



Prof. Khalil Drira, University of Toulouse, France

Challenges of IOT Service Platforms

Abstract: Recent advances in information and communication technologies include virtualization both at the processing and the communication levels as well as interoperability at the different interaction levels. The progress in networking encompasses Machine-to-Machine (M2M) communications for Internet of Things and Big Data traffic that constitute active research and standardization activities in Europe by ETSI, and around the world by OneM2M. The design and deployment of interoperable IoT platforms based on open systems and interfaces are identified as enablers for the digital market. The strategic application domains include e-health, connected and automated vehicles, advanced dynamic manufacturing, energy management and smart homes, buildings and cities. IoT Systems provide advantages in all these various domains. This fast-growing ecosystem is leading IoT towards a promising future. However, IoT systems expansion opportunities are not straightforward. A set of challenges should be overcome to enable IoT mass-scale deployment across various domains including interoperability, autonomy, and scalability issues. This talk aims at giving an overview of these challenges. Recent international standardization and R&D initiatives will be investigated. Future directions will be highlighted.

Biography:

Khalil DRIRA received the Engineering and M.S. (DEA) degrees in Computer Science from ENSEEIHT (INP Toulouse), in June and September 1988 respectively. He obtained the Ph.D. and HDR degrees in Computer Science from UPS, University Paul Sabatier Toulouse, in October 1992, and January 2005 respectively. He was from oct 1992 to sept 2010, Chargé de Recherche, and he is since oct 2010 Directeur de Recherche, a full-time research position at the French National Center for Scientific Research (CNRS). Khalil DRIRA's research interests include formal design, implementation, testing and provisioning of distributed communicating systems and cooperative networked services. His research activity addressed and addresses different topics in this field focusing on model-based analysis and design of correctness properties including testability, robustness, adaptability and reconfiguration. He is or has been involved in several national and international projects in the field of distributed and concurrent communicating systems. He is author of more than 150 regular and invited papers in international conferences and journals. He is or has been initiator of different national and international projects and collaborations in the field of networked services and distributed and communicating systems. Khalil DRIRA is or has been member of the programme committees of international and national conferences. He is member of the editorial board of different international journals in the field of software architecture and communicating and distributed systems. Khalil DRIRA has been editor of a number of proceedings, books and journal issues in these fields.