I-ESA'14

InterOP - VLab

CALL FOR WORKSHOP PROPOSALS

MINES Albi-Carmaux

INTEROPERABILITY FOR ENTERPRISE SYSTEMS AND APPLICATIONS
IoT Interoperability for Manufacturing: challenges and experiences

March 24th-28th, 2014 – ALBI (FRANCE)

I-ESA brings together the world's leading researchers and practitioners in the area of Enterprise Interoperability for the development of new Enterprise solutions based on the Internet of the Future. Initiated in 2005 by two major European research projects of the FP6 of the European Commission, the ATHENA IP (Advanced Technologies for Interoperability of Heterogeneous Enterprise Networks and their Applications, Integrated Project) and the INTEROP NoE (Interoperability Research for Networked Enterprise Applications and Software, Network of Excellence), the I-ESA conferences have been recognized as a tool to lead and generate an extensive research and industrial impact in the field of interoperability for enterprise software and applications. I-ESA'2014 will be held in Albi, France by 24th-25st March, 2014 (Pre-conference) and 26nd-28rd March, 2014 (Conference): www.i-esa.org

Workshop

IoT Interoperability for Manufacturing: challenges and experiences

I-ESA is established as the major event addressing Enterprise Interoperability and the official conference of Virtual Laboratory for Enterprise Interoperability (INTEROP-VLab) with the sponsorship of the International Federation for Information Processing (IFIP) and the International Federation of Automatic Control (IFAC).
The Workshop will take place in Albi (France) on 24th and 25th March 2014.
Accepted and presented papers will be published by ISTE Publications UK, www.iste.co.uk

Workshop Scope:
The goal of the workshop: the **IoT Interoperability for Manufacturing: challenges and experiences** workshop focuses on interoperability issues when Internet of Things is applied in the manufacturing environment.
Indeed, *"… in the twenty-first century… the melding of the global industrial system that was made possible as a result of the Industrial Revolution, with the open computing and communication systems developed as part of the Internet Revolution, opens up new frontiers to accelerate productivity, reduce inefficiency and waste, and enhance the human work experience"* (P. C. Evans and M. Annunziata, "Industrial Internet: Pushing the Boundaries of Minds and Machines", November 2012). Moreover, *"… Future Internet (FI) technologies and infrastructures (including cloud and mobile computing, Internet of Things, Big Data analytics, IPv6 and next generation networks and computational and storage architectures), when embedded and integrated in vital and critical business processes in a transparent and seamless way, are envisioned to constitute the most prominent drivers for enterprise business innovation. This innovation… will support a new renaissance of European digital enterprises."* (O. Lazaro et al., "Embarking on New Orientations Towards Horizon 2020", June 2013, FInES position paper).

This new *industrial wave* envisages the development and deployment of intelligent devices, intelligent systems, and intelligent decision making to support a deeper integration of the physical world (machines, facilities, fleets, networks, etc.) with the digital world and virtual world. The effects of this phenomenon in the realm of manufacturing is at the core of the German ***Industrie 4.0*** programme and of the ***Industrial Internet***.

The combination of smart products, procedures and processes assembled in smart factories and smart **Cyber Physical Systems** (CPS) will increase our capability to manage complexity, increase reliability, safety and efficiency in manufacturing goods.

As envisaged by the ***Industrie 4.0*** programme "*The services and applications provided by these platforms will connect people, objects and systems to each other … and will possess the following features:*

- *Flexibility provided by rapid and simple orchestration of services and applications, including CPS-based software*
- *Simple allocation and deployment of business processes along the lines of the App Stores model*
- *…*
- *Safety, security and reliability for everything from sensors to user interfaces*
- *Support for mobile end devices*
- *Support for collaborative manufacturing, service, analysis and forecasting processes in business networks.*

For Industrie 4.0, … the term 'orchestration' … should explicitly include the setting up of shared services and applications in collaborative inter-company processes and business networks."

Interoperability will therefore constitute a key factor to support this new *industrial wave* sharing of information (and its meta-information) across machines, networks, individuals or groups and support intelligent collaboration and better decision making.

The workshop therefore focuses on analysing the following I-ESA topics for the manufacturing domain:

- Business interoperability
  - o Business process interoperability
  - o Knowledge management in networked enterprises
- Future internet and enterprise systems
  - o Future internet and enterprise interoperability
  - o Future internet in enterprise collaboration and virtual organisations
  - o Future internet and digital ecosystems

Additionally, the workshop wants to foster circulation of ideas, issues and approaches, as well as the establishment of liaisons and synergies to promote the setup of a more synergic, systematic and coherent approach within the EU R&D community. The session is organised in two specific sub-sessions the 1st one addressing the technological and scientific challenges, while the 2nd one focused on the business aspects and test cases. Both sub-sessions will be conducted as a set of short presentations, mostly but not exclusively represented by EC-funded projects in several areas – FI PPP, FoF, FiNES, IERC - and by a conclusive open discussion where the audience and the presenters will have the possibility to debate issues related to the IoT interoperability in the manufacturing domain. The workshop will offer the opportunity for synergies and future research projects in light of the European H2020 programme.

Workshop Format
- The duration of the workshop will be Half day (subsession1 90' + subsession2 90' + Panel 30'), with 6 invited speakers (3 per sub-session, 25' each) with specific expertise in the topics addressed by the workshop
- After each subsession 15' will be devoted to discussion and debates
- The workshop envisages a final panel discussion of 30'

Workshop Organisers
Sergio Gusmeroli, TXT e-Solutions SpA, Research & Innovation Director, MSEE project
Eva Coscia, TXT e-Solutions SpA, Project Manager, TELLME project
Gabriella Monteleone, Piksel SpA, Project Manager, OSMOSE project
Domenico Rotondi, TXT e-Solutions SpA, Senior Consultant, FITMAN project

Key Dates
- Workshops Programme: January 31th, 2014
- Workshops Venue: 24th - 25st March, 2014

Website: www.i-esa.org