

## Invited Speakers

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**Nebulous  
Mechanisms**

**Brian David  
Johnson**

**Intel  
Corporation**

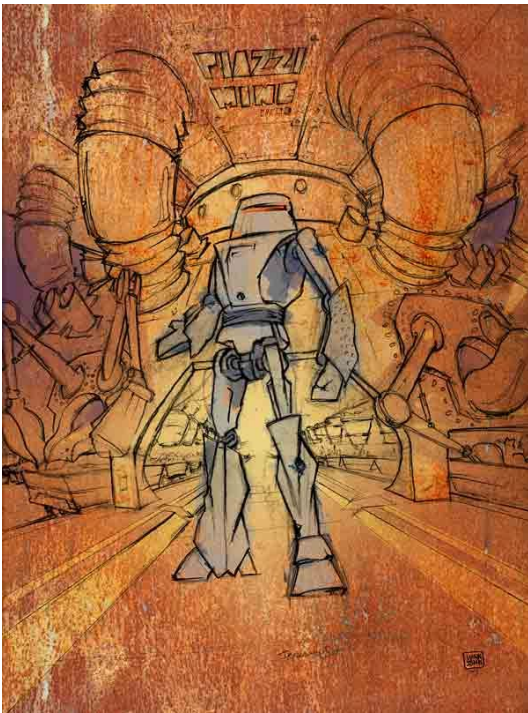
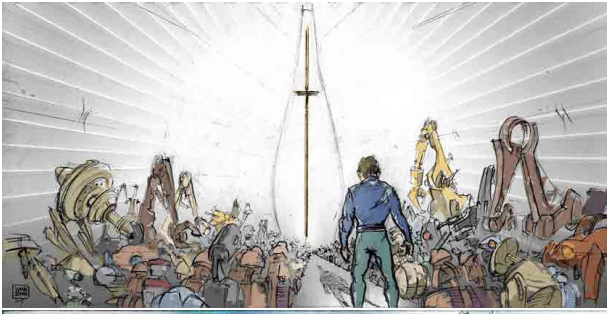
It is my contention that some of the most remarkable features of the present historical moment have their roots in a way of thinking that we have learned from science fiction (Disch, T. M. (2000). *The DREAMS OUR STUFF IS MADE OF: How Science Fiction Conquered the World*. Free Press)

What can we learn from science fiction? For hundreds of years scientists and researchers have been influenced and inspired by science fiction. Video phones imagined in fictions like *2001 A Space Odyssey* are available in nearly every laptop shipped today. What is the latest mobile phone but a realization of the *Star Trek* communicator? But can the combination of narrative and science fact be employed towards a new end? What if science fiction was the laboratory for science fact?

Brian David Johnson's *Nebulous Mechanisms* is just such an study. Founded on and inspired by the IE08 paper "Using Multiple Personas in Service Robots to Improve Exploration Strategies when Mapping new Environments" (Egerton, Callaghan, Clarke) Johnson experiments with the authors' current research taking it into a human drama and examining the implications.

At the IE09 conference dinner Johnson will introduce his conceptual approach to *Nebulous Mechanisms* and the science fiction laboratory. Immediately following a dramatized version of the story will be presented with actors and music.

The future is Brian David Johnson's business. As a Consumer Experience Architect he develops future products for the Intel Corporation, a global microprocessor manufacturer. He speaks and writes extensively about future technologies in articles and scientific papers as well as in science fiction novels (*Fake Plastic Love*, the forthcoming *This is Planet Earth*) and short stories. He has directed two feature films; one that features a girl from Mars (*POP*) and is an illustrator and commissioned painter; a recent work depicts satellites talking to each other in binary code across a gigantic spacecape.



Illustrations of Nebulous Mechanisms by Winkstink

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**The Future  
Internet in  
support of  
Intelligent  
Environments**

**Dr. Marcus  
Brunner**

**NEC Europe  
Ltd**

Currently, there is a lot of movement in the area of the Future Internet with a lot of attention on EU- and international level. Several project in that area support various degrees of real world Internet applications. This talk will introduce a set of research topics under study in some of the project, which are directly supporting Intelligent Environments. Since some of the cross-cutting topics are seldom mentioned, the talk will emphasize some of the cross-cutting challenges and use as example two areas of current interest, namely Green ICT and public displays. True Green ICT can only be achieved if we consider energy consumption holistically on the networking, application, and environment level. This also holds for public display solutions, which connect network, displays and the environments in more or less intelligent ways still trying to optimize energy consumption.

Dr. Marcus Brunner is chief researcher at the Network Laboratories of NEC Europe Ltd. in Heidelberg, Germany. He received his Ph.D. from the Swiss Federal Institute of Technology (ETH Zurich), while working in the Computer Engineering and Networks Laboratory (TIK) of the Electrical Engineering Department in 1999. He got his M.S. in Computer Science from ETH Zurich in 1994. Aside from the involvement in different national and international projects, his primary research interests include network architectures (fixed and mobile), programmability in networks, network and service management. He is a leading member of the network management research community with being in the Organization and Technical Program Committees of major network management conferences such as NOMS, IM, DSOM, IPOM, etc. E.g., he was TPC co-chair of NOMS'08. Also in the networking area he is in the Organization and Technical Program Committees of major conferences such as IEEE Globecom, IEEE ICC, etc. He is currently IEEE ICC'09 and ICC'10 symposium chair on Next Generation Networks. He is in the editorial board of the IEEE Transactions on Network and Service Management (TNSM), the Journal of Network and Systems Management (JNSM), and the Journal on Peer-to-Peer Networking and Applications. Finally, he is secretary of the IEEE Communication Society Technical Activities Council (TAC) and secretary of the IEEE ComSoc technical committee on Network Operation and Management (CNOM), and Vice-chair of the Autonomic Communication sub-TC.



**Wireless  
sensor  
networks:  
the  
ambient  
intelligence  
that will  
connect the  
next billion  
nodes to  
the Internet**

**Carles  
Gómez  
Montenegro**

**Universitat  
Politécnica  
de  
Barcelona**

Wireless sensor networks (WSNs) have gained momentum as a technology for monitoring and control applications in a plethora of scenarios. Some examples include home automation, industrial control and environmental monitoring. In fact, these networks may enable the futuristic paradigm called ambient intelligence. Despite the challenges that present these networks, a variety of solutions (many of which are proprietary) have emerged. The Internet Engineering Task Force (IETF) is devoting a lot of effort to the development of standard networking solutions for WSNs based on the Internet Protocol. This work will allow straightforward interoperability between WSNs and the Internet and will also constitute a significant step towards the 'Internet of Things'.

The speech presents the main state-of-the-art WSN protocol architectures and technologies and illustrates their application to enable intelligent environments. The speech describes also the current and future efforts within the IETF for extending the Internet for WSNs.

Carles Gómez received the M. Sc. degree and the Ph.D. degree from the Universitat Politècnica de Barcelona in 2002 and 2007, respectively. He is an Assistant Professor at the same university and a member of the Wireless Networks Group (WNG). He is an active member of the IETF and an author or co-author of more than 30 contributions to journals, conferences and books in the areas of optimization of Internet access over WWAN technologies, ad-hoc networks and sensor networks.