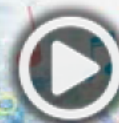IBM Software ☐ Connectivity, Integration and SOA

Internet of Thing

Driving transformation for inventors an
on the things that matter

Without the right connections, instrumentation shifts from competitive advantage to unmanageable complexity.

☐ Watch: The Internet of Things

(00:01:01)

In 2008, IBM set a bold agenda for a Smarter Planet—a global movement built by infusing instrumentation, interconnection and intelligence into the systems that drive human progress and economic growth. The Internet of Things (IoT) provides an iconic example of the immense potential contained within a Smarter Planet.

☐ Read More: The IBM point of view on the Internet of Things (PDF, 55KB)

" At IBM, we believe there are two primary ways that enterprises and entrepreneurs can take full advantage of the transformational opportunities the Internet of Things represents—the invention of new IoT products or services, and the optimization of business operations to deliver new services, upset long-standing business models, and find new and radical ways to connect people to the world around them."

– John Thompson, vice president of Strategy, Internet of Things

To achieve these transformations, we understand that the Internet of Things requires an integrated fabric of devices, data, connections,

processes, and people—and we respect the unique challenges of integrating digital Internet technologies with physical infrastructures. We are proven global leaders in the technologies that allow organizations to capitalize on the Internet of Things—Cloud, Analytics and Mobile—and we enable their back-end systems to support a full range of applications, allowing them to apply insight-driven actions to their business with confidence.

Exponential instrumentation delivers the genesis point for understanding the world around us as billions of things become instrumented and generate data—however, without the right connections, instrumentation can shift from competitive advantage to unmanageable complexity. Redefine how you control that data and use it to securely deliver value at every point in the system, while maintaining privacy.

☐ Read More

Universal interconnectedness is generating new points of data between individuals, devices and organizations. As you gain access to this IoT data, you must have integrated systems in place to securely store the data, analyze it for insights and then act on those insights in real time to make the right decisions. Build a central nervous system that connects data insights to organizational (or individual) response.

☐ Read More

New levels of business insight and consumer demand are driving a new innovation agenda. As barriers to entry fall and new competitors emerge, increased responsiveness and automation are today's keys to gaining market advantage and creating competitive differentiation. Embrace this momentum and expand your vision, moving quickly but thoughtfully with partners and proven technologies you can trust.

☐ Read More

Explore real world dispatches from a Smarter Planet and see how the Internet of Things can change your world.

Reliability made with Synchrony Systems

Development of a mobile maintenance application was cut from six-months to 15 days

☐ Read the case study

☐ Watch the video (00:02:07)

Insurance made with Daimler FleetBoard

New pay-as-you-drive insurance for commercial fleets

☐ Read the case study

Machine learning made with Hilderbrand

Harnessing data captured from the Internet of Things to deliver revolutionary new services

☐ Read the case study

IBM Internet of Things Blog

You'll enjoy this official IBM blog about the Internet of Things if you're interested in how to capture real-time big data from networks of connected sensors and create insights to improve the way businesses works.

M2M Journal

ibm.biz

Great Interview with Michael Curry, IBM's Vice President for WebSphere Foundation Portfolio on The Role of Big Data and Data Security with M2M.

#IBM IoT smartthings connected WebSphere technology internetofthings

1 note

At IBM, we're enabling the Internet of Things by applying industry leading analytics to big data in the cloud.

#IBM #iot #internetofthings #automotive #travel #tansport #mobile #social #cloud #analytics #bigdata

1 note

Florence Hudson, IBM's Director of Corporate Strategy, talks about what IBM and Intel are doing together in the Internet of Things market and what value this partnership will bring to end-users.

#IBM   #Intel   #IoT   #internet of things   #connected car   #impact

1 note

At IBM IMPACT 2014, ARM and IBM teamed up to create an IoT technology demonstration of ARM Sensinode and MQTT enabled smart street lights that are controlled through the IBM Intelligent Operations Center (IOC). The demo illustrates viability in expanding IBM IOC connectivity through ARM's Sensinode technology as well as through MQTT integration. IBM Informix database technology was utilized to help provide the connectivity "glue" to the IBM IOC.

#IBM   #arm   #iot   #internetofthings   #mqtt   #technology   #sensor   #smartcities   #city #sensinode

4 notes

Check out Michael Curry's Internet of Things Demo from Impact 2014.

Michael is IBM's VP for WebSphere Foundation Portfolio, you can follow Michael on Twitter: @MikeCurr55

#IBM   #Impact   #iot   #internetofthings   #nodered   #mqtt   #cloud   #technology   #bigdata #mobile

2 notes

Wearables Technology Meetup Summary

Last week I attended a Meetup for people who are enthusiastic about wearable technology in London! I have to say first off, that the event was awesome! This meet was well organised and had a great range of speakers who were all involved with exciting and innovative tech projects. The Meetup consisted of 5 talks about their experiences and projects with wearable technology.

The first talk was delivered by a business student called Max who took an interest in wearable technology having networked with some computer science students. Max decided to co-host a wearables hackathon that eventually gained a large volume of sponsors including the likes of Microsoft. Max showed us videos of the cool presentations that the hackathon participants gave. Some of his most noteworthy hackathon competition entries included developing an Google glass app that used image recognition to view a runic cube then use a simulator video to tell the user the next move - TRUELY AWESOME! Other innovative hack included a Google glass app that help people with dyslexia by using voice recognition to detect when they struggled with certain words as they read them out and then whispered the word into the user's ear to help them.

The second talk was presented by a lady who was part of a team at the hackathon mentioned above. Her team designed an app for Google glass that allowed a user to find items in a shop with turn by turn directions. Seen as that was as far as that app went It wasn't a product that solves a problem, more a latent need. Most people are familiar with their grocery shops… That said this app was only V1, by the time they get to V3 I hope they might use Google glass' image recognition / bar codes to look up product reviews to help purchasers make better informed decisions about buying products.

The third talk was by a group who developed a google glass app that could provide subtitles for audio the google glass' picked up. This was very useful say if you were watching a movie with your friends who may have different native languages. The app would display the subtitles on the google glass as you watch the film (in real-time of course!).

The forth talk was from a company called HeadsUp Ventures. These guys have designed a really clever app that allows a user to control the Google glass' UI from a mobile device, the demo showed off the apps easy to understand UI. To be honest, this product has a long way to go really provide value to Google glass users.

The fifth and final speaker was an aerospace engineer student that has developed his own wearable watch. His design was made from very low cost materials and had a very stylish UI. This watch was extremely light and had a battery life of 4 weeks due to its built in solar panels.

Overall the event was a fun and insightful experience. The buzz around wearable technology is awesome and seeing such innovative google glass hacks was inspiring. Whilst there are many challenges facing wearable technology products such as battery life for small but powerful products like Google Glass, wearable technology is only going to become more popular and I can't wait to see what problems developers will solve with this new breed of technology.

Thanks for reading!

Blog post written by Nick Downs, Social Strategist for IBM Internet of Things Product Management. Twitter: @btwNick

#ibm   #wearable   #technology   #googleglass   #meetup

Forrester Analysts on the Internet of Things

Forrester analysts say that CIOs have four priorities when it comes to the Internet of Things:

- Identifying business outcomes.
- Partnering with business leaders to ensure that organizational and skill sets are aligned.
- Addressing security issues and data privacy concerns.
- Evaluating and expand staffs' software skills.

#IoT   #Internet of Things   #technology   #business   #cio   #forrester   #analysis

2 notes

In the next five years, buying local will beat online. Merging the tactility and immediacy of physical retail with the richness and personalization of online, local shops will make online-only stores seem downright quaint.

Every year IBM makes predictions about 5 technology innovations that stand to change the way we live within the next 5 years. This set of predictions, narrated by Mo Rocca, is all about personalization. See the other predictions at http://www.ibm.com/smarterplanet/us/e…

#IBM   #retail   #future   #technology

IBM Internet of Things and Retail

It's no hidden secret that brick-and-mortar retail stores are facing increasing competition from online retailers, infact the online retail channel saw its share nearly double to 27 percent of shoppers versus 14 percent last year. But brick-and-mortar retailers need not fear, IBM is here to help.

Before we dive into some new solutions IBM is offering retailers, let's have a look at some facts and trends that are effecting the retail industry. We surveyed 30,554 consumers in 16 countries to discover their attitudes about shopping, particularly as it pertains to adopting omnichannel capabilities.

- Mobile traffic and sales **grew 40%** in the last quarter.
- Retailers face growing expectations from **consumers that want to use technology in all aspects of their shopping experience** - from online to mobile to in-store
- Shoppers place the highest value on receiving **consistent prices**, **product availabilit**y and **shipping options** regardless of which channel they use to buy.

It is becoming all the more critical for retailers to connect with consumers one-on-one. IBM investigated three contact methods: Social handle, Location and Mobile number (SoLoMo) and found that shoppers' SoLoMo adoption levels ultimately revealed four distinct consumer groups:

- **Traditional** *(19 percent of study population)* - Uses least amount of technology while shopping.
- **Transitioning** *(40 percent)* - Uses technology mostly to gather research and other information.
- **Tech-intrigued** *(29 percent)* - Uses SoLoMo from browsing to buying.
- **Trailblazers** *(12 percent)* - Uses SoLoMo extensively, including as a retailer evaluation tool.

Leading grocers like **Wakefern Food Corp**. - one of the largest U.S. retail cooperatives and operator of more than 300 stores are leveraging IBM's cloud analytics to build sophisticated, real-time analytics to help its store owners make better business decisions on a regional basis.

Wakefern has adopted IBM DemandTec, which delivers as a cloud-based service, to deliver **dynamic promotions** to their customers. The new solution allows Wakefern to **respond to changes in real-time demand** by using **predictive analytics** to build and execute promotions, while maintaining the proper product mix in stores.

Client Quote

"In a highly competitive market, we need to quickly respond to changing consumer demand and preferences, be it promoting the latest new product or a trending flavor profile," said Joseph Colalillo, Chairman and CEO, Wakefern Food Corp. "IBM gives us the power,

speed and flexibility to be in touch with our customer's needs and provide the exceptional brand experience that they expect from us every day."

Summary

If you want your retail business to meet the demands of today's and the future's tech savvy consumers, then have a look at IBM's Commerce on Cloud that delivers an extended e-commerce platform on the cloud to help your business quickly establish and enhance its online presence.

Thank you for reading!

#IBM   #retail   #iot   #cloud   #social   #mobile   #online   #shopping   #solution   #technology #websphere   #commerce   #ecommerce

The Internet of Things and IBM MessageSight for developers

If you're a developer looking to get involved with the Internet of Things and Machine-to-Machine technology then we have the perfect *FREE* offering for you!

IBM MessageSight for Developers is a virtual messaging appliance designed to process large volumes of events in near real time and to handle a large number of concurrently connected devices (sensors or mobile devices).

The benefit of this developer-focused virtual appliance is that it enables developers to get started quickly in coding and testing applications to work with IBM MessageSight. It's a virtual appliance which is suitable for deploying in VMWare and VirtualBox environments, and so enables rapid application development.

Here's the download page: https://ibm.biz/BdR25q

When IBM MessageSight for Developers is used with our Mobile Messaging and M2M Client Pack and the IBM MessageSight JMS Client Pack, it provides developers with a comprehensive toolbox to create and test M2M and mobile

messaging applications quickly and easily.

Thanks for reading and please share with us what you make with this developer software!

#ibm   #iot   #internetofthings   #internet   #things   #m2m   #developer   #free   #messagesight
#data   #develop   #download   #vmware   #messaging   #mobile   #cloud   #bigdata   #tech
#technology

1 note

5 awesome IoT devices & solutions you need to know about.

1. Dacor Discovery iQ - A cooker that you can control from your smartphone, very tasty.

http://www.dacor.com/Discovery-IQ.aspx

2. Blacksumac Piper - This hub has a built in camera for a live video of your home. It also boasts temperature and humidity sensors and a very loud alarm, ideal for getting kids to stop playing video games.

http://blacksumac.com/

3. Kolibree electric toothbrush - Yes the internet of things has come to our mouths. Sensors in this clever toothbrush send data to your smartphone so analyse how well you've scrubbed your teeth. Handy for parents checking if their kids have brushed their teeth well enough…or at all.

http://www.kolibree.com/shop/kolibree-gentle-and-smart-toothbrush/

4. WattVision - This is a cool solution that gives homeowners a smart meter without having to install a smart meter. It measures real time usage of power and transmits it to a slick mobile and web application. This can save you money on your bills.

http://www.wattvision.com/
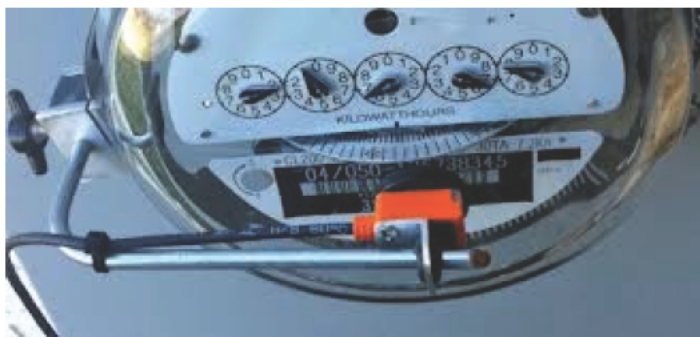
5. Wifi Bathroom Scales - These scales record your weight and send the data to an app in your smartphone. An easy way to stay on top of your 2014 weight loss progress.

http://www.wifiscales.co.uk/

Hope you've enjoyed reading!

#ibm   #internet   #things   #iot   #m2m   #devices   #technology   #ces

3 notes

Check out this video to see what IBM is doing with analytics technology in the cloud to enhance people's security.

In five years, a digital guardian will protect you online. Security is evolving from being based on rules, like passwords, to being automatic and made stronger through us just being us.

Every year IBM makes predictions about 5 technology innovations that stand to change the way we live within the next 5 years. This set of predictions, narrated by Mo Rocca, is all about personalization. See the other predictions at http://www.ibm.com/smarterplanet/us/e…

#ibm   #cloud   #analytics   #technology   #security   #digital   #online

Never miss a post! ✖

Check out IBM is doing wit[_____]er.

In five years, the city will he[IBM] **ibminternetofthings** [+ Follow] ecision-making
[IBM Internet of Things] IBM Internet of Things Blog
process, and your city will become a direct reflection of everyone who lives there.

Every year IBM makes predictions about 5 technology innovations that stand to change the

way we live within the next 5 years. This set of predictions, narrated by Mo Rocca, is all about personalization. See the other predictions at http://www.ibm.com/smarterplanet/us/e…

#IBM   #Cloud   #internet of things   #smartercities   #technology   #city   #smarter   #planet
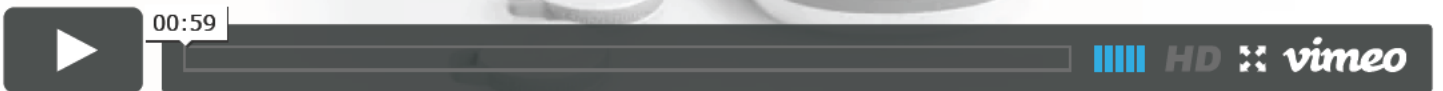
Keep a look out for this start up in 2014, SmartThings is an awesome Internet of Things business enabling people to make their homes smart with connected devices, just the kind of stuff we love here at IBM!

Check out their website for more info: http://www.smartthings.com/

#IBM   #IoT   #m2m   #smartthings   #business   #home   #smart   #connected   #smarthome

1 note

Node.js at PayPal | PayPal Engineering Blog

paypal-engineering.com

Check out this awesome blog about how PayPal have implemented Node.js over Java to make their applications more responsive and quicker to build.

#ibm   #paypal   #node.js   #node   #java   #application   #app   #blog   #develop   #developer

Jon McNamara talks to another ThingMonk hacker about his demo including Arduino, Node.js and JavaScript!

#ibm   #thingmonk   #arduino   #Node-RED   #node.js   #javascript   #hacker   #developer

1 note

Jon McNamara talks to Crispin, a hacker at ThingMonk, about his demo to use Node-Red and MQTT for an application in the energy industry.

#ibm   #thingmonk   #demo   #nodered   #mqtt   #energy

1 note

Check out this awesome video of Ben Mann flying a quadcopter using JavaScript and Node.js!!

#ibm   #internet of things   #quadcopter   #javascript   #node.js

2 notes

ThingMonk Video Playlist!!
youtube.com

Click on the link above to check out this playlist for Interviews with hackers at ThingMonk.

To find more IBM Internet of Things Videos, click here!

#IBM   #technology   #internet of things   #IoT   #m2m   #hackers   #hackfest   #thingmonk

3 notes

IBM Documentation for ThingMonk

* Building your IoT defenses *

Full Downloadable Document: http://ibm.co/1c6cxs3

To develop and showcase your IoT defenses against the Robopocalypse, we'll start you off with a few tools:

1) **Helpful Feeds** to locate and track the robots
2) An **MQTT API** to deploy your IoT defenses and fight the robots on the battlefield
3) An HTML5 **Battlefield UI** to monitor your IoT units and the enemy robots

Helpful Feeds

(NOTE: multiple demo "sandboxes" are available, each with a different **topicRoot**. For these examples a topicRoot of **hack1** is assumed)

(NOTE: sample MQTT messages in this document will be displayed as: **[topic] payload**)

A) Robot locations. The location of every robot is tracked by IBM's IoT cloud, and published once per second on a unique topic per robot. With an MQTT client, subscribe to **hack1/things/+/location**. Location updates will be published with a payload of:
  longitude,latitude

(NOTE: Robots will have a numeric ID between 1…N, so in your subscription callback only process messages with a topic of **hack1/things/1…N/location**)

Example: (robot **7** moves to longitude -0.1978417, latitude 51.4922170)

    [hack1/things/7/location] -0.1978417,51.4922170

B) Proximity alerts. To help guide your units, the IBM IoT cloud performs real-time distance calculations between each unit and the robots, and publishes proximity warnings for various distances: 500 meters, 250m, 100m, 25m. For each unit (with ID **<unit_ID>**), subscribe to **hack1/alerts/proximity/<unit_ID>/#** to receive all alerts, or
  …../<unit_ID>/250m/+for only alerts of a certain distance.

Example: (unit **K3B5** is 97 meters from robot **7**)

    [hack1/alerts/proximity/K3B5/100m/7] 97

A sample Node.js application, **Colorer**, uses the proximity alerts to change the color and status of robots as your units move close by. You can see this sample in action by configuring the map and test client to use **topicRoot=test**

http://m2m.demos.ibm.com/hack/index.html?topicRoot=test
http://m2m.demos.ibm.com/hack/test.html?topicRoot=test

To see the subscriptions and logic used in this application, check out the Node.js source here:
http://m2m.demos.ibm.com/hack/colorer.js

MQTT API

Control over the IoT battlefield is accomplished through a MQTT messaging "API":

A) Configuration topics. Each robot and IoT unit you deploy is defined by a set of MQTT **retained messages.** As such, it is possible to alter the properties of any object in the demo just by publishing a new retained message onto a **configuration topic**… every participant in the Hackfest is an admin in their own sandbox. However, you must use the honor system… before you publish a message that will "disable" a robot, please fire a (simulated) ray gun and confirm that the robot is disabled!

Topics (with sample value):

    [hack1/things/1/type] robot
    [hack1/things/1/description] Robot #1. I'm programmed to destroy all humans.
    [hack1/things/1/name] Robot 1
    [hack1/things/1/location] -0.1951095,51.5031417
    [hack1/things/1/color] blue
    [hack1/things/1/state] 1

To change the configuration, just publish a retained message onto a property topic with a valid payload. Here is a list of accepted values for each parameters:

type   default types: **circle**, **square**, **triangle**, **diamond**, **robot**   (you can also add your own type, pointing to a hosted image)
description   any string
name   any string
location   longitude,latitude
color   any HTML color (e.g. **green**, **#00FF00**, **#0F0**)
**state**   any number >= 1

To use your own image for a robot, first publish the URI as a retained message to an image config topic, then set the type of the robot as the last part of the image config path.

Example: (create image reference **dalek** and set Robot 1's type)

 [hack1/config/image/dalek] http://www.veryicon.com/icon/png/Movie%20%26%20TV/Doctor%20Who/Dalek.png

   [hack1/things/1/type] dalek
   [hack1/things/1/description] EX-TER-MIN-ATE!
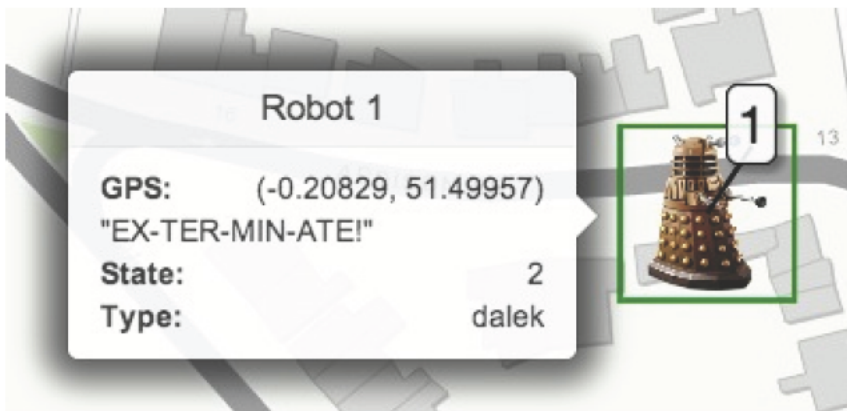
B) **Deploying your units.** Just like the robots, your IoT units are defined by a set of configuration topics. To add a new unit, publish a JSON payload with data for each configuration topic:

Example: (creating unit P4W2)

   [hack1/things/P4W2]
{"location":"-0.21078,51.49613","name":"P4W2","description":"Reporting for duty!","type":"circle","state":1,"color":"red"}

(NOTE: your IoT units must have an ID of at least 4 characters)

Once your unit is created, update the configuration by publishing a retained message on the configuration topics listed in the section above.

A sample "unit creator" is provided. You can use the javascript source (embeded in the HTML file) as an example for creating your own units.
http://m2m.demos.ibm.com/hack/test.html?topicRoot=hack1
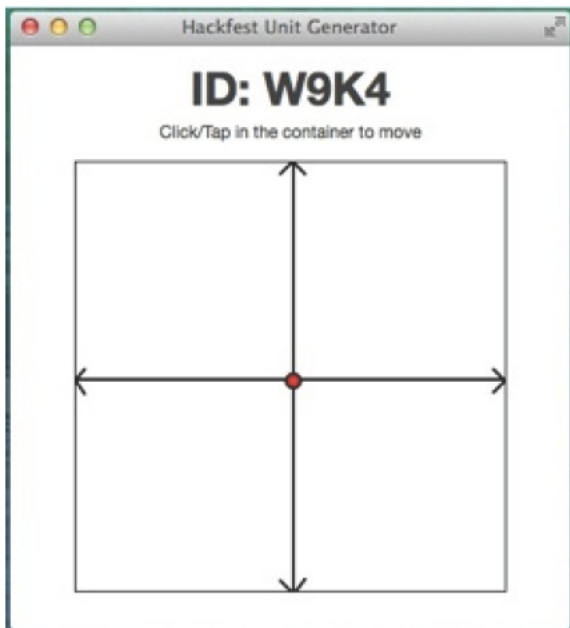
Battlefield UI

We provide a HTML5 map application to monitor the battle. The application subscribes to the robot/unit configuration feeds and draws each object on a pan/zoom map.

Each robot or unit will be drawn according to the type/color configuration topics, with the other properties accessible by clicking/tapping on the map object.
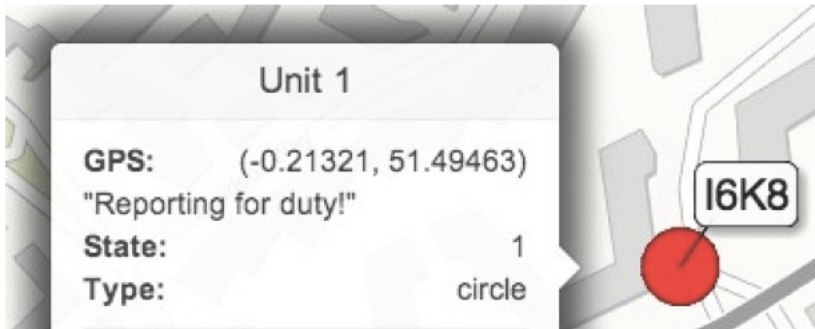

Additionally, timed overlay messages can be pushed onto the map by publishing an MQTT message:

Example: (publish the message "Orange!" with orange background and white foreground over robot **12**, and have the overlay disappear after 3 seconds)

    [hack1/things/12/addOverlay] Orange!|3000|orange|white

The last two fields (background and foreground color) are not required, and will default to black-on-white if only the first two fields (text and duration) are specified.
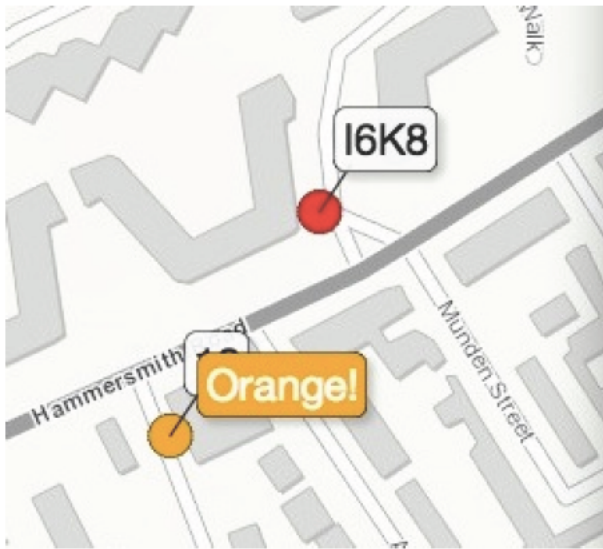
MQTT Client

An HTML5 Websocket MQTT client is available to help you develop and test your solution

http://m2m.demos.ibm.com/mqttclient/index.html?ip=5.153.17.246&autoConnect=true

Prizes:

We're giving out a Sphero 2.0 as a prize for the best hack, and we'll hand out an IBM IoT T-Shirt to any participants.

HAVE FUN!!