MoMo #32 – How IoT will improve your quality of life and reduce global energy consumption

Fribourg, Monday 24th September: Eric Gagnaux (CEO MNG Europe) welcomed almost 50 MobileMonday enthusiasts to debate the current and future state of the IOT (Internet of Things). We were privileged to have a truly international line up of speakers with Marco Brini (Lugano) Dominique Guinard (in between London and Zurich), Alicia Asin Perez (Zaragoza, Spain), Laurent Moesle (Toulouse), Ralf Rimet (Valais) presenting their specific viewpoint and contribution to the IOT.

Intro from SOFTCOM – (evening sponsor)
Beat Rohrbach (Managing Director Softcom Bern) introduced his company, which specialises in „ultra-local" focus on software development for clients with complex needs. Softcom sees a demand for "the opposite to offshoring" -helping companies developing software locally with local people on-site.

SECU4 – "Startup, grow & innovate in the appcessories market. Story of SECU4"
Ralf Rimet (CEO) explained the beginnings of SECU4, with the launch of the Bluewatchdog security product already sold in thousands via Ingram Micro, Virgin France, Manor, and in 15 countries. SECU4 learned a lot from the Bluewatchdog product (which allows people to secure laptops, backs, suitcases against theft via a mobile-app and sensor on the protected item). They have now developed a broader product-line under one clear brand SECU4. This new product-line will extend the concepts used in Bluewatchdog to many other fields/areas (eg SECU4-Pet, SECU4-Kid, etc. etc.) Ralf explained a key element of SECU4's strategy is to develop mobile-applications on handsets that interact with physical accessories – he calls this convergence "the APPCESSORIES market".

EnvEve – "IoT: from translating the forest stress to change the way we interact with our Things, personal objects and the surrounding environment."
Marco Brini (CEO) has been active in IOT since 2005. IOT is an often used term but what are its practical uses right now. Marco explained TREES and forests as being a really important application for IOT today, and he has customers in Southern Europe (Greece, Italy) that he works with. Forest-fires are a serious and increasing problem for the world. EnvEve have developed mobile-network sensors (effectively mini-phones) that can be attached to trees. These specialized sensors can transmit any data captured from a tree's location (sound, temperature, gas, light, poison). EnvEve have also developed an efficient IOT backbone (cloud) that manages the collection, storage and analysis of the data. EnvEve stated that with the above approach, EnvEve are not only able to alert and warn people of fires that have started, but they are also able to predict forest at higher-fire risk (300% more accurately than traditional methods).
Marco explained how with transducers, sensors can be cheaply developed that measure almost anything, with limitless commercial uses. He believes IOT needs to become an ecosystem where developers can easily build sensing-devices and connect them up, giving *Thing* Apps… i.e. TaPPs – and hence having a TaPP store..

Evrythng: "Building a Web of Things: Making Objects, Smart, Simple and Socially-Connected!"

Dominique Guinard (CTO) after reconfirming the spelling of his company's name, described how more and more objects would become connected in the future and adopt an online identity. Whilst today's tagging technologies (eg RFID) already exist and are used by companies to improve their logistics/supply-chains, Dominique said that these objects typically don't have individual identities, but are limited to a single product-identifier (eg "I am a box of soap powder called Ariel"). He sees that objects will need to have individual, personalized identities so that they are truly unique and can be used to drive many different personally-specific use-cases. For example your Nikon D90 camera might, with your permission, suggest times and place to get the best photos: "19th November looks like a clear night with a full moon– go to the foot of Tate Britain at 7.15 for the perfect night shot of St. Paul's Cathedral." Dominique summarized Evrythng's market-position as being "the Facebook for Things".

Libelium: "50 applications the internet of things will revolutionize"
Alicia Asin Perez (CEO) introduced Libelium who have been active in IOT since 2006. Whilst the adoption of IOT may be slower than expected, she quoted some market-predictions for 2015 ($10Bn), and 2020 ($100Bn) that show this market is likely to takeoff soon especially due to increasing global demands on limited resources like energy and water. Also EU mandates state that 100% of households must have smart metering by 2022. Alicia firmly responded to the question/criticism of IOT "Yes, that sounds great, but what can it really do…" by presenting no less than 50 precise and instantly recognizable use-cases for IOT. These included use-cases from e-Health to home-automation, to smart-agriculture, to in-car telematics, to restocking supermarket shelves. Libelium have developed a fully open platform that enables IOT use-cases to be implemented in a plug and play manor. They have developed designs and hardware technology for the implementation of wireless sensor networks so that system integrators, engineering and consultancy companies can implement reliable Smart Cities solutions as rapidly as possible.

SIGFOX: SIGFOX is the first cellular network operator dedicated to M2M communications and Internet of Things
Laurent Moesle (Business Development Manager) explained SIGFOX's impressive ambition, to develop a new dedicated network for IOT and M2M applications. He described how in fact with IOT many scenarios require very small transfers of data (perhaps only a few bytes to be sent once an hour or once a day), so his company has decided to go the opposite direction to mobile-network operators rolling out increasingly fast 4G networks.. Sigfox have developed a technology based on the beginnings of radio over 100 years ago, called Ultra-narrrow-band (UNB), and is funded by Intel's VC fund. Sigfox's current network in France has already demonstrated impressive results (upto 40km range in the open, down to 4-5km in urban areas, and most amazing of all, 1-2km for sensors embedded within buildings/construction. Sigfox's antennas are able to relay with upto 1,000,000 objects per antenna, and upto 100bit/s, and -143dB sensitivity. The cost of sensors today are $9, down to $1 in high-volumes. Sigfox plans to rollout in UK, DE in 2013 and the rest-of-the-world by 2015. They see considerable potential in the utilities sector (water, gas, electricity metering)

Q&A
Question: "IOT, will this really happen. Will it improve our lives?
Answers from speakers:
- Yes, its already here!

- In fields of digital-marketing, IOT is already happening
- E-health, quality of life definitely real and possible – concept of PAN (personal area network) will become reality
- Energy and metering is definitely coming with smart-grids, and will be needed to reduce energy consumption automatically using smart-objects
- Yes, and our governments will need to become more transparent because IOT will help people sense and show the real truth of what's happening (eg radiation levels in Japan, post Fukushima)
- Consider how Napster completely shook up and changed the music industry.. IOT will also have the potential to shake up, change and improve our world too..
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Question: "how can we accelerate its adoption?"
Answers from speakers:
- Use of low-energy networks (eg Sigfox) will help
- Interoperability and standards important, eg. like the router/bridge helped the internet go truly global
- Need to make the jump from pilot to commercial implementation… too often things stay at pilot stage only..
- Need to have the innovation in business-models to enable scale-economies and arrive at app-stores that drive adoption – e.g. appstore for a (smart) city..
- A lot of IOT already in place today (eg fire and burglar alarm systems), but we don't necessarily recognize that.

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