

Internet of Things; navigating through uncharted territory

On 25 February a breakfast debate on the Internet of Things (IoT) organised by the European Internet Forum (EIF) in cooperation with IEEE took place in the European Parliament. It was a well-attended, well balanced event with more than 50 participants from different professional backgrounds including the European Commission, the European Parliament, IEEE Standards Association (SA) Samsung Electronics Europe, EU FIWARE Future Internet PPP, BMW, and civil society.

Lambert van Nisterlrooij, Dutch MEP from the European People's Party (EPP) and Member of the EIF, opened the debate highlighting the importance of IoT in people's lives. According to van Nisterlrooij, Internet of Things with its pervasive and expansive reach be seen and grasped in various sectors ranging from the entertainment sector to the automotive one; Therefore the EU should take advantage of the presented opportunity, move forward and become a revolutionary player.

Amongst the participants, there was a broad consensus that Internet of Things can have a great impact on people's lives. *Mario Campolargo* Director, *Net Futures*, European Commission DG Connect, during his intervention argued that Internet of Things is a technology that by nature can boost innovation while improve the lives of millions. In addition, IoT is a cross cutting technology that is in position to alter the current business model. "Ordinary" people, the girl or the guy next door for instance will be empowered to build up their own mobile applications making use of big data. However, for Campolargo, the core value of IoT lies on the following:

- The relation of Big Data and Internet of Things is a complementary one.
- IoT is essential element of the industry digitalization process.
- The need to follow a horizontal approach as well as recognise the cross-sectorial nature of Big data (transfer data from one sector to the other) it is equally important.
- The security aspect should not be overlooked. Issues such as data protection, privacy and secure are of paramount important for the EU citizens and the European Commission should not lose track of this.

The floor was later on given to *Chuck Adams*, Past President of the IEEE SA who claimed that IoT is the inclusion of different rapidly evolving elements such as data analytics, clouds services, etc. Therefore the real challenge is how to bring together heterogeneous stakeholders and convince them about the need to work together as to build up a common governing structure. In that respect, he made reference to the IEEE IoT Initiative, the so called *2013 Project* that aims exactly at promoting a holistic approach with reference to the IoT. Before closing, he stressed once again the importance of having the standards communities working together given the fact that in an ever changing environment no one can stand alone.

Ilkka Lakaniemi, took the floor next and argued that IoT has had a cross societal effect, altering the lives of all people not only of the "elite". He argued that IoT has had also a great impact on the business and services model. For Lakaniemi, businesses should be engaged in finding new ways of modus operandi, penetrate new markets, optimise their services and become more efficient.

Although he expressed some radical views, for instance he made reference to the jobs losses that IoT has led to (many professions have disappeared over the years), he quickly

fell back arguing that IoT has also led to the transformation of the economies, thus creating new professions that did not even exist few years ago.

Andrew Fielding, Vice President, Samsung Electronics Europe, wanted to focus on three main points:

- Connectivity: Spectrum efficiency is continuously being increased (normally every two years) therefore spectrum should be the core of IoT.
- Standards cannot be isolated. By 2020 all Samsung devices will be able to communicate to each other and this is a new reality that the world needs to embrace.
- Net Neutrality requires legal certainty as well as data protection. Without a clear framework no further advancement can take place.

Frank Strebe, representative from the automotive sector, *BMW*, argued that IoT has also influenced people's mobility behaviour. Applications that have led to the time optimisation of the public transportation as well as the tendency of the new generation to not buy cars but resort to other solutions such as the car sharing have pushed the automotive industry to its limits. The challenge therefore is how to keep people interested in cars? In Strebe's view, the connected car is the ultimate IoT technology as well as the key to unlock the box. The shift from better cars, to better services should be the objective of every automotive industry that wants to succeed.

On the other side, the attendees of the event wanted to learn more about the relation between IoT and jobs growth. In that respect, speakers argued that it is a matter of perspective. It is true that many professions will be outdated in the future but it is also true that new fields of expertise will be created. For instance, in Finland, a report has been released stating that in the years to come 1/3 of the current jobs will be lost. How media deal with this information plays a crucial role, on people's perspective. Unfortunately most of the times, media decide to emphasize only on the negative side of the story (jobs loss) thus accrediting only a negative connotation; what is often omitted is that new profession opportunities will rise in various sectors such as the Gaming industry.

With reference to the Data Protection questions, speakers were bold. They admitted that people's data worth a fortune and companies will always try to get the best out of it, while they seemed to acknowledge the bitter truth that data will continue to be collected and stored forever. However, in their view the most important question is how anyone balances people's right of privacy and community benefits; and here there is no easy answer.

What was also interesting, was that the attendees wanted to know whether the Commission is envisaging updating the Civil Law given the fact that in few years the smart devices will choose for us. The Commission replied that the data have moral and economic value and in that respect close cooperation with the Directorate General for Justice is needed. It seemed to recognise the importance of extending the legal framework beyond the current areas but right now nothing concrete is at the table.