



Artificial Intelligence (AI) in Europe

Covering Policy and Standardization work

December' 2018

SESEI introduction and brief on oneM2M

- SESEI (Seconded European Standardization Expert in India) is a local face for the European standardization community in India: Dinesh Chand Sharma
- Why SESEI: India is a major trade partners for Europe, Increasing role of standards to gain market access and Evolving & complex nature of regulatory and standardization landscapes, Sharing best practices, work together
- Sector: 1. ICT: M2M/IoT, Security, 5G, NFV/SDN, e-Accessability, eHealth, eCALL... 2. Electrical equipment including Consumer Electronics: Smart Grid, Smart Meter, LVDC, Micro- Grid, Lift Escalator... 3. Automotive: Connected Cars, ITS, e-Mobility... 4. Smart Cities: Mobility, Waste, Energy, ICT..
- For more information visit - www.sesei.eu , www.sesei.in , www.eustandards.in
- Before AI, let me briefly touch upon on role of oneM2M and its progress until now:
 - oneM2M Project, Specification adoption by TSDSI, Platform development by CDOT, rollout by HP in Smart Cities such as Bhopal, Korea has mandated its rollout in Smart Cities such as Bushan, Open System and capable of using the existing rollouts and existing wireless/fixed line infrastructure.



GENELEC

ETSI



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Enabling Europe-India Cooperation on Standards

AI - Introduction

- Because of Digitization, Big Data, Deep Data, Data Science capabilities and availabilities ((M2M/IoTM, Smart Cities, Industry 4.0 etc.):
 - Artificial Intelligence (AI) is emerging very fast these days and is affecting widely the entire industry e.g. automation, data management, integration of smart technology.
- Artificial Intelligence (AI) is not new: European Association for AI [EurAI](#) was established in July 1982 as a representative body for the EU AI community.
 - Its aim is to promote the study, research and application of Artificial Intelligence in Europe.
 - Its an online platform aim to stimulate debate on AI and is also a place to share practices, contribute to the AI ethics guidelines, encourage activities related to the development of AI.
- AI applies to a variety of sectors : smart manufacturing, robots, autonomous cars, virtual reality, healthcare, interactive speech interfaces, visual recognition, data analysis/manipulation, home appliances, cybersecurity or spatial programming.
- 57% of the companies expect AI to have a high or a very high impact on business areas that are “entirely unknown to the company today”.



EU strategy for AI

- EC released its strategy communication '[Artificial Intelligence for Europe](#)' in April 2018 and it is based on **three distinct pillars**:
 - ✓ **Boost technological expertise and industrial capacity** with “AI uptake” by both the private and public sectors
 - ✓ **Prepare for social-economic changes** brought about by AI, by encouraging the modernisation of education and training systems, nurturing talent, anticipating changes in the labour market, supporting labour market transitions and adapting social protection systems.
 - ✓ **Ensuring an appropriate ethical and legal framework** based on the EU's values and in line with the Charter of Fundamental Rights.
- On 10th April 2018, Twenty-five EU countries agreed to work together in AI domain and signed [declaration on AI cooperation](#).

EU Investment in AI

- European Union (EU) to invest €20 billion in research and innovation in AI in the period of 2018-20 and more than €20 billion per year from public and private investments over the following decade.
- Complementing national investments, the Commission will invest €1.5 billion by 2020, 70% more than in compared to 2014-2017.
- For the next long-term EU budget (2021-2027) the EU has proposed to invest at least €7 billion from [Horizon Europe](#) and the [Digital Europe Programme in AI](#).
- Funding to be used for R&D and Excellence Centers, AI-on-demand platform, Digital Innovation Hubs & Industrial Data Platform
- €9.2 billion additional investment in first ever digital programme in Europe and to focus on five areas: Supercomputers, Cybersecurity and trust, Digital skills, Ensuring a wide use of digital technologies across the economy and society and **Artificial intelligence (AI)**:
- [GDPR](#) also covers provision for AI for several reasons including that it requires a certain amount of explainability, which can be challenging with “black box” AI systems.

Impact on Standardisation

- EC foresees impacts in the machinery sector with changes or clearer guidance brought to a series of EU Directives such as the:
 - ✓ [Radio Equipment Directive](#) (RED) - play a better role in data privacy, fraud on software, etc.
 - ✓ [Product Liability Directive](#), [Machinery Directive](#), [Low Voltage Directive](#) (LVD) and [Electromagnetic Compatibility Directive](#) (EMC), Medical Devices, Toys etc.

This means that CEN Technical Bodies, CENELEC TCs, ETSI TCs will be impacted

- CEN and CENELEC also have strong ties with their international standardization bodies, ISO and IEC, where work have also kicked-off on AI in [ISO/IEC JTC 1 SC 42](#)



European Telecommunications Standards Institute (ETSI)

Experiential Networked Intelligence (ENI):

- ETSI Industry Specification group (ISG) was set up in Oct 2017 under the label ENI with aims to help operators facilitate their network deployment by using AI techniques.
- ETSI ENI ISG released followings as first deliverables:
 - ✓ [ETSI GR ENI 001](#), specifies a set of use cases to be applied to the fixed network, the mobile network, or both, and defines the expected benefits operators can gain from using an ENI system.
 - ✓ [ETSI GS ENI 002](#) captures the requirements of how intelligence is applied to the network in different scenarios to improve operators' experience of service provision and network operation.
 - ✓ [ETSI GR ENI 003](#) analyses the work done in various Standards Developing Organisations and open source consortia on policy management in general, and context-aware policy management specifically.
 - ✓ [ETSI GR ENI 004](#) addresses terminology for the main concepts in ENI.
 - ✓ ENI has launched a **Proof of Concepts** activity whose framework is defined in [ETSI GS ENI 006](#). Proofs of Concept will help provide proof of the technical feasibility of ENI within the Industry.



Thank you!

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