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Select Committee on Administration Written Evidence

Memorandum from Richard Allan, Head of Government Affairs for Cisco Systems, UK and Ireland (October 2006)

- 1. Author Background: Richard Allan was MP for Sheffield Hallam and member of Information Select Committee 1998 to 2005 and worked as an information technology professional in the National Health Service prior to that.
- 2. Since September 2005, he has worked for Cisco Systems, a major manufacturer of networking equipment, providing him with further recent experience of the way in which a large distributed organisation uses technology.

Relevant Facts: Cisco Systems supplies equipment that is used for many of the applications described in this submission. However, a number of other manufacturers also make similar technology. This submission will inevitably refer to Cisco's own solutions as it covers best practice within this company but it does not aim to promote any particular company's products.

- 3. Scope of Submission: This submission is largely addressed to questions a) and c) but also covers issues raised in questions d) and g) of the inquiry. It aims to respond concisely and in non-technical language avoiding detailed discussions of the technology. If more detailed information would be valuable to the Committee then we can follow up on technical points either with Committee members or with the House's technical staff.
- 4. Additional Context: The submission describes a number of solutions that I believe would be of benefit to Members that are not all currently deployed by the House authorities. In doing so, I make no explicit or implicit criticism of Parliament's technical team. Having observed the work of PCD at close hand over 8 years I believe them to be a team that does remarkably well in servicing the demands of such a complex and challenging organisation as Parliament.
- 5. The suggestions in this submission will be ones which I am confident that PCD will have considered and may already be implementing in some cases. Their advancement here is intended to be an encouragement towards the provision of better services and for the organisation to develop further its capabilities and offer to Members and staff.
- 6. I also understand that there have been organisational changes since I left Parliament of which I do not have first-hand knowledge. I am however familiar with the background to them and believe them to be a sensible response to today's challenges.

RESPONSE TO QUESTIONS

- (a) Best practice in the world at large: How are ICT services provided in other organisations, both commercial and public sector? How are such services provided in organisations with distributed systems and multiple locations?
- 7. Cisco Systems was founded in 1984 by a small group of computer scientists from Stanford University. Since the company's inception, Cisco engineers have been leaders in the development of Internet Protocol (IP)-based networking technologies. Today, it has more than 47,000 employees worldwide who are supplied with computer equipment by the company and connected to a corporate network.
- 8. Cisco is also a supplier of technology to public and private sector organisations globally, including many in the UK, and so has a great deal of expertise in best practice deployments of IT. If the Committee would like to explore best practice examples in more detail then this could most effectively be done in a presentation session. Cisco is able to offer such a presentation and/or technology demonstration on request.
- 9. The following sections describe corporate uses of technology within Cisco that may be of relevance to the way in which the House of Commons could work.

A. Intranet Usage

- 10. The redesign of the Intranet is also touched on in question g) of the inquiry.
- 11. Within Cisco, the intranet is very extensively used for transactions as well as the provision of information. This means that activities such as the booking of travel, entering of financial claims, logging of technical support queries and so on are all carried out via websites as the primary means of communication.
- 12. The key to this strategy has been the deployment in most cases of best-of-breed external systems that are customised to varying degrees for Cisco's use, rather the creation of entirely new systems internally. The intranet is used to provide controlled access and a Cisco-branded interface to systems such as those of the external pension provider and the car fleet manager.
- 13. The financial system is especially important allowing all claims to be logged electronically and then approved online according to the authorisation rules established. All purchasing is also done electronically using an interface to online catalogues. And travel booking is handled by a web interface to the Amex-run travel office freeing up their staff to deal only with urgent issues on the phone or in person.
- 14. Similar systems would, I believe, be of benefit to Members and staff and could be implemented cost-effectively if the customised-off-the-shelf approach is followed.

B. Personal Communications Services

15. The most significant difference I have found between Parliament's use of its network and Cisco's has been in the provision of personal communications services. The Parliamentary network supports email as an inter-personal communications tool for Members and staff. Cisco also offers email but additionally uses its network to deliver instant messenger, advanced voice services and video communications.

(i) Voice Services

- 16. One of the major differences between practice in the commercial sector and Parliament is in the use of voice services. Cisco Systems employees carry out a large part of their business using voice services. Audio-conferencing and voicemail in particular are in daily use as internal and external communications tools.
- 17. Voicemail usage is far more advanced than simple answerphone functionality. For example, senior managers will use distribution lists to send messages to dozens of people in their teams as a preferred method for certain types of communication. This is an attractive alternative to email where voice is the more effective medium.
- 18. Properly used this could be of great benefit to Parliament. For example, the leadership of a political party might use voicemail to communicate urgent information to a large number of Members and staff quickly and efficiently.
- 19. It is likely that list distribution functionality is already present in Parliament's voicemail system. The challenge may be one of developing new working methods rather than one of the tools not being available. If there is to be more take-up of voicemail then consideration may have to be given to ease-of-use issues as well as those of training and work culture.
- 20. Audio-conferencing is now in widespread use across the technology sector as a core business application. It offers significant efficiency and cost benefits over traditional meetings as well as permitting groups to work together that would simply be unable to do so without this technology.
- 21. The costs of using it have reduced as it has become a feature of the voice systems over IP that most businesses are now deploying. These new systems also make it easy to use so that the overheads in setting up and running a meeting are very low.
- 22. In the Parliamentary context, it could be used for regular meetings between a Member and their Westminster and constituency staff, sitting on speaker phones at each end, as well as applications such as a Member bringing together a group of policy advisors from across the country to discuss an issue before the House.
- 23. Another key feature of IP-based telephony systems that may be of interest to Parliament is that of extension mobility. Wherever I go in a Cisco office anywhere in the world I can log in to a telephone and have my own normal telephone number and local functionality. This allows a much more flexible use of workspaces between staff.
- 24. A common telephony system could be implemented between the Parliamentary estate and other points of use such as Members' homes and constituency offices that would allow a person to simply login wherever they find themselves and be accessible on a single number. This approach of linking an HQ and multiple branches into a single IP-based phone system is very common now and can deliver a very rapid return on investment as well as offering these enhanced services.

(ii) Instant Messenger

- 25. Cisco uses an Instant Messenger tool which is essentially a corporate version of popular products such as the MSN/Yahoo/AOL messengers in common use by anyone under the age of 25. This is a very important part of the set of communications products.
- 26. Most email users feel overwhelmed by the quantity of mail they receive. This can often be for the most trivial purposes. For example, arranging a meeting can generate a dozen emails as different dates and times are proposed and rejected or agreed. The same meeting can be fixed with a few instant messages in real-time relieving the email inbox of those messages.
- 27. There are also occasions when a user sends an email with a time-critical query but has no idea how long a response will take. Instant Messengers have the great virtue of showing "presence" information, ie whether a person is online or not. This means that you can look at your list of contacts and see if someone is there for whom you have an urgent query.
- 28. The service is also very typically used for setting up phone calls—you see if someone is online and send a message to ask if it is OK to call. They can then respond instantly to say when they are free for the call and what the best number is for you to use. This is a great time-

saving measure.

(iii) Video Services

- 29. Increasingly, video is being used as a business communications tool. In Cisco this operates at a number of levels. There are portable video-conferencing units in many meeting rooms that can be setup and connected to another such unit anywhere on the network in a few minutes. There are also at-desk facilities with small webcam-type devices. And at the top end a facility called Telepresence has been developed that allows groups in two locations to meet around a virtual conference table.
- 30. Key to their successful use is the choice of the appropriate solution for a particular meeting. Their ease-of-use is also essential if they are to be accepted by users. The solutions landscape has certainly changed significantly since the early attempts to introduce video-conferencing into Parliament which involved units that could only be used in certain locations with advance booking and no certainty that they would work.
- 31. Given the nature of Parliamentary business, video should play a large part in this and it would be worth how considering recent developments could be exploited. For example, a video-conferencing link would allow a Minister to "join" a number of local MPs on visits to schools in geographically distant constituencies on a single day when this would not be possible in person. And MPs could hold more short meetings with experts from across this country and abroad, not as a substitute for travel that is necessary for interpersonal contact, but as a supplement to it.
- 32. A further element in the use of video that may be of interest is the deployment of internal IPTV—that is internal video content delivered over the network. This is used within Cisco to communicate important internal messages as well as for training purposes and to allow people who are not in the office on a particular day to participate in meetings.
- 33. Parliament is already using a form of IPTV externally with the webcasting of committee meetings and this could be developed further as the technology is increasingly effective for these purposes. But it may also want to consider investigating other ways to use video to generate and distribute additional content for both internal and public consumption.

C. Network Capabilities

- (i) Virtual Private Network (VPN)
- 34. This is also relevant to question d).
- 35. Cisco employees are issued with laptops and use a VPN connection when working remotely. This connectivity is very robust with a number of points of connection provided around the globe. The security is generally provided by a software token on the PC which generates a unique key when a password is entered that is used to authenticate the connection.
- 36. The Cisco VPN system is designed to support a large community of users who mostly spend much of their time offsite. It has to be reliable and offer equivalent functionality to that available onsite to meet the business requirements.
- 37. Parliament is right to specify equivalent functionality offsite and onsite as its VPN objective. If this is not being achieved then the design and specification of the VPN solution being deployed should be revisited as there is no inherent technical reason why most users with standard UK ADSL broadband connections, now typically at 2MB or 8MB, should not be able to enjoy a good VPN service.

(ii) Wireless Networking

- 38. This is also relevant to question g) on the House's plans for wireless.
- 39. Cisco Systems has rolled out wireless networking as standard in its offices. This includes two networks—one for Cisco corporate users only, and a public network for guests. This project has been very successful with wireless now the default method of connectivity for most users.
- 40. Cisco Systems believes firmly that the technology is sufficiently mature for wireless networks to be deployed securely, including for the transport of sensitive information. It is used within Cisco Systems to carry exactly the same level of confidential data as the wired networks. Secure deployments require careful consideration to be given to the network design and configuration but are now common across many enterprises.

(iii) Backup Facilities

- 41. Users within Cisco store most of their documents locally on their PCs, as do Parliamentary users. There are common network-based data storage facilities that are used for holding structured data for group use but the default for document creation is to use local rather than network drives.
- 42. Software is deployed across the network however to ensure that all this locally-held material is backed up centrally so that it can be restored to a PC in a timely fashion if necessary. This takes the form of an incremental backup that runs in the background on the laptop computers.
- 43. Such a system of automatic backup to secure storage facilities is preferable to leaving users responsible for their own backups to devices like CD-R disks. My experience of Parliamentary users was that hardly any of them ever carried out any form of backup, with all the consequent risks of permanent data loss. A centralised backup server also presents a lower risk of data security breach if managed correctly than the presence of backed up files on CDs.
- (c) IT stability v flexibility: Has the right balance been struck between (1) stability/quality of service and (2) flexibility for Members to arrange their ICT provision to suit their individual working patterns?
- 44. Before 2001 there was no common computing platform for Members and their staff. The change to central provision has created much greater coverage and consistency in the use of IT by Members. It is likely that major problems in terms of support and security would have resulted from a continuation of the previous regime of individual purchase of computers by Members.
- 45. However, it is also the case that any large group of users of a corporate network will have diverse specific requirements. There will therefore be an inherent demand for the installation of multiple software packages in addition to the basic supplied package.
- 46. As I understand it, the current situation with Parliamentary computers is that users are not allowed administrator access and therefore cannot install their own applications. This has the effect of limiting the usefulness of the devices as well as being a source of frustration amongst the client group for the service. Security and stability are typically cited as the rationale for such restrictive usage policies.
- 47. An alternative strategy would be to allow users to install their own applications in addition to the supplied set. This would make the devices much more useful to their owners. It would also allow the community to innovate in the ways in which they work.
- 48. Stability concerns about the operating system can be overstated and on balance should not be a reason on their own to obstruct user choice. If a clear policy of user responsibility is adopted, i.e. if there is a major problem with user-installed software then the House of Commons only undertakes to restore the standard configuration plus any user data (see also backup proposals above), then this need not necessarily open the door to excessive and problematic support requests.

- 49. Security concerns can be dealt with by the use of security products both on client PCs and at network level that detect and deal with any rogue applications. Again the chances of this happening should not be overstated as most users will only use any additional freedom to install popular applications that do not present any particular security challenges.
- 50. PCD could model the pros and cons of allowing more flexibility in the use of PCs in the light of experience to date. Tools such as Windows automatic updates and modern security packages should be factored in with a view to allowing increased flexibility in line with user demand.



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