent holders with no corresponding public benefit - would not be in the public interest. For these reasons, NAPM and its member firms are strenuously opposed to H.R. 359.

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Statement of Alfred B. Engelberg, on Behalf of Generic Pharmaceutical
Industry Association

Mr. Chairman, I am Alfred B. Engelberg, counsel to the Generic Pharmaceutical Industry Association. I am making this statement on behalf of GPIA to express its strong opposition to H.R. 359.

H.R. 359 proposes to amend 35 U.S.C. § 154 to provide that the term of a patent shall run from the longer of 17 years from its issue date or 20 years from the date of the earliest application for the patent. This legislation would effectively overrule the patent term provisions of the Uruguay Round Agreements Act ("URAA") which was enacted last year in order to implement the intellectual property provisions of the General Agreement on Tariffs and Trade ("GATT"). The basic purpose of the intellectual property provisions of GATT was to promote international harmonization of patent laws. The vast majority of the domestic and international experts in these fields believe that such harmonization is essential to the promotion of fair trade. Under the URAA, the 20 years of patent life are measured from the earliest patent application filing date. Therefore, applicants who make a good faith effort to achieve the issuance of a patent within less than 3 years of the initial filing date will actually achieve a longer patent life under the URAA than under the 17-year patent term. According to public statements by senior officials of the United States Patent & Trademark Office ("PTO"), a PTO study with respect to all patents issued in 1993 revealed that the average patent application which matured into a patent in that year was pending before the PTO for less than 2 years. Therefore, the vast majority of all patents will have a longer patent life under the URAA 20-year term compared with the pre-URAA 17 year term.

A 20 year patent term which is based upon a patent application filing date rewards those companies and individuals who seek to accelerate the issuance of their patents. H.R. 359 would defeat this sound purpose and, instead, reward those individuals who seek to manipulate the patent system by delaying the issuance of a patent so as to delay its expiration date. It would resurrect the abuses of the patent system which the URAA has just eliminated without any countervailing benefit to the public.

The URAA also provides for an extension of the 20 year term for up to an additional 5 years for delays in the issuance of a patent caused by successful appeals from adverse decisions of the PTO or patent interferences. See 35 U.S.C. § 154(b). Therefore, it cannot reasonably be argued that the 17-year patent term must be preserved to protect applicants from unwarranted delays in the prosecution of patent applications which are caused by situations which are beyond the control of an applicant. In any event, patent term extensions for unwarranted or unfair delays in

the issuance of a patent can be addressed without providing applicants for patents with unlimited opportunities to manipulate the patent system.

A patent term which runs from the issue date rather than the earliest application date is an invitation to an unscrupulous applicant to delay the issuance of a patent in order to manipulate the marketplace. An applicant can delay the issuance of a patent by abandoning the original patent application in favor of a new application (1) which contains the identical subject matter (a "continuation" application); (2) which contains some new matter (a "continuation-in-part" application); or (3) which claims a different aspect of the same basic inventive concept (a "divisional" application). Neither current law nor H.R. 359 places any limit on the number of continuing applications which an applicant may file, the number of extensions of time which an applicant seeks or any other delays caused by an applicant. Therefore, unless the applicant requires urgent issuance of the patent to prevent known infringement, an applicant would be rewarded under H.R. 359 for delaying the issuance of a patent by receiving a later patent expiration date. This approach stands logic on its head!

The danger in H.R. 359 from a public policy standpoint is dramatically demonstrated by the patent covering Novaldex (tamoxifen citrate), the leading drug for the treatment of breast cancer. Tamoxifen was discovered in England by ICI and patent applications for that compound were initially filed in the United Kingdom in September, 1962 and July, 1965. Under British law (and the law of almost every other developed nation) the tamoxifen patent expired 20 years later, specifically on July 20, 1985. In the U.S., however, the initial patent application for tamoxifen which was filed in August, 1963 did not result in the issuance of a patent until 22 years later on August 20, 1985. In fact, by the time the U.S. patent issued, the U.K. patent had already expired. A review of the official record reveals ICI filed a series of 11 continuation patent applications. (See the enclosed title page of U.S. Pat. No. 4,536,516). Moreover, it is apparent from the record that this delay in the issuance of the patent was not simply the result of appeals from adverse PTO decisions but

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rather arose from a lengthy series of deUberate refilings of the same basic patent application over a period of many years solely for the purpose of maintaining the pendency of a patent application without a good faith effort to advance the application to final consideration on its merits. This was possible because nothing in the patent law (or H.R. 359) limits the number of continuing applications an applicant can file or the length of time that an applicant can manipulate the system to delay a final disposition of an application.

The foregoing situation has produced dramatic effects in the market place which are clearly adverse to both public policy and the interests of the United States. In

the U.K., where patent protection no longer exists, the average wholesale selling price of a 1 month supply of tamoxifen (60-10 mg. tablet) is less than \$10.00. In the United States, the wholesale price of Novaldex is \$81.74! Women suffering from breast cancer in the United States will be forced to pay excessive prices until 2002. The consequent profits for a U.K. company produce no benefit for the U.S. economy.

The issuance of multiple patents on the same basic patent, commonly called "evergreening," is another outrageous practice which the URAA eliminated but H.R. 359 would reinstate. Under the pre-URAA practice, it was possible for an applicant to obtain separate patents covering a new drug entity, a formulation or composition containing the drug, the use of the drug and a method of manufacturing the drug even though all of these alleged inventions were disclosed in a single patent application. This was accomplished by filing a series of divisional or continuation patent applications all of which were derived from a single original patent application. Prior to the URAA, the patents derived from each such application would last for 17 years from its issue date without regard to when the continuing application for that patent was filed in relation to the original application from which it was derived. This has often resulted in market exclusivity lasting well in excess of 20 years despite the existence of a 17 year term. The foregoing practice is completely eliminated by URAA since all patents based on a common early application will expire 20 years from the date of that application irrespective of how many continuation or divisional applications were filed.

Mr. Chairman, the members of GPIA, whose business depends on free competition once patents have expired, support a sound patent system which justly rewards innovation. To be fair, such a system should also promote certainty and predictability. That is why GPIA supported the URAA and why it opposes H.R. 359.

H.R. 359 is also opposed by the PTO, the USTR, the vast majority of Fortune 500 companies and even the majority of the patent bar associations which usually support any proposal which will produce more patent protection. All of these institutions and organizations recognize that the proposed bill completely undermines the attempt to develop an international system of patent law which promotes the progress of science and the useful arts by providing fair competition to inventors, rewarding good faith efforts to accelerate the issuance of a patent and discouraging unwarranted attempts to manipulate the patent system to delay the issuance of patents.

GPIA appreciates this opportunity to submit its views and thanks the Chairman and the Committee for your consideration.

United States Patent ns]
Harper et al.

[54] AUCENE DERIVATIVES

(7S) Inventors: Michael J. K. Harper,
Femey-Voltaire, France; Dora N.
Richardson; Arthor U Walpole.
deceased, both of Macclesfield,
England

[73] Assignee: laipcrial Clieinlcal Industries PLC,
London. England

[21] Appl. No.: 600,224

[22] Filed: Apr. 17, 19S4

Related VS. AppUcatloB Data

[63] Continuation of Ser. Na 486.913. Jul. 9. 1974. tlwv
doned. and a coatiauation oTSer. No. 3S9J97, Mar. It.
1982, abandoned, which is a contmuttoia of Ser. Na
9ISJ6T. Jaa. 22, 1978, ibandcnd, which ij a continua-
tion of Ser. No. 4t6,T74. Jul. 9, 1974. tbudooed,
which a l continuation-in-part d Ser. Na 262.9319,
Jun. IS, 1972, abandoned, which ii ■ oontinottion of
Ser. No. 868,667, Oct. 13, 1969, abandoned, which is i
continuadon of Ser. Na 632,336. Apr. 21. 1967, aban-
doned, which is a oontinuatoo-iii-part of Ser. Na
S32.89I. Mar. 9. 1966, abandoned, and Ser. Na
3M.632, Ang. 26. 1973. abandoned, sakl Ser. Na
486,913, is a condnoaticD-in-jiart of Ser. No. 262,939.

[11] Patent Number:

[45] Date of Patent:

4,536,516

Aug. 20, 1985

[30] Foreign Application Priority Data

Sep. 13. 1962 (OB] United Kingdom 34989/62

Jul. 20. 1965 [OBJ United Kingdom 30755/65

[51] laL CL> A61K 31/135; A6IK 31/205

[52] VS. a. SI4/SI4; 514/648;

364/324; 260/501.18

[58] Field of Scvch 564/324; 424/316. 330;
260/501.18

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1099093 1/1968 United Kingdon 564/324

Primary Examiner— Kohen V. Hines

Anomey, Agent, or Firm — Cushman, Darby A. Cushman

[57] ABSTRACT

Triphenylalkene derivatives, in particular 1-(p-0-diine-
tbylaiziinoetbyoxyphenylVU-diphenylbut-l-ene,
which possess utility as anti-oestrogens.

6 Claims, No Drawings

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Statement of

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Before the House Committee on the Judiciary,

Subcommittee on Courts and

Intellectual Property

Reference: H. R. 1733 Hearing, November 1, 1995

"Patent Application Publication Act of 1995"

Mr. Chairman and members of the Subcommittee:

On behalf of intellectual property owners, I wish to express our gratitude and
thanks to you Mr. Chairman and to the Honorable Pat Schroeder, Representative
from Colorado.

Your thoughtful and sincere pleas for the support and passage of House
Resolution 1506, last October 17th, was very welcome news to the intellectual
property community. Thank you both for your strong public declaration of support
for Americans' intellectual property rights, and to you, Mr. Chairman, for pointedly

identifying them as recognized in the U.S. Constitution.

We were especially buoyed by Congresswoman Pat Schroeder when she said "The greater good — is the positive aspect of a bill that stands for all intellectual property protection in order for the U.S. to retain a competitive edge in technology. " Ms. Schroeder certainly spoke for all inventors when she made that statement. Our sincere special thanks to Congresswoman Schroeder for stating it so succinctly. We are aware that those, who are the architects of bills that harm the majority for the financial benefit of the few, frequently stand to gain enormously by revising a tried and proven standard. They misinform, create diversion, even lie to achieve their end result. They even sell out for promises of future lobbying and advisory jobs promised by the advocates of revision.

By publicly declaring your support for our rights so clearly, you have greatly assuaged the fears of the independent inventor community. We have been in great fear that you would fail to come to our support and protect us from the disasfrous potential of H.R. 1733. Thank you for your courage and integrity.

The wisdom and compassion you both showed, as defenders of intellectual property rights from copiers and infringers, who wish to desfroy them for crass commercial gain, is to your lasting credit. By upholding our rights as put forth in Article 1, Section 8, paragraph 8 of our Constitution, you have shown how clearly
Pg. 1 of 2

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you understand the danger of tampering with the world's best patent system.

You both spoke with conviction, sincerity and passion for protecting creators from copying by others. And you both spoke of how easy it is to copy a creative work while ^e technology to produce that work was far more complex than the equipment needed to copy it. (in the case of H.R. 1506, on digital recordings)

As you know, Mr. Chairman, that complex technology was created by an inventor. A creative invention from the mind of man, as is the music from the composer who created the work and the skill of the performer.

Knowing how you feel about the rights of creators of intellectual property, we know now that you would never support legislation that would expose the personal and private works of composers, performers and music publishers to copiers and thieves before they could copyright their creations, even though those who would gain by stealing tell you that would never happen. But if it did, the creator could lure lawyers to set it right, (if he could afford them) Imagine Andrew LUoyd Weber being forced, by law, to publish his music months before opening night. Well that is exactly what will happen to the inventor of technology who will have his creation exposed to copiers, thieves, or clever application writers who will

surround the original technology with a nest of relevant applications. The inventor can't even file legal action against an infringer until his patent is issued. He then becomes effectively barred from developing his technology before he even has a patent. If the technology happens to be a breakthrough in the fields of electronics, bio-technology, or communications, for example, the applications take several years to issue. The American public then becomes the loser, not just the inventor. Secrecy toward applications has been America's unique incentive to create technology that has kept us a world leader for a century and a half. To support a bill that would desroy that concept would be anti-American, to say the least. If H.R. 1733 had been adopted before the digital recording technology application was filed, then published before the inventor received his patent, and some foreign power spotted it, the H.R. 1 506 bill would have been a useless exercise. The ftiture economic benefit to America would be lost, plus all the American dollars would be sent overseas to their patent holders, composers, music publishers and performers.

Again, thank you for courageously protecting our rights so that won't happen. And for this hearing, so that evil bill can be shelved, once and for all.

Testimony of Donald G. Costar,
Nov. 1, 1995, re: H.R. 1733. Pg. 2 of 2

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CHEMICAL MANUFACTURERS ASSOCIATION

October 20, 1995

Timothy F. Burns
Vice President
Federal Government Relations
The Honorable Carlos J. MOORHEAD
Chairman
Subcommittee on Courts and
Intellectual Property
House Judicial Committee
B-351A Rayburn House Office Building
Washington, D.C. 20515

Dear Mr. Chairman:

The Chemical Manufacturers Association (CMA) wishes to convey its strong support for your legislation, H.R. 1733. H.R. 1733 provides a means of addressing uiu-easonable delays in the U.S. patent system and conforming the U.S. patent system to international standards.

CMA is a nonprofit trade association whose member companies represent 90 percent of the productive capacity for basic industrial chemicals in the United States. CMA's members are among the most frequent users of the U.S. patent system, and consequently have a strong interest in the efficient operation of the patent system. CMA supports H.R. 1733 for the following reasons:

- H.R. 1733 Will Keep Jobs at Home: H.R. 1733 fulfills implements the U.S. Constitution's reservation of rights for the inventor. It will provide U.S. businesses more certainty about using patented matter by eliminating the problem of "submarine" patents. That certainty will prevent consumers from paying higher prices for U.S. inventions, and will retain jobs in the United States.
- International Patent Term Standard Protects U.S. Inventors: The Uruguay Round Agreements brought the U.S. patent system into conformity with other countries. Before the Agreements, the U.S. patent term (17 years from the date of grant) was subject to abuse by the intentional delay and manipulation by some inventors. The Uruguay Round establishes an internationally accepted standard patent term, 20 years from the date a patent application is filed. The longer term provides expanded patent protection to most U.S. inventors.

2501 M Street, NW, Washington, DC 20037 Telephone 202-887-1124 Fax 202-463-1598 Yt
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- H.R. 1733 Complements the Uruguay Round Standard: H.R. 1733 complements the 20 year patent term by recognizing that some inventors may face unusual administrative delays by the U.S. Patent and Trademark Office in issuing patents. The legislation permits these inventors to get up to a 10-year extension of the patent term.
- H.R. 1733 Provides at least 18 1/2 Years of Valuable Rights: H.R. 1733 provides for the publication of patent application 18 months from the day of filing. The primary effect of this provision is to provide at least 18 1/2 years of enforceable patent rights for all applicants, and to speed the disclosure, in English, of foreign origin technology. However, H.R. 1733 permits inventors to protect their trade secrets, and prevent disclosures in the event that their patent protection is not available or would be unduly limited.
- H.R. 1733 Prevents Abuse of the Patent System: H.R. 1733 prevents abuse of the patent system by those who delay their patent grant. H.R. 1733 also creates an incentive for patent applicants to move their applications promptly. Finally, H.R. 1733 will help promote bilateral arrangements which call for important

changes in national patent systems.

Again, CMA strongly supports the concepts contained in H.R. 1733, and looks forward to working with you as the legislation moves forward. If CMA can provide any additional information, please have your staff contact Rose Marie Sanders, Legislative Representative, Intellectual Property, (887-1123) or Michael P. Walls, Seruor Assistant General Coimsel (887-1170).

Sincerely,

Timothy F. Bums
Vice President
Federal Government Relations

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Genentech, Inc.

31 October 1995

The Honorable Carlos MOORHEAD
Chairman, Subcommittee on Courts and Intellectual Property
B351A Raybum House Office Building
Washington, DC 20510

Dear Mr. Chairman:

At your request, and the request of the ranking member, I am writing to offer Genentech's views of the bill H.R. 1733. We support H.R. 1733. As outlined in the letter below there are several ameliorative amendments that we believe could, and should, be adopted to improve the functioning of patent system. In addition, as it currently states, we do not support H.R. 359. The principle interest of an innovative firm such as Genentech is to create a strong and stable intellectual property environment. As such, we have learned to cope with a 20-year from filing patent regime in other jurisdictions. Thus, we are not troubled merely by the onset of a 20-year from filing approach in the United States. The most serious caveat to that view, however, is that there are sufficient safeguards to protect against the erosion of patent term due to excessive regulatory review', either in the Patent Office or at the Food and Drug Administration.

'As noted by Professor Lemley, there are two factors in current law that should work to substantially reduce the pendency period at the PTO. First, the new law permits filing of provisional applications which in some situations may permit applicants to gain up to an additional year of patent prosecution time. Second, the new law will alter the incentive system

for patent lawyers. Clients will no doubt adjust to the new law by rewarding patent prosecution speed, rather than payments on an hourly basis.

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Chairman MOORHEAD

31 October 1995

Page Two

We were very pleased that, under your leadership, several of the serious issues of delay at the PTO have been addressed. First, in the GATT implementing bill, provisions were made for some extensions for appeals and interferences. Second, the PTO has successfully implemented new "utility" guidelines that should speed up the biotechnology industries applications. Third, the enactment of your bill, the Biotechnology Process Patent Act of 1995, will speed up biotechnology process patent claims and overcome delays associated with the now-overruled case of *In re Durden* .

Finally, your bill H.R. 1733 offers additional extensions for interferences and new grounds for extensions based on administrative delay. Thus, in total, many steps have already been taken to address problems of administrative or PTO delay.

In addition, we favor amendments to the existing Hatch/Waxman legislation that would assure that all time spent in human clinical trials should be eligible for patent restoration. When Congress enacted section 156 of title 35 in 1984, the average time from discovery to approval of a new drug was 5-7 years; whereas today that time is 10-12 years. Unless Congress acts to grant full extensions for all regulatorily mandated human clinical trials, biotechnology firms will lose more and more time due to FDA regulation.

Finally, we believe that the bill H.R. 1733 could be improved in two respects. First, the proposed ten year maximum extension for patent holders who succeed in interferences should be deleted, otherwise second place inventors will have a strong incentive to delay the resolution of interferences. Second, the term "unnecessary" regulatory delay as used in the bill should be defined. There are two ways to accomplish this result; either by legislative language (as proposed by BIO) or in rule making (as suggested by the Patent Office). In our view, either approach could achieve the desired result of providing fair notice of what conduct by the PTO and the patent applicant will lead to an extension.

Other witnesses at the hearing will outline their concerns about the features of H.R. 359. These concerns include problems associated with "submarine" patents, as well as concern about

the need to conform our implementing legislation to reasonable, fact-based expectations of one of our trading partners on how we would interpret our agreement with them. We do not quanel with these objections.

Rather, our concern is that by enacting H.R. 359, serious damage will be done to our ability to move towards a harmonized and stronger international patent regime. If we continue to have a patent system that is out of sync with the rest of the world, it will be increasingly difficult to get the rest of the world to address the major — and potentially more serious — deficiencies in their intellectual property regimes. In essence, we made a deal in the GATT to adopt a 20-year term from filing. All of the other countries understood that was our commitment. For us to act

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Chairman MOORHEAD

31 October 1995

Page Three

now to undermine that commitment would very likely lead other signatories to be equally disingenuous in their implementation of their undertakings. This can hardly be in our long term interest. In the bio-pharmaceutical industry, fully more than half of the world market is beyond our shores. We need to secure improvements in the laws of Europe, Japan and in the developing world. We will not succeed in these efforts if H.R. 359 is adopted.

In sum, we urge the Subcommittee to adopt H.R. 1733, with appropriate amendments, and reject H.R. 359. We believe that most of the problems associated with administrative delay have been dealt with by other measures and by H.R. 1733. Further refinement of H.R. 1733 by the addition of Hatch/Waxman amendments and certain other technical changes could cure the remaining concerns without jeopardizing our international intellectual property agenda.

We look forward to working with the Subcommittee.

Sincerely,

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David Beier

Vice President, Government Affairs

DB/drw

cc: The Honorable Pat Schroeder, Ranking Member

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October 5, 1994

John Boarabla MilXiw J. Clinfinn,
Members of the Office of the Trademark and
Copyright of the United States House of Representatives

We, for the Committee on Patents and Trademarks of the Senate
support the proposed patent law amendments to the
filing of the application as proposed in X.R.5110 and
8.3467, the Administration's bill for the United States
Copyright Law .

A patent is granted from the date of filing the application
application immediately upon the filing of the application to the
public and the inventor that patent application have today
to delay application to the Patent and Trademark Office. The
proposed patent law will give patent owners at least a
month patent law that they receive under existing law and is
equitable to all patent owners.

We believe the 20-year term is appropriate for the date of filing the
application will improve the United States patent
system.

Thank you.

C. Marshall Daan
Congressman 1974-77

Ronald J. Noaiaghoff
Congressman MT 1961-08

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William B. Aahuyar. Jr.
Congressman 19C9-71

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December 8, 1993

The Honorable Bruce A. Tjrhman
Commissioner of Patents and Tradonaila
Box4
Washington, D.C. 20231

Dear Conunissioner Ldmian:

As you know, Qxt NAFTA Agreement requires a modification of 35 U.S.C. { 104. The United States will permit nationals of Mexico and Canadatoprovidedatesof inventions in those countries when diose natirmai^ are involved in interference proceedings here.

It would be highly desirable to modify and thereby simplify i nterfer ence proceedings in the Patent and Trademark Office in view of this development

At the same time, we can convenioitly change our patent life period to twenty (20) year from filing of the patent application, we can provide for opening or publishing of certain patent <q>plications and reduce fees to smaU entities in view of tiie added oqMnse involved in the publication of patent applications.

Enclosed is a draft of l^islation which would acconq)lish these desirable results, respectfully recommend prompt action be taken to introduce and enaa such legislation.

I

Very truly yours.

DWBrpaj
Enclosure

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295 STEVENSON DR.
PLEASANT HILL, CA 94523
Pn. (510)934-1331 Fx. (510) 934-1132
Oct. 25, 95

House Comm. on InCernaC lonal Relations
Subconun. on Int ' 1 Economic Policy & Trade
Hearing of Oct. 25, 95

Hay I submit the following statement for the record:

Sara is a development company In the ir-lustrlal controls and medical device
area. We own over two dozen issued patents.

We see a trend in "Globalization" that we do not like. Our ability to
export and to sell in our own markets Is strictly guided by the unchallenged
ownership of our intellectual properties, our patents. We find an un-
explained willingness In the 104th Congress to erode our property rights.
The GATT which we thought was a matter of import -export duty relaxation, turns
out to be an infected carrier of a virus ... believed to be Japanese in origin,
which changes our long standing - traditional patent term of 17 years from
date of issue to 20 years from date of filing and that leaves us at the mercy
of the processing time in the Patent & Trademark Office. We are not impressed
with PTO claims of an 18 month process time. Moreover, we are not believers.
There is a massive deception here, being played out upon the innovative group
in our population. . . on whom all the otheis depend for jobs in new Industries.
Therefore we support the passage of H.R. 359.

Whereas our patents have been unchallenged. Under H.R. 1732. a new element has
been introduced into re-examlnat ion. Challenges no longer will be in the courts,
but in the patent office and the challenger can remain unidentified. It can

bring to a halt any effort to actually process a patent in 18 months. It is fatally destructive to our patent system.

Therefore, we irrevocably oppose H.R. 1732.

Whereas it has been a confidential matter between the Inventor and the patent office during the "patent pending" period, under H.R. 1733 that la gone. Gone forever. H.R. 1733 mandates full and complete publication of a patent application in all Its detail at 18 months from filing date. This Is the European and Japanese way and it doesn't work. For us. It will provide the "requesters" the Information needed to use H.R. 1732 Re -examination . These two Bills are as damaging to American innovative Industry as a World Trade Building Bombing in every place where Americans are employed.

Therefore, we irrevocably oppose H.R. 1733.

How could Commissioner Lehman support these Bills having full knowledge of their disastrous effect. We ask the same of Secretary Ron Brown. Both are attorneys who in some way have been mislead. They set policy for the Clinton Administration and that policy clearly must be reversed by the American People, for the American People and done by their Congressional Delegates who must override these two appointees

Sincerely, ^^ • "f - "y^ ^•^^^ .^^- .^_^^^

S, S. Flshman

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AMERICAN COUNCIL ON EDUCATION
Office of Vice President and General Counsel
September 27, 1995
RE: H.R. 359 / S. 284
The Honorable Carlos MOORHEAD
U.S. House of Representatives
2346 Rayburn House Office Building
Washington, DC 20515

Dear Representative MOORHEAD:

On behalf of the American Council on Education (ACE) representing over 1,800 colleges

and universities, we are pleased to provide our views on H.R. 359 and S. 284. Many of our member institutions participate in government-university-industry partnerships that involve the transfer of university technology to industry and small businesses. These relationships have been extremely beneficial to all concerned. Very early in this session of Congress H.R. 359 and its companion bill S. 284 were introduced to correct a portion of the GATT implementing legislation which could have a dangerous impact on university technology transfer, especially in the health care and biotechnology fields.

The Uruguay Round negotiation, leading up to the GATT agreement, called for a minimum patent term of 20 years from the date the patent application was filed. The GATT implementing legislation simply called for a set patent term of 20 years from filing. Any delays in approving a patent directly reduces patent term was 17 years from the date the patent was issued so that PTO delays were of little consequence.

Universities were able to plan for those seventeen years.

H.R 359 and S. 284 corrects this current difficulty by affording inventors the longer of the two patent terms.

Our university members are often involved in health care and biotechnology inventions which take considerable time to have their patents approved. Each year of patent life is tremendously important to our members. Institutions will receive a guaranteed minimum patent term for their products through H.R. 359 and S. 284.

If you have not already co-sponsored H.R. 359, I urge your support so that U.S. inventors can receive a fair patent term.

on Elliot Steinbach
Vice President & General Counsel

One Dupont Circle, NW, Suite 636, Washington, DC 20006-1193
Phone (202) 939-9355 FAX (202) 833-4762
Inrerner: 5sheldon.5reinbQch@ACE.NCHE.EDU

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October 16, 1993

The Honorable Carlos J Moorhead, Chairman

2346 Rayburn House Office Building
Washington, D.C. 20215

Dear Representative Moorhead:

I am an inventor from Tulsa, Oklahoma. I am vice president of the Oklahoma Inventors Congress, the state's official organization that represents independent inventors. The independent inventors of Oklahoma, of the United States, and I personally need your help. There is a bill pending before your committee that poses a great threat, no—devastation to the U.S. Patent system. This House Bill 1733 proposes that all patent applications be made public 18 months after initial filing with the Patent Office, which will in most cases disclose the secret contents of the patent even before the patent is granted. This exposure will give anyone in the United States, Japan, or anywhere else the opportunity to profit from our hard work even before we can. The patent laws in Japan are such that someone there could read these patent applications and then file their own patent application there in Japan for our inventions. They will have all of the information so that it really appears to be their idea. Japanese patents may be granted much faster than here in the U.S. It is entirely possible that the Japanese patent will be granted before the U.S. patent, which consequently, will prohibit the U.S. patent from being issued. As a result, the U.S. inventors will have wasted all of the time and money they spent in research and design, all of their money on patent attorneys, all of their money on patent filing fees, and simply end up with a letter from the U.S. Patent Office saying "Sorry, but we cannot issue you a patent on this particular device because someone in Japan beat you to it." Forgive the language, but that sucks.

That would be equivalent to a songwriter having all of his songs published in BILLBOARD magazine months before the songwriter had the chance to sell it to a major artist. Everybody and their brother-in-law could record the song, free of charge, and the songwriter would get absolutely nothing. This proposal will destroy the U.S. Patent system that has worked for 200 years. The existing system may be slow, but it does work well. This proposal is of absolutely NO BENEFIT TO ANY U.S. INVENTOR. All this proposal can do is harm, to the inventor, companies small and large, and to the U.S. economy. Even companies as large as Motorola and Microsoft, who derive most of their income from patented technologies, will be forced to revert to the old form of Trade Secrets* to protect their investments. Ironically, the original purpose of the U.S. Patent Office was to eliminate Trade Secrets* so that the U.S. economy would be bolstered, and the inventors would be compensated for their efforts. Inventors reveal the contents of their inventions to the U.S. Patent office for the preservation of scientific knowledge, and in return the USPTO grants the patent holder certain rights and privileges to protect their ideas.

This proposal signed by Commerce Secretary Ron Brown and the Japanese Ambassador is scheduled to become law on January 1, 1996 if you and your fellow committee members do not contest it. Please, please, please look into this matter in secret and do whatever you can to stop this horrible plan from becoming law. The inventors of America need your help.

Thank you for your time, and I look forward to hearing back from you pertaining this matter.

Respectfully,

^rj2^S:^^^

Gordon Cuthrell

P.O. Box 904011
Tulsa, OK 74103

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August 15, 1995

Hon. Carlos Moorehead
2346 Rayburn HOB
Washington, D. C. 20515-1306
RE: H.R. 1733

Dear Mr. Moorehead:

As a patent attorney with over 30 years experience in the United States, I urge you to abandon the attempt to change our patent system via HR 1733. The entrepreneurial spirit of this nation has been dealt severe blows in the last 14 years, starting with the abandonment of support for the Patent Office via "user" fees, tax payments on issued patents and now the attempt to publish patent applications at 18 months from filing.

We are not world leaders because our laws "look like the rest of the world" ! It has been reported that you are skeptical of the testimony of small inventors against this bill as simple resistance to change. That is not true. This bill will further erode the ability of the small inventor to participate in the patent system.

When patent taxes were begun in 1982, I compared such activity

to the crushing of the gametes. As you may know gametes are haploid cells containing half the required genes and are otherwise more commonly termed sperm and ovum which, when combined, render life giving growth.

While the purpose of patents is to further the advancement of science and the useful arts, the practical effect is to provide investors, large and small with protection when taking risks in new technology. Patents represent only a haploid cell. They are worthless, do not represent economic growth or provide jobs until they are combined with investment in the practical means to exploit the invention.

Publication of an invention before patent rights are secured can be deadly to the small inventor. Many hard fought battles in the Patent Office are sometimes needed to win a patent.

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Unless there is some assurance that a patent is granted, investors are not likely to take a risk in a new technology. We have glaring examples of this. Chester Carlson, inventor of xerography, was turned down by industry even though he had issued quite a few patents to protect the basic invention. Today Chester would have gone broke paying taxes on patents that went undeveloped until Battelle Memorial Institute and Haloid Co. furnished investment. John Chotming issued a patent on FM synthesis and was likewise turned down by U.S. industry. Yamaha chose to take a chance on this new technology and they are the leaders today in music synthesizers. If the work of these men was difficult then, the changes in our patent law since 1982 has made such men face impossible hurdles. We are crushing the gametes of intellectual life.

You cannot have missed the fact that only organizations dominated by large corporations support this bill. I have belonged to AIPLA for over 30 years. It is dominated by large corporate patent departments and major law firms supported by major corporations. The same is true of the ABA and the IPO.

Just look at the corporate affiliations of the officers of these groups.

In closing, I must tell you that from my experience both as an individual practitioner as well as a member of patent departments of multi-national corporations, the patent law as proposed by HR 1732 will further crush the gametes and make the patent process in the United States safe for only wealthy corporations (mostly foreign ones) . The small inventors will be left out and such inventors as Chester Carlson and John Chowning will not provide their contributions as in the past. We all use the patent system through the advancement of sci-ence and the useful arts and such system fully deserves public support. Please drop the idea of publishing applications for patents in the U.S.

Very truly yours.

CJ^^^A.^

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US House of Representatives
Committee on the Judiciary
Subcommittee on Courts and Intellectual Property
Written testimuii> by Runaltl J. Riley
President, Riley and Associates, Inc.
Advisory Board President, Alliance for American Innovation

As an m\cnl(>r, I must speak otill ahoul mulli -pronged allacks against our palcnl system by lorei^n paid lobbyists and mullinatuinal corporations Amenta's founding lathers reco^ni/ed that innovation is crucial to a free enterprise system Foreign governments and multinational corporalum have linind allies in Patent and Trademark Ollice, bi)th are spending large sums ol money lo change American patent law Japan is one olthe leaders but by no means is it the only foreign government trying to influence our lawmakers to make changes that are not in America's best interest It is important that we not ct>mprt)mise our country's prosperity by allowing foreign interests lo weaken our patent laws.

My testimony must address all the changes that are pending because in their entirety they will have a much greater impact than each alone. It is especially important that readers understand

that the changes will make patents unenforceable for everyone except the largest companies. The reason that NAM, IPO, and AIA are prioritizing these changes is because they are run by the largest companies who generally view innovation as a threat to their existing investment. A bargain was made during the "Mutual Understanding" of January, 1994 between Patent Commissioner Lehman and Japan to make a number of changes to our patent system. Some of those changes have been embodied in OATT. This deal is a result of a trade with Japanese negotiators who offered the right to file American patents in English and a limited right to correct

translation errors in exchange for the 20 year term from date of filing language. Another agreement between Commerce Secretary Brown and the Japanese was made in August 1994 to publish American patent applications 18 months after filing and to allow third parties to participate in reexamination proceedings.

Results of deals with Japan over many years should have taught the United States that we never get what we bargained for. I see no benefit for Americans in this deal. Most American inventors can still apply for foreign patents. American inventors who do file foreign patents find that it is almost impossible to obtain a patent.

Page 1

Written testimony for hearing held on November 1, 1994 by Ronald J. Riley
Riley & Associates, Inc., 1323 WestCoc* Road, Grand Rapids, MI 49503
Phone (616) 655-8830 - fax (616) 655-8832 - e-mail rriley@frtnir.com
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Jack Kilby of Texas Instruments is a recent example of Japan's unfair treatment of American inventors. He invented the microprocessor circuit. The Japanese patent office held up the issuance of his patent for 29 years and after its release Japanese courts ruled that the

patent does not apply to current chip design.

The Japanese have been studying in their educational system for years; attempting to imitate what makes Americans so much more creative than the Japanese. Americans make

many I'veaktlirotigli inventions. Japanese inventions are usually iiKremental oj- small improvements

in existing teclmology.

Japan has dcuiioistrnted tffe anlnity to successffilly couunercialize concepts rtiat thie V.S. and otlier western cultwres create witlj I'veaktlirotigli inventions. So. their sohitiou to thie proWctn

is to weaken our patent laws so they can lake advantage ol'our creativity

There is a concerted aitenipl to weaken I 'S patents hy mullinational ctmpanies and by lk>reign {(ovemmenis The Japanese are especially active in Ihis attack A recent article in Japan Times Weekly titled "Intellectual properly rij;hls accord with U S said necessary" made it clear thai changes lo Ihe V S patent system are imptKlanI Ut "lacilitale Iranslers ol' technology and related investments /rom advanced economies lo Ihe Asian nations, which would help their economic development" The 20 year change that has been hidden m GATT enabling legislalitm IS very detrimental li> small business and iinJividual inventors There may also be other harmliil provisions in GATT-TRIPS that have escaped mUice The document is »)ver thirty pages

I have a healthy respect liw Ihe Japanese They are experts al marketing and manipulating p«)litics They consider bt>lh when prvHTioting their interests They are willing lo spend large amounts ol' money lo promote their interests and Ihey dt> il consistently over a long time Irame II

IS well known in WashingUm that pe«>ple who promote Japan's interests will be rewarded alter they leave olVice

I have come l«) Ihe u>nclution that iT we do not slop these ill considered changes lo our patent system that independent inventors and Ihe industries they lound will cease lo exist in America, just as they have in F.uope We must stop this well «)rcheslraled and I'unded attempt by

multinalK>nal ct>rporate and loreign gtnemmenis lo alter our patent system in a manner thai will

make patents unenl(>rceable lt>r everyone except the largest companies.

Ilk real problem is not Japan trying to influence our system, it is the willingness of individual Americans to sell out our coimtries interests and tiie failure of Americaas to plan and make sacrifices tor long tenu goals. We must start plaiuiing at all levels of personal corporate, and goveruiueut for 3. 10. and even 20 years goals.

CIIANOlis UNULR GAIT

Oiange of patent term from 17 years from date of issiuuKe to 20 years from date of filing.

Ilk net eti'ect of this change is to shorten the usable life of a patent, Iliat is especially true of the most significant patents thut often take a decade or more to is.sue. Ilie twenty year Kinguage is also included in 1W4 S. 1»54. Il.R. 4307. S. 236». and U.R. 3110.

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Prior to 1980, the prior user right in the United States was limited
except where a patent has been published. GATT changed our laws (Section 104) to allow
worldwide prior user rights. This is going to create many more interferences which will be
extremely difficult to investigate. It will be much easier for multinational companies to avoid
compensating American inventors by citing obscure evidence. It also opens the door for large
scale fraud by multinationals which will be next to impossible to prove. My personal
experience

has been (that large corporate interests often commit fraud to avoid compensating inventors

OTHER PENDING CHANGES

Other changes to our patent law have also been proposed in several other pending bills.
These changes in their totality will cause far greater damage than the threat represented by each
alone.

Publish the patent application 18 months after filing. This will encourage interference with
a patent by giving potential infringers access to the information before the patent issues and
will

make it much easier for an infringer to fraudulently claim prior user rights.

The published information will be used by dishonest entities to bring the invention to
market ahead of the inventor denying the inventor the profits which could be used to defend the
patent against infringers. It is especially coupled with the expense of defending patent rights.
WAKild result to a return to the conditions we had a decade ago where most inventors properly
rights were taken without compensation by large corporations with impunity. Adding insult to
injury is the fact that inventors will be charged a fee to publish their patents. 1994 S 1854, H R
4.07, 1995 HR 17V^

"Prior User Rights" which says that anyone who claims that they have secretly developed
an idea can use it royalty free. This will prevent someone who obtains a patent covering the
idea

from collecting royalties from any prior user since there is no requirement that they publish to
establish the right. This will encourage large scale fraud by infringers who want to establish their
right to use the idea to avoid compensating the inventor. 1994 S 2272, 1995 HR 22.5

A bill is pending that would allow third parties an active role in reexamination of patents. Currently a third party can request a reexamination but only the inventor and patent examiner are

active in the process. This change would allow third parties an active role. Large businesses could mount a series of attacks through the patent system and tie the inventor up for many years. This is especially insidious when considered with the patent term starting at filing. 1 W4 S. 2341.

1 W5 UR. 1732.

All of the citations cited tilt the playing field in favor of those who copy, like Japanese have always been very good at copying and I believe that is why they are lobbying so hard for these changes. The United States has always been good at making major technological breakthroughs and the protection of patents is going to be disproportionately weakened.

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These changes will favor those who make small incremental improvements in technology at the expense of those who make more significant breakthroughs. They will favor large companies over start-up companies, and favor companies with short term management goals over companies that plan for long term goals.

One example of how insidious the foreign interference is how they managed to get the patent office backing for changes that will undermine the patent system. Proposals of weakening our patent system argue that it is being abused by inventors. They usually cite "submarine patents" as an example of misuse. The term submarine patent first appeared in a Japanese publication and it is used to describe a patent which is issued after a long delay in the patent office which catches everyone in industry by surprise. Some persons claim that inventors intentionally delay their patents. There are many proven cases of intentional delay being used to create a submarine patent.

There is considerable evidence that delayed patents are the result of inefficient bureaucrats at the patent office. When they were confronted by powerful interests over the problems created by patents that were issued after lengthy delays of up to many years they picked individual inventors to be the scapegoat.

The patent office is specifically mandated to aid individuals who are filing their patents.

The patent office's claim that submarine patents are caused by individual inventors is preposterous. They are not adequately aiding inventors as mandated by law.

There is a great deal of evidence that the PTO is mired in the cause of excessive patent delays. When an examiner receives an unusually complex or in some cases a poorly drafted patent (as can happen with pro se applications) they tend to work on it all day. They have processed thousands of patents to keep their productivity evaluations favorable. The patent may go one to two more years between office actions and I have heard of four and five years in extreme cases. The examiner may leave the PTO, causing the file to be passed to another examiner. The new examiner is faced with even more work to become familiar with the patent and sticks the file on the bottom of their pile. The application languishes and soon ten or twenty years, or in the worst case forty years have elapsed. This is not inventors' fault and the solution is to enforce the mandate that the PTO prosecute all patents, especially pro se patents in a timely manner. Another aspect of this problem is allowance of claims. Currently the inventor or their representative and the examiner interact to determine appropriate claim language. The examiner has an incentive to complete the patent because they like to close the case. Inventors have an incentive to receive their patent as soon as possible because they rarely derive income from patents before it issues.

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Some persons who have a vested interest in a weaker patent system have claimed that inventors have a motive to delay patents until a technology is well established. It is illogical to believe that an inventor would intentionally delay his patent for forty years. Compounded interest on money earned earlier will exceed the potential for a bigger market, which is cited as a motive to delay patents. The likelihood is that an inventor would have to be clairvoyant to see twenty, thirty, or fifty years ahead. There is a fair probability that an invention would be rendered obsolete during a very long period. Prolific inventors would be reluctant to defer income when cash flow stops them from filing additional patents whose financial return is likely to far exceed the value of the investment. It follows that prolific inventors want income as soon as possible on

existing patents to fund developing their most current ideas

The 20 year term filing procedure is a PTO bureaucrats dream because it gives them a huge lever to make an inventor accept whatever the PTO dictates. The five year, and then ten year extensions they have offered are Rand-Aids applied to a change that is not justified by the evidence or in America's interests. Obtaining the extension is dependent on the whims of a bureaucrat. The PTO gets more power and eliminates industry criticism over delayed patents. The 20 year term also shields the financial consequences of unreasonable delays from large corporate interests to the inventor. It is clear that the PTO would rather have one or two angry inventors versus having many large corporate interests and the organizations that represent them such as NAM, AIA, and IPO demanding an explanation over unreasonable delays. In other words the 20 year change represents a serious political problem for the PTO.

Administrative solutions such as the five or ten year extensions that are included in HR 17;V are not acceptable. An inventor would be at the mercy of the PTO admitting they had caused an unreasonable delay in the patents execution. Our PTO management is not willing to accept responsibility for so called submarine patents and I think it unlikely they will take responsibility for the delays they cause if HR 17;V were passed. In any event giving them more

power over inventors is poor policy since they are already abusing their position.

Our own patent office has been systematically crippling the patent system at the request of Japan and multinational corporations. The current patent commissioner is neither a patent attorney

nor an inventor. He characterized inventors who oppose his policies as "weekend hobbyists". The

group who is opposing him includes many Hall of Fame inventors and several Nobel laureates who are sure were surprised that our patent commissioner had such a low opinion of them. I agree with Lindauer that administrative solutions could solve many problems. Let's start with replacement of several of the PTO's upper administrators.

I suggest the following issues must be examined as a group while carefully considering what the practical implications are.

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- 1) 20 year term filing
- 2) World Wide Patent Invention section 104

) IX month publication

4) Prior user rights

5) Privali/ing the patent ollke

There are ollen huge disparities between theory and real world application of principals
I.ix)k at capitalism verses socialism One encourages hard vhotV. and the other doesn't
Multinationals will use the pr(>p>sed changes to crush small business and independent inventors
18 month disclosure will be used by dishonest entities to erode (he patent term by third
parties challenging pending patents, claiming prior user rights, and use oi Fraudulent evidence
From difficult to investigate loreign sources It will make our patent system subject to "IUnKJing"
as IS common in Japan Flixxing is where hundreds olnarrow and ollen questionable
improvement patents are Tiled concerning a Tundamental patent to limit the ability oTthe
original

inventor to collect royalties IK month publication will lead to a massive transfer oTconceptIs
created by American inventors to other ctmnlries which mevilabilily will cause llirther U)ss oT
American jobs

Early publication will result in the transfer ol" technology with military significance
Publication ol pending patent applications will initially result m over IOO.OfK) patents being
published This huge volume ol'material will overliKid the stall' that is responsible lbr screening
material witii uilitary sigiuficaucc. l cclmology ofctii lias dual use. botli military and civilian.
Piiblicntiou will cause siich tccluiology to Iv disseminated much quicker to tlie detriment of oirr
national interests.

Prior user riglits itudenuiucs the purpose of our patent system, llic patent system was
created to eiKourage inventors to disclose tlieir inventions. If tiie incentive of a giuoranteed
period

of exclusive u.se is removed it creates a strong incentive for inventors to treat ideas as trade
secrets. If tiiey are able to protect flic idea as a trade secret tiiey may use it indefinitely. If they
fail to keep the idea secret and someone else patents the idea they forfeit die invention.

Important patents that arc not stopped outright will lx; tied up with interference's and other
delaying tactics that wilt eat up hall'or more of the 20 term All infringers will claim to be a prior
user The very umcepl of prior user rights is contrary to the basic purpose of inir patent system
The patent system is meant to encourage discUtsure of ideas to promote the general advancement
of technology

Pru)r user rights will enciHirage greater use o I trade secrets since the perstMi using the trade
secret will not K>se their right to continue using the idea if it is discovered by another party This
is bad policy, persons who make a decision to use trade secrets do nothing l<) advance
technology

and should therelbre not enjoy protectum in the li)rTTt of prior user rights

The upper management of the Patent and Trademark Ollice is lobbying vigorously to

IKconie a corporation. They present many reasons why fees would be an improvement but they
real

Page 6

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reason is to dislodge themselves from Citicorp's oversight. This attempt clearly violated the
UHililutum because the patent process is quasi-judicial.

Privatizing the patent office will lead to ever lighter costs, the patent office plans on
spending \$2 billion to construct a new complex. An incorporated F.K.) will be as efficient and
accountable as our postal system, a situation I hope does not happen.

Seventy percent of the National Inventor Hall of Fame inductees were selected for
inventions that occurred while they were independent inventors. Higher patent office fees make it
increasingly difficult for independent and small business inventors to patent their inventions. Small
entity inventors are the backbone of job creation.

Stripping the patent examiners of their civil service protection will make the whole patent
system very susceptible to outside influence. Current P.K.) management has been influenced by
large corporations more than at any other time in our history. It is crucial that we stop the outside
influence.

Traditionally a patent received a guaranteed term of 17 years in exchange for disclosing
the invention, this policy has served America well for over 200 years.

Patents will be enforceable for anyone except the largest companies, inventors such as I
will abandon innovation. America's declining standard of living will accelerate. I suspect that
America will stop being the beneficiary of the drain and that we could even end up being
an
exporter.

The K.C.) has repeatedly claimed that the vast majority of inventors will enjoy a longer
term of patent protection under the 20 year from filing provision that was included in (JA) .
This is another example of the P.O. misrepresenting the facts, they claim the average pendency
is 3.5 years based on the most current continuation. It is not an accident that their statistics
do

not take into account the previous applications that led to the last application from which the
patent is issued.

An analysis of patent pendency by (Gregory Aliaronian) showed the average pendency of
1000 software patents to be 34 months. Some other disciplines are twice as long.

The PTC claims the changes address abuses of the patent system. The worst abuses have

been perpetuated by the PTO and many of the proposed changes address abuses of the system that have been perpetuated by the PTO. The PTO is a bureaucracy whose upper management is willing to compromise the source of our prosperity to cover-up its own failures, justify burdensome fees to increase its size and budget, and to give it more power.

The end result of the patent office's attempts to lay blame for submarine patents on inventors is that they have been maneuvered by the foreign multinationals into a position where they had

to take measures that are contrary to America's interests. I am not sure at this time rather the patent

Page?
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The office has been duped into hacking destruction of innovation or if other incentives have been offered by multinationals to key persons.

I believe that the PTO upper management is promoting early publication to increase its budget and justify increasing staff to handle publication. Most bureaucrats want larger budgets and staff to increase their stature.

While inventors still face many obstacles in defending their intellectual property rights, they have made progress during the past ten years. That progress is threatening to those multinational businesses and foreign governments that had become accustomed to unlawfully appropriating individual's and small business's intellectual property. They are spending large sums of money attempting to gut our patent system so that they can take the benefits of American

ingenuity and the jobs for their profit.

This is not an abstract problem that only affects inventors. The issue affects every citizen. Our country's economic benefits of Yankee ingenuity will cost Americans decent paying jobs and will deprive their children of a much lower standard of living.

America's economic might is a direct result of our producing more inventors per capita than any other country in the world. Our culture is known for producing independent thinkers. Other cultures have studied our educational system in the hope of learning how to produce inventors.

A healthy economy is dependent on a diverse mix of small companies and large businesses. If we allow laws to be changed that benefit large companies at the expense of small companies who are the source of innovation, we will have fewer startups and fewer inventions.

large companies have become very short sighted in the last ten to fifteen years Their quest for ever higher short term gains has radically altered business practices All of us have known persons who have been displaced from jobs by downsizing Many people are not aware that Research and Development staff persons are being let go in greater numbers than many other

groups This IS a result of large companies only funding small improvements that will give them an immediate return on their investment

Market trends are causing many inventor to form small companies to develop ideas for which large companies are not willing to make a long term investment to commercialize. The problem is that the large companies want to be able to take advantage of the small companies work without fairly compensating them.

Everyone understands that a farmer who consumes his seed corn is foolish. Small companies seed the market. If multinational companies are successful in crippling the patent system all Americans will suffer a decreased standard of living

I have been an inventor for ten years, the last six full time I am appalled by the actions of the current Administration and the Patent & Trademark Office (PTO) The PTO is a classic example of a bureaucracy that is out of touch with the realities of the marketplace and the needs of inventors

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Their actions during the last few years have been extremely damaging to innovators The PTO has been convinced by lobbyists that are paid by multinational corporations and foreign governments to back measures that will allow the foreign interests to take our inventions and the jobs and profits that those inventions represent

A coalition of inventors joined with the Alliance for American Innovation to vigorously oppose the changes to our patent laws Those changes are being promoted by multi-national corporations, foreign governments, and their lobbyists or agents, inventors fighting to preserve our patent system includes numerous members of the National Inventors Hall of Fame, seven members of the American College of Physical Scientists inventors, three Nobel laureates, and thousands of other inventors who recognize that we must stand up to preserve our patent system. Several inventors attended GAO hearings and numerous meetings including

myself, I have lobbied in Washington against changes to American patent law that will damage American innovation.

Please support Rohrabacher bill H.R. 59 and re-introduce the bill S 284. as they are designed to

repair the damage caused by the unnecessary provisions in GA ITs enabling legislalit.ni that hann our ability to create desi)erately needed new jobs Please opjxise I IR 1 65"-). 1 7.12. & 1733. Please IcKik. into whal would motivate our PIO m:uia^ement to tmdermine their mission which is to promote innovation.

Ronald J. Riley. Prcsidait
Riley & Associates, inc.
(Jrand Ulanc. Micliigan

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Ronald J Riley is president of Riley and Asstieiatcs. Ine . a Grand RlaiK. Michigan based u)mpany and is an inventor thai speciali/es in industrial u)nrlrt)ls and prtxluct development hut also has patents in pr<.>cess in diverse areas such as Iwt wear, telecommunications. e.\crease equipment, and numeaxis other a^Misunier))nxlucts He is President of the advist">rv Ixiard of the Alliance for American Inn<.>vation. an advisory b<.>ard member for Intellectual Properly Creators, a memlx;r of the UnuTii of Concerned Scientists. The Planetary Stxiety. and the ScKJely of M;uiiufaclurint; Hntiineers.

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October 31, 1995
The Honorable Carlos MOORHEAD
Chairman, Subcommittee on Courts and
Intellectual Property
United States House of Representatives
2346 Rayburn House Office Building
Washington, D.C. 20515

Dear Mr. MOORHEAD:

I am writing to set forth Amgen's position on H.R. 359 and H.R. 1733.
Amgen supports the principles of both bills and hopes that the Subcommittee will combine the best features of both.

There is no industry which is more sensitive to the length of patent term protection than the biotechnology industry. Any law that undermines the ability of our industry to secure patents with an adequate term undermines our ability to attract the venture capital which is necessary to finance research and development on new, innovative health care products. Enforceable patents having an adequate term are essential to the success of the biotechnology industry in order to allow a startup company to recoup the substantial investments they must make in developing a product for market.

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As you are aware, in Section 532(1) of the Uruguay Round Trade Agreements Act ("URAA"), Congress adopted a patent term of 20 years from the date of filing. This provision implemented TRIPS Article 33, which provides: "The term of protection available shall not end before the expiration of a period of twenty years counted from the filing date." Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations, Agreement on Trade-Related Aspects of Intellectual Property Rights, Article 33, p. 334 (April 15, 1994) 1/ On December 8, 1994, President Clinton signed legislation implementing the Uruguay Round Trade Agreement, which provided, among other things, provisions changing the term of U.S. patents to 20 years from the earliest filing date. Previously, as established by the Patent Act of 1861, all U.S. patents had a 17 year term from date of grant.

H.R. 359 would amend the URAA to provide a patent term of 17 years from the date of the grant of the patent or 20 years from the date of filing, "whichever is later". Supporters of a 20 year term from the date of filing have stated that since "virtually all" applications are processed within three years, a term of 20 years from the date of filing would not reduce the previous 17 years overall length of a patent term. Unfortunately, because of extreme delays by the

1/ Message from the President Transmitting Uruguay Round Trade Agreements, H. Doc. No. 103-316, 103d Congress., 2d Sess., p. 1636 (Sept. 27, 1994).

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PTO in issuing certain key pioneer biotechnology patents, a patent term of 20 years from filing would effectively shorten the terms of some leading biotechnology patents. We believe that this outcome is unfair, and undercuts the fundamental objective of our intellectual property laws, which is to promote continued American innovation, research, and development. To remedy this problem, H.R. 359 simply provides a guaranteed 17 years patent term. H.R. 1733 would authorize the Commissioner of Patents to restore any time lost by the patent applicant due to no fault of the applicant. Amgen wholeheartedly supports the approaches of both bills in this regard and believes that with additional safeguards, such as those proposed by the Biotechnology Industry Organization, the guarantees offered by the two bills provide the necessary patent protection needed by the biotechnology industry. We have reviewed comments that H.R. 359 is inconsistent with TRIPS and therefore should be opposed. To the contrary, H.R. 359 is entirely consistent with TRIPS. The TRIPS Agreement imposes a binding obligation on all Members of the World Trade Organization (WTO) with respect to the minimum patent term. It does not preclude the United States from adopting longer or more extensive legal protections for patents if it is concluded that stronger and more effective patent protection is appropriate. Thus, H.R. 359 is wholly consistent with TRIPS. This position has been confirmed by U.S. trade officials. In fact the Administration has committed that "if the Congress does revisit the [patent term] issue and reaches the conclusion that a change in accordance with [a proposal to change the patent term

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similar to provisions of H.R. 359] should be made, the Administration would not oppose legislation to achieve that change." 2/

If you or other members of the Subcommittee desire additional information, please contact me at (805) 447-3047 or Peter Teeley, Vice President, Government and Public Relations at (202) 289-7447.

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>even M. Odre
Vice President,
Intellectual Property and
Associate General Counsel

2/ Letter from Michael Kantor, U.S. Trade Representative to Senator Robert
Dole, November 23, 1994, Published in Inside U.S. Trade. November 25, 1994.

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CongrcsB of the Bnitcd States ^
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October i.: 1995

Honorable Henry Hyde
Chairman
House Judiciary Commiitee
2137 Raybum Building
Washington, D.C. 20515

Dear Mr. Chairman:

I am wnting to request that the Judiciar> Committee hold hearings on civil rights
violations by law eni'orcment officers at police departments around the country. The recent
revelations regarding the Los Angeles police dcpanment. tor instance, indicate that racism
may be a cottage industry within a police dcpanment that routinely looks the other way while
African-Americans are framed or insulted with racial epithets.
Further, it appears that the senous allegations regarding the Los Angeles police
department may not be the exception. Repons in the past year have expwsed entrenched
problems of racism and corruption in Philadelphia. New York, New Orleans and Atlanta as
well. This past spring, 5 Philadelphia police officers pleaded guilty to civil rights violations
based on accusations that they had planted phony evidence, falsified police records and lied in
court. In New York, nearly 50 officers have been arrested since March 1994 on charges of
drug trafficking, extortion, brutality and civil rights violations. In New Orleans, more than SO
officers have been arrested, indicted or convicted since 1993 on charges including rape,
aggravated battery, drug iratficking and murder. On September 6, six Atlanta police officers
were arrested on drug charges ranging from shaking down drug dealers to extorting money

from citizens in exchange for police protection.

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Chairman Henry Hyde

October 12, 1995

page 2

It is particularly disturbing that revelations of deeply ingrained racism and civil rights abuses in police departments are being met with a deafening silence while Congress has expended considerable time recently examining the alleged violations of civil rights and liberties of others. I know that you share my desire that there be no double standard in this respect.

The 1994 Crime Bill provides the Justice Department with the statutory authority to investigate and take action against local law enforcement officials who may have committed civil rights violations. 42 U.S.C. § 14141 provides that it is unlawful for law enforcement officials to 'engage in a pattern or practice of conduct ... that deprives persons of rights, privileges, or immunities secured or protected by the Constitution or laws of the United States.' This section also provides that the Attorney General may initiate civil actions to 'obtain appropriate equitable and declaratory relief to eliminate the pattern or practice.* In addition, 18 U.S.C. sections 241 and 242 provide criminal penalties for police officers who conspire to deprive individuals of their civil rights and for police officers who act under color of law to deprive individuals of their civil rights.

I request that the Judiciary Committee begin hearings on civil rights abuses by local law enforcement officials and that the Department of Justice be invited to explain any actions it may be taking in reference to these violations. I believe that Congressional hearings might serve to deter other police departments from permitting the same intolerable culture to take root or to persist. I would hope that Judiciary Committee hearings would be comprehensive and would examine both specific allegations as well as the overall culture that tolerates racial bias and civil rights abuses. It is also my hope that such hearings could explore appropriate remedies and safeguards.

I believe that you appreciate the significance of this matter and look forward to your cooperation.

Sincerely,

Member

Judiciary Committee

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National Association for the Self-Employed

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202-466-2123 (fax)

FOR IMMEDIATE RELEASE CONTACT: Bene't Lynn

November 1, 1995 202/466-2100

STATEMENT OF BENNIE L. THAYER
PRESIDENT OF THE NATIONAL ASSOCIATION FOR THE SELF-EMPLOYED
ON PATENT TERM LEGISLATION

As the President of the National Association for the Self-Employed, I would like to voice my support for H.R. 359, Rep. Dana ROHRABACHER's (R-Calif.) Patent Term Restoration Act. I believe that H.R. 359 better assists the concerns of America's small inventors by guaranteeing the length of a patent term and protecting them from copying violations.

With a membership of over 320,000, the NASE realizes that the issue of patent term reform strikes at the heart of American entrepreneurship. Small business individuals have been responsible for many of the break-through inventions over the years, such as the MRI and the laser. The NASE wants to ensure that any patent reform legislation passed will help the small inventor gain ground in the global arena, not lose ground.

The Patent Term Restoration Act would allow an inventor to have a patent term that is either 17 years from the date of issuance of the patent or 20 years from the date of filing, whichever is greater. The language that has currently been included in the GATT implementation legislation will likely shorten the patent term. It states that the protection period "shall be for a term beginning on the date on which the patent issues and ending 20 years from the date on which the application was filed in the U.S." If the application process takes longer than three years, the inventor faces a shorter patent protection term. And according to an MIT study. It takes 10-12 years for a break-through invention to win patent approval. Also, by not guaranteeing at least 17 years of patent exclusivity, small inventors may have difficulty in securing financial backing - a concern big businesses do not have. Another provision in H.R. 359 that the NASE supports is the public disclosure of patent applications at 60 months. Currently, a patent is not published until it has been granted to the inventor. H.R. 359 addresses the issue of possible "submarine

patents" - applications that are purposefully prolonged by the inventors to keep them secret - by allowing publication of a patent application after five years. The NASE supports the five year period because it gives more time for small business and independent inventors to seek financial assistance and prepare for commercialization before anyone attempts to copy their ideas.

H.R. 359 gives the incentive and the advantage to the small inventors of America. The NASE strongly supports Rep. ROHRABACHER's efforts to keep the small inventor moving in the right direction in today's competitive world.

"Serving the Needs of Small-Business America "

Member Services: 2121 Precinct Line Road • Hurst, TX 76054 • 1-800-232-NASE
65%

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Statement of V. Wayne Kennedy, Senior Vice President — Business and Finance, University of California

Mr. Chairman and Members of the Subcommittee: As an active user of the nation's patent system and the United States Patent and Trademark Office (U.S. PTO), the University of California supports H.R. 359 that would correct a major problem for universities created by the General Agreement on Trade and Tariffs (GATT) legislation concerning the period of patent protection.

Why Patents are Important to the University. — The primary missions of the University of California are education, research and public service. The success of the University can be seen in the innovative research results of our faculty and high quality of graduates that we produce. Additionally, thousands of industrial jobs have been created as a result of University research and innovation through the transfer of UC technology to industry to commercialize inventions that benefit the public. Our technology transfer program, an increasingly important part of the public service mission of the University, has fostered the commercialization of many new technological advances that impact the lives of Americans across the nation. Today, millions of people consume food products produced with the help of our researchers, travel on safer highways, explore the Internet and depend on medical technologies — all developed by University of California scientists. Some of the most visible impacts have been in the biotechnology field where commercialization of University discoveries has resulted in the development of the Hepatitis-B vaccine, the human growth hormone, and the gene-splicing technique that launched the U.S. biotechnology industry.

The University transfers technology to the private sector by licensing inventions to companies that are capable of bringing the technologies to practical application. Before a company will invest significant resources in developing an invention, especially in the health care and biotechnology industries, it must be assured that sufficient patent protection will be available. Thus, it is the patent system that makes it possible for the University to attract and retain licensees who will commercialize and further develop inventions and bring them to market for the benefit of the general public.

Effect on University Technology Transfer. — There are differing opinions on the average length of time it takes to process a patent application through the U.S. PTO, but it is commonly known that biotechnology inventions take significantly longer than inventions in other fields.

Under the "twenty years from filing" term, patent protection begins on the date the patent issues and extends until twenty years from the date the earliest application was filed in the United States. Considering a hypothetical, but not uncommon situation, if a patent issues after ten years of prosecuting a "family" of patent applications (i.e. the parent and subsequent continuation applications) through the U.S. PTO, then the actual term of the patent would be only ten years (twenty years from the earliest filing date.) Under the "seventeen years from issuance" term, the patent owner would have seventeen years of patent protection.

The difference in time is especially important to the biotechnology industry's ability to recoup their investment costs. It often takes a number of years and significant resources before the technology can be developed, receive regulatory approvals, and be brought to the market.

In an academic environment, it is essential that faculty publish research findings early in the research and development process. Therefore, in order to protect the commercial potential of such findings, universities need to file a patent application early. In this environment, the length of university patent protection under the "twenty years from filing" term is effectively shortened.

If companies believe the period of patent protection is insufficient to recoup their expenses and make a profit, they will not be willing to risk the substantial investment that technology commercialization requires. Consequently, companies may be less likely to license early-stage technologies from a university, denying access to the benefits of such inventions to the public.

Conclusion

H.R. 359 would allow the patent term to be the "longer or twenty years from date of earliest filing or seventeen years from date of issuance. This would ensure that the historical "seventeen year from issuance" period would be retained as a minimum period, while complying with GATTs requirement for a "twenty years from filing" period.

The University of California is extremely productive in moving new technology into the marketplace. Half of our most successful inventions are in the biotechnology area which, in Fiscal Year 1995, produced 74% of our patent royalty income. Be-

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cause this bill would provide strong support for the commercialization of biotechnology inventions, the public, as well as all university of California campuses and laboratories conducting biotechnology research, would benefit from H.R. 359. We support its passage.

Statement of the National Venture Capital Association

The National Venture Capital Association is comprised of over 200 professional venture capital organizations. Its goals are to foster a broader understanding of the importance of venture capital to the vitality of the U.S. economy and to stimulate the flow of equity capital to emerging growth and developing companies. We appreciate the Committee's invitation to present testimony on the impact a shorter patent term could have on a major and critical industry in which the venture capital community invests: biotechnology.

A significant portion of venture capital investments in the United States are made in the biopharmaceutical and medical device fields. According to the research firm of VentureOne, in 1994 twenty-four percent of all professional venture capital dollars were invested in biotechnology and medical device and equipment firms. This funding level is equal to over 1.2 billion dollars, and has been at that level for the last three years. The companies that receive this money are at the cutting edge of biotechnology and medical innovation. They are giving new and renewed hope for people across virtually the entire spectrum of diseases and afflictions.

However, policies developed in Washington directly affect the future of emerging biotechnology and medical device companies. These government policies in turn af-

fect our investment decisions, which in turn impact the availability of late stage capital and the development of the novel, life sustaining products these companies are developing.

THE importance OF VENTURE CAPITAL IN BIOTECHNOLOGY

Venture capital plays an integral role in the funding of the biotechnology industry. According to Goldman Sachs, there are currently 33 biotechnology therapeutics/vaccines approved for sale by the Food and Drug Administration. More than 450 products are under development, with more than 120 in latter stage FDA approval stages. These include biotech drugs, vaccines and therapies for conditions such as heart disease, infectious diseases, cancer, arthritis, genetic disorders, burns and blindness. Many, if not most, of these companies have been financed by venture capital.

In fact, without patient investment from venture capitalists this industry would not exist. In 1994 venture capitalists invested \$717 million in biotech and pharmaceutical companies across the United States. Conservative estimates indicate that over 108,000 Americans are now employed in biotechnology companies. The Largest of these companies include Amgen, Chiron, Genentech, Biogen, GenzjTne and Immunex, which generated combined 1994 product associated sales of \$3 bilUon. Many NVCA members are seasoned venture capitalists who sit on the Boards of Directors of one or more biotechnology and medical companies. Thus, they can attest to the enormous risks these companies face in an attempt to bring a product to market and become a successful, profitable business. The Biotechnology Industry Organization estimates that it takes 10 to 12 years to research, develop and obtain regulatory approval to market a new biopharmaceutical product, at an average estimated R&D cost of \$259 million (in 1990 dollars), and this figure does not even include general and administrative expenses. Given these numbers it is no wonder that investing in this industry is very risky and why it is important that the Government demonstrate to investors, such as venture capitalists, that potential rewards are commensurate with the risks.

WHY PATENT PROTECTION IS CRUCIAL

To venture capitalists patents play a fundamental and critical role in the availability of capital and our willingness to invest in biotechnology. Patents are as important as any other factor in the decision to invest in any idea, entrepreneur or company in this field. The reason for such dependency upon patents is that they provide the favorable economics required to justify substantial capital investment

for successful product development. The shorter the patent term, the less attractive the company is from the investors' perspective.

Historically, biotechnology companies with successful proprietary products have generated significant product sales during periods of market exclusivity, (patent protection), yielding healthy profit margins and high returns on investment. These re-

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turns have been necessary given the significant level of risk associated with technology development, regulatory hurdles, clinical testing demands, limited availability of capital and prolonged product development cycles.

New pressures placed on young and emerging biotechnology companies from health reform to Food and Drug Administration backlogs, to unrealistic performance goals have contributed to disappointments with the biotechnology industry in the private and public capital markets. The recent alteration in patent term in the General Agreement on Tariffs and Trade is added fuel to this fire.

To be able to succeed, venture capitalists must be able to secure a healthy return on investment for their investors, who increasingly are public and private pension funds. Within the venture industry, due to the huge risks associated with investing in young companies and new industries, average annual returns are expected to exceed the Standard & Poors 500 Index for the public market by at least 5 points. The average annual S & P returns for the last 25 years have ranged from 11-13%. Therefore, venture investors are looking for annual returns of at least 16-18%. This is a very tall order particularly because venture capitalists often invest in unsuccessful companies. Thus, we must seek opportunities that, individually, far exceed those returns, because when the individual failures have been included, the average annual returns are considerably lower. These facts make investing in biotechnology, a risky endeavor at the outset, even more risky.

Thus the absolute need for strong, reliable patent protection. Within the biotechnology sector, patents are necessary to allow product pricing stability, generate attractive gross and net profit margins and allow a reasonable period of market exclusivity to overcome all of the other risks associated with biotechnology investing.

PROPOSED LEGISLATIVE SOLUTIONS

NVCA believes that one of the major purposes of both H.R. 359 and H.R. 1733

is to reduce venture capitalists' concerns regarding the patent changes implemented on June 8, which currently give them additional reasons to avoid investing in biotechnology startup companies. Both bills address the impact of the GATT enabling legislation in shortening the life of a U.S. patent, but via different means. H.R. 1733 addresses the problem by delegating discretion to the Patent Office, whereas H.R. 359 statutorily guarantees a patent holder the greater of 17 years from the date of issue or 20 years from the date of application of a patent.

NVCA believes that the administrative remedy envisioned in H.R. 1733 may not solve the existing problem. It is fraught with uncertainty and delay. This gives venture capitalists pause when deciding whether to risk funding a particular biotechnology project or company. Based on the current problems venture capitalists and companies face with FDA administrative hearings and procedures, the idea that a company can only seek an extension of a patent term after following Patent Office procedures makes investment in that company much more risky. In some, maybe many, cases it could be the one issue that forces the venture capitalist to forgo investing in a specific biotechnology company.

Consequently, NVCA believes that H.R. 359 is a better approach to cutting a serious problem. NVCA feels that elimination of the 17 year term from grant in favor of a 20 year term from filing seriously eroded the strength of the U.S. patent system. Biotechnology, one of the industries where the U.S. still clearly is preeminent, has been given, in effect, a shorter term than 17 years from grant. This has reduced our confidence in the biotechnology industry at a time when the industry continues to find it very difficult to obtain needed capital. Lack of capital directly leads to a decrease in new jobs and a postponement in the delivery of breakthrough drugs. Simply put, venture capitalists will stay away from long-term, high-risk biotechnology breakthroughs if the government makes it even more difficult to invest in them. The GATT patent provision imposes such an additional roadblock. H.R. 359 would correct the problem by restoring an equitable patent term for biotechnology inventions, and hence the National Venture Capital Association supports it.

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