

## **ABSTRACT LIEGE ICT DAY**

In our hyper-connected society, citizens, business and the public sector are faced with constantly enhanced technologies brought to rapidly expand, evolve, become more complex and diversified. The Information and Communication Technologies (ICT) have an impact on our daily lives and ask fundamental questions to the economic world, the world of education and the management of the City. Will we live in a city where everything is clickable? How many billions of smart objects will communicate together to facilitate our daily lives? How will we think in a world where all data and knowledge come to us before we even ask for it? As part of the dynamics of Liège together, Liège ICT Day forum aims to clarify these challenges, to cross these different worlds and provide answers that will enable each of us to appropriate these technologies and not to undergo them.

### **ROUNDTABLE II – 50 billion connected devices in 5 years: the challenge ahead**

Set-up:

- Stage with chairs for the panel and two large screens at the back with slides on one side and video streaming + moderated tweets on the other side
- Session Moderator: Stephan Pire (references on the last page)
- The 5 speakers follow each other in the order listed below and each one has got 5'-7 'to present, describe their organization, explain their activity related to the theme, and position themselves in relation to this topic.
- The moderator will then lead the debate on the topic (15 ') by asking questions, either via the Twitter feed, or will address the questions received in advance from the speakers

Thread:

1. Rob van Kranenburg – The Internet of Things, importance, future trends and challenges of IoT
1. Ingrid Moerman – UGent/iMinds, mobile and wireless networking; challenges on networking aspects
2. Marc Godon – Bell Labs Alcatel-Lucent, societal impact of IoT
3. Loïc Bar – The Smart Company, success story and IoT trends in Wallonia
4. Frédéric Feytons – Tapptic, success story and IoT to facilitate our daily lives

Abstract IoT:

The Internet of Things (IoT) refers to an intelligent association of uniquely identified objects that are transparently accessible on the Internet. The underlying Information and Communication Technologies (ICT) will enable these systems to seamlessly collaborate over the Internet, making overall internet services much more dynamic, scalable and powerful.

Embedded intelligent systems are gradually becoming common in our everyday lives by offering means to measure and control our surrounding environment. This expansion is coupled with an increasing diversity in electronic systems in terms of communication protocols (Wi-Fi, Bluetooth,...), size, user interface, processing power, memory, energy source and sensing/actuating capabilities. Interconnecting such heterogeneous devices is a real challenge.

We now stand before the digital revolution of the 21st century (50 billion connected devices by 2020), the Internet of Things that will connect the digital world to the

physical world. In this vision, embedded devices, also called smart objects, will be connected using the Internet Protocol (IP) and then be an integral part of the Internet. A smart object can be any item equipped with a form of sensor or actuator, a tiny microprocessor, a communication device and a power source. Such a smart object can communicate its sensor readings to the outside world and receive input from other smart objects. Actually, all objects surrounding human beings may potentially be part of the IoT.

The impact of the Internet of Things will be significant, with the promise of better environmental monitoring, energy savings, smart grids, smart cities, more efficient factories and better logistics, better healthcare and smart homes.

To enable this new kind of Internet applications, many challenges are still to be addressed in terms of security, data control and sharing, standards, infrastructure, etc.

## **SPEAKERS**



**Rob VAN KRANENBURG** – Advisor, The Internet of Things

Rob van Kranenburg wrote *The Internet of Things*. A critique of ambient technology and the all-seeing network of RFID, *Network Notebooks 02*, *Institute of Network Cultures*. He is co-founder of *bricolabs* and the founder of *Council*. Together with Christian Nold he published *Situated Technologies Pamphlets 8: The Internet of People for a Post-Oil World*. He currently works as Community Manager at the EU Project *Sociotal*. He is consultant to *IoT China, Shanghai 2014*.

Rob van Kranenburg has been teaching at various schools in the Netherlands (UvA, EMMA Interaction Design, Industrial Design) and has worked at several Dutch cultural institutions; *de Balie*, *Doors of Perception* and *Virtual Platform*. Currently he works as the Head of the Public Domain Program at *Waag Society*. He lives in Ghent, Belgium.

**LIEN INFOS EN LIGNE:** <http://www.theinternetofthings.eu/content/rob-van-kranenburg>



**Prof. Ingrid Moerman** - Mobile & Wireless Communication Networks, IBBT - Universiteit Gent - IBCN

Ingrid Moerman received her degree in Electrical Engineering (1987) and the Ph.D degree (1992) from the Ghent University, where she became a part-time professor in 2000. She is a staff member of the research group on Internet-Based Communication Networks and Services, IBCN ([www.ibcn.intec.ugent.be](http://www.ibcn.intec.ugent.be)), where she is leading the research on mobile and wireless communication networks. Since 2006 she joined iMinds, where she is coordinating several interdisciplinary research projects. Her main research interests include: Sensor Networks, Cooperative and Cognitive Networks, Wireless Access, Self-Organizing Distributed Networks (Internet of Things) and Experimentally-supported research. Ingrid Moerman has a longstanding experience in running national and EU research funded projects. At the European level, Ingrid Moerman is in particular very active in the FP7 FIRE (Future Internet Research and Experimentation) research area, where she is coordinating the CREW project and further participating in IP OpenLab, IP Fed4FIRE, STREP SPITFIRE, STREP EVARILOS, STREP FORGE and IP FLEX. In the FP7 research area on Future Networks, she is involved in IP LEXNET and STREP SEMAFOUR.

Ingrid Moerman is author or co-author of more than 500 publications in international journals or conference proceedings. She is associate editor of the EURASIP Journal on Wireless Communications and Networking and vice-president of the expert panel on Informatics and Knowledge Technology of the Research Foundation Flanders (FWO).

**LIENS INFOS EN LIGNE:** <http://www.ibcn.intec.ugent.be/content/prof-ingrid-moerman>

**QUESTIONS:**

1. How well is the concept of IoT understood? Is there widespread agreement on what is meant by the Internet of Things?
  2. In terms of real-world activity today, is the Internet of Things still mostly conceptual or is it more advanced than people realize?
  3. How 'disruptive' will the Internet of Things ultimately be? How will it change the world we live in?
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**Marc GODON** – Senior Researcher, Bell Labs Alcatel-Lucent

Marc Godon is Senior Researcher at Bell Labs Alcatel-Lucent in Antwerp Belgium. His research work is focusing on the needs for new innovative communication means and future media supporting the emerging participative, creative, and empathic networked society. He uses his multidisciplinary skills of artist, engineer, and his experiences in user research and interaction design to foster lateral thinking and use of the creative language in research for societal innovation. He is big fan of the DIY culture.

**LIEN INFOS EN LIGNE:** [be.linkedin.com/pub/marc-godon/13/763/b35](https://be.linkedin.com/pub/marc-godon/13/763/b35)

**QUESTIONS:**

1. Shouldn't we focus more on DIY in the technology adoption roadmap?
  2. How can IoT contribute to global sustainability challenges?
  3. Does IoT need new business models or new business ecosystems?
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**Loïc BAR** – Co-CEO, The Smart Company

Loïc Bar est le co-fondateur de The Smart Company, une société technologique qui conçoit des produits informatique à destination du secteur énergétique. Il a commencé sa carrière en 2008 en créant sa première société à la fin de ses études d'informatique de gestion. Très vite il à l'occasion de collaborer avec des sociétés de renom telle que McKinsey&Company, Coca-Cola, L'Oréal ou encore le groupe Schröder dans plusieurs grande ville dont New-York, Londres ou encore Katmandou. Pour l'aider dans le développement de son entreprise, il s'associe avec plusieurs personnes ce qui donnera naissance au projet The Smart Company en 2011. Conscient de la nécessité d'optimiser l'utilisation de l'énergie et voulant donner un sens sociétal à sa société, Loïc oriente ses activités vers le domaine énergétique pour tenter d'aider les particuliers et les petites entreprises à gérer leur consommation d'énergie plus intelligemment. L'entreprise connaît très rapidement ses premiers succès notamment grâce à l'utilisation de méthodes créatives et agiles.

Loïc Bar est également actif dans le milieu associatif avec The Cleanweb Initiative qui vise à promouvoir les sociétés exploitant les technologies dans le but d'améliorer la condition humaine. Il est aussi l'auteur de plusieurs ouvrages techniques vendu par la prestigieuse maison d'édition parisienne Micro Application.

**LIEN INFOS EN LIGNE:** [be.linkedin.com/in/loicbar](https://be.linkedin.com/in/loicbar)

QUESTIONS:

1. Concrètement, est-ce que c'est déjà utilisé ?
  2. Est-ce pas plutôt gadget ?
  3. Quid de la vie privée ?
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**Frédéric FEYTONS** – CTO, Tapptic

Fascinated since its childhood by the computer industry, Frédéric has always been attracted and involved in various web and mobile-related projects. As he were a student Frédéric was involved in projects such as Netvibes, which became a web success story. At the end of his studies, the switch was done to the mobile sector and he founded his first company, building apps in the pre-iPhone era. After he joined Tapptic in 2010, he was responsible for all mobile projects of M6 in France and then took the CTO seat within Tapptic. He co-founded Screenity in 2012, a company aimed at developing end-to-end SaaS mobile solutions.

His attention is now focused on IoT, which has took an important place in the R&D department of Screenity as well as in innovative projects that are being built with Tapptic.

**LIEN INFOS EN LIGNE:** [be.linkedin.com/pub/frédéric-feytons/5/b6b/720](https://be.linkedin.com/pub/frédéric-feytons/5/b6b/720)

QUESTIONS:

1. What will be the role of agencies such as Tapptic in the IoT world?
  2. IoT: another « geek » trend or real revolution?
  3. What is the main difference between the IoT concept and a bunch of other technologies that never really explode (ie. 3D tv at home, robotics, talking objects, blue ray...)
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## **MODERATOR**



**Stephan PIRE** - Ecolo eCommerce Entrepreneur, FOTO.COM

Stephan Pire is an Ecolo eCommerce Entrepreneur in Hannut/Liege(BE) Manchester NH. Printing photobooks and digital photo albums at FOTO.COM

Supply Chain & ERP specialist, specialized in eCommerce. Founded and took over Branding & eCommerce agencies.

Professional experience:

- \* eCommerce large scale projects involving exhaustive payment methods
- \* Set Up of 9 start up companies in Technology (Social Media, Publishing, and ERP) with sustainable profit
- \* Coach for starters in B2B Sales & Brand building
- \* 11 full ERP implementations: 4 as a Project/Stream Leader, 7 as a Manager
- \* BPR (Business Process Review) done in large scale Supply Chain companies
- \* Worked in USA, France, Belgium, Luxemburg, Scotland, Germany, New Zealand and Australia

## **INFO/REFERENCES ABOUT IoT**

- <http://www.theinternetofthings.eu/>
- <http://www.theinternetofthings.eu/content/rob-van-kranenburg>
- <http://robvankranenburg.wordpress.com>
- <http://www.ibcn.intec.ugent.be/content/mobile-and-wireless-networking>
- <http://www.bellabs.be/>
- <http://www.alcatel-lucent.fr/blog/corporate/2013/02/linternet-des-objets-une-revolution-naturelle>
- <http://www.thesmartcompany.com/>
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- <http://www.forbes.com/sites/rakeshsharma/2013/11/12/five-challenges-for-the-internet-of-things-ecosystem/>
- [http://www.rtf.be/info/medias/detail\\_iinternet-des-objets-le-changement-c-est-maintenant?id=8186039](http://www.rtf.be/info/medias/detail_iinternet-des-objets-le-changement-c-est-maintenant?id=8186039)