IoT STANDARDS ECOSYSTEM, WHAT’S NEW?

www.aioti.eu

Patrick Guillemin AIOTI WG3 (IoT Standardisation) Chair and AIOTI Steering Board member
The development of the AIOTI

The **Alliance for Internet of Things Innovation** (AIOTI) was initiated by the European Commission in 2015, with the aim to strengthen the dialogue and interaction among IoT players in Europe, and to contribute to the creation of a dynamic European IoT ecosystem to speed up the take up of IoT.

Launch in 2015 by Commissioner Günther Oettinger

In context of the preparation of Large Scale IoT Projects under EC’s Horizon 2020 initiative

From 2016 one-stop-shop for IoT in Europe and globally
AIOTI WG03 (Standardisation Group) engagement model

WGs support to AIOTI in:
- Digital Single Market
- Digitising European Industry
- EC’s H2020 Large Scale Pilots

AIOTI WG03

- Engage, disseminate and influence
- Identify gaps, divergences, common concerns
- Analyze landscape
- Publish guidance and recommendations
- Task sub-teams to address themes

High Level Architecture
Semantic Interoperability
Identifiers
Security and (Personal) Data Protection (with WG4)
AIOTI WG03

- Identifies and, where appropriate, makes recommendations to address existing IoT standards, analyses gaps in standardisation, and develops strategies and use cases aiming for (1) consolidation of architectural frameworks, reference architectures, and architectural styles in the IoT space, (2) (semantic) interoperability, (3) security by design support and (4) personal data & personal data protection to the various categories of stakeholders in the IoT space.

- IoT Landscape / georgios.karagiannis@huawei.com
  - IoT Landscape maintenance is key to keep the liaisons alive and maintain dialogue on how to foster collaboration to improve interoperability & security.
  - IoT-EPI IoT Platforms analysis improvement / H2020 UNIFY-IoT Ph. Moretto (ETSI STF)
  - Gap Analysis and recommendations / EC funded STF 505 E Darmois (ETSI STF)
  - Cooperation with SDOs/Alliances to foster co-creation and interworking (Patrick Guillemin)

- HLA / High Level Architecture / omar.elloumi@nokia.com
  - IoT Reference Architecture and its mapping with existing IoT Reference Architectures
  - IoT identification juergen.heiles@siemens.com ; henri.barthel@gs1.org

- IoT Semantic Interoperability Paul.Murdock@landisgyr.com
  - Important topic of the moment that created a great international collaboration

- IoT Privacy (with WG04) vanderwees@arthurslegal.com
  - IoT Platform, experimentation, LSPs need concrete standard framework & references to enable “IoT Trust” and IoT “Privacy by design”

- IoT Security (with WG04) vanderwees@arthurslegal.com, jacques.kruse-brandao@nxp.com, harm.arendshorst@nl.verizon.com
  - IoT Security Architecture for Trusted IoT Devices; Baseline Requirements for Security & Privacy up to segment requirements; experimentation, LSPs need concrete standard framework & references to enable “IoT Trust” based on IoT “Security by design”
8 Feb 2017 EC/AIOTI WG03 Panel on Converging IoT standards


➢ 3GPP has been introduced by ETSI Director General Luis Jorge Romero
➢ oneM2M, Omar Elloumi Nokia, oneM2M TP Chairman
➢ ETSI TC SmartM2M, Enrico Scarrone Telecom Italia, SmartM2M Chairman
➢ ITU-T SG20, Marco Carugi, NEC Corporation, ITU-T SG20 Rapporteur and Mentor
➢ IEEE P2413, Paul Murdock Landis+Gyr
➢ ISO/IEC JTC1 WG10 (IoT) now JTC 1/SC 41 since May’17, Henri Barthel GS1
➢ CEN/CENELEC Bernhard Thies, CENELEC President
➢ IIC Jean-Pierre Desbenoit, Schneider-Electric
➢ OPC and Platform I4.0, Thomas Hahn, Siemens (Juergen Heiles)
➢ IETF Georgios Karagiannis, Huawei Technologies (Patrick Wetterwald)
➢ W3C (Dave Raggett regrets)
<more background slides FYI>
AIOTI WG03 Reports: we do not develop standards

- [http://www.aioti.org/resources/](http://www.aioti.org/resources/) and [https://docbox.etsi.org/SmartM2M/Open/AIOTI/](https://docbox.etsi.org/SmartM2M/Open/AIOTI/) with latest WG03 Reports
  - AIOTI WG03 IoT Landscape V2.7 (IoT Reference Architecture mappings)
  - IoT-EPI UNIFY-IoT D3.1 IoT Platforms analysis improvement from AIOTI WG03
  - STF505 IoT Landscape (ETSI TR 103 375) and Gap Analysis and recommendations (ETSI TR 103 376) + 7 February report on latest recommendations (to come)
- AIOTI WG03 High Level Architecture V2.1 (V3 under preparation)
  - IoT identification (WG03 survey on going, broader survey to come soon)
- IoT Semantic Interoperability
  - First report AIOTI WG03 SemIoP report 2.0 (aioti.org) - 2015
  - Join (*) AIOTI, oneM2M, W3C and IEEE P2413 SemIoP White Paper
  - ETSI IoT Security Week, AIOTI WG03 IoT Privacy report (with WG04) - June 2016
- WG03 contributions on IoT in AIOTI inputs to EC DSM/DEI
..and more in AIOTI WG03 cooperation in the developments of these recommendations / reports

**AIOTI Liaisons** with SDOs, Alliances, Open Source Initiatives, IoT Platforms and EU IoT initiatives: supporting role of ETSI/SmartM2M, oneM2M, 3GPP and formalising IIC, ITU-T, W3C, JTC1, IEEE P2413, OPC-UA, Platform I4.0, AEF, CEMA, CEN, CENELEC, ISO, IEC, etc... **Collaboration with** WG04 IoT Policy and complimentary Technical expertise in IoT Security and Privacy. **Horizontal, cross-cutting collaboration** with AIOTI WGs

❖ **Faciliator of the active and early AIOTI cooperation with**

- European Commission, DG CONNECT E.4 (IoT) supporting Member of AIOTI  
- IERC, the EU Cluster of IoT Research projects, IoT Platforms (IoT-EPI) and H2020 IoT LSPs + 2 CSAs (CREATE-IoT + U4IoT)
  
  Smart Living for aging well : **ACTIVAGE**
  Smart Farming and Food Security: **IoF2020**
  Wearables for Smart Ecosystems: **MONICA**
  Reference zones in EU Cities: **SYNCHRONICITY**
  Autonomous vehicles in a connected environment: **AUTOPILOT**

**And** inclusion of all IoT Stakeholders / testbeds / EU Initiatives
More AIOTI cooperation

❖ CEN/CENELEC/ETSI Smart Meter-CG, Smart Grid-CG, Smart Cities (SF-SSCC)

❖ ISO, IEC (TC57, TC65), OMA, GSMA, BBF, TM Forum, OGC, NIST, NGMN, OASIS, OCF (absorbed AllSeen), AIM, ZigBee, Bluetooth, ULE Alliance, IPSO Alliance, IPv6 Forum, LoRa Alliance..

➢ Based on existing AIOTI participation and contribution levels
  1. Light = IoT Landscape input & update, email exchanged
  2. Participation = conf calls, meetings, surveys, reporting, inputs
  3. Cooperation = liaison, work program sharing, join paper/release
  4. Commitment = task/group/deliverable leader or co-author

➢ Reaching consensus on recommendations, facilitating exchanges

❖ FoF/EFFRA, 5G-PPP, BigData, CyberSecurity-PPP, EIP-SCC (Urban Platforms), Eurocities, IoT Forum, BSI, Hyper/CAT...
Professionalising AIOTI’s organisation for the next phase

- Transformation into a legally recognised Association
- 21 Founding Members
  - Drafted AoA and particularly by-laws
  - Provided startup capital
  - Critical engagement
- Principles going forward
  - Same vision, mission, goals
  - Low fee (750 euros)
  - Member driven
  - Equal rights, equal obligations (IoT style)
  - Budget
  - Empowerment of Working Groups and Steering Board
  - Participative membership
  - Enabling by Management Board
- Towards ETP status with the EC