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Do you need a link between your FP7
Call1 Project Proposal and ETSI
Standardization?

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Do you need a link between your FP7 Call1 Project Proposal and ETSI ?

If you think it is an added value to have a Work Package to link your project impact to RFID Standardization, you can contact ETSI patrick.guillemine@etsi.org to add a liaison to ETSI in your proposal

In the following slides you can discover the ETSI Board RFID Ad Hoc group approach of RFID standardization



OECD & RFID

- RFID is a networking technology (like mobile, Internet, ...)
- With time cost is reducing and growth is very high
 - Tens of billions in 2006, hundredths by 2009 and perhaps trillions later
- 3 phases for RFID deployment in economies
 - 2003-2005: initial pilot and experimenting
 - 2005-2009: Supply chain infrastructure
 - 2009-2013: widespread item-level tagging
- RFID are increasingly accessed across IP networks

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International Standardization

- **ISO:**
 - TC 8 (Ships and marine technology)
 - TC 104 (Freight Containers)
 - TC 122 (Packaging)
 - TC 104/122 JWG (Smart Card RFID Applications)
- **ISO/IEC JTC 1:**
 - SC 6 (Telecom and Information exchange between systems)
 - SC 17 (IC Cards => "Smart Card")
 - SC 31 Automatic Data Capture
 - WG 1 (Symbology)
 - WG 2 (Data Capture)
 - WG 3 (Conformance)
 - WG 4 (RFID tag)
 - WG 5 (Real Time Location Systems – RTLS)
- **ITU:**
 - Networked ID, including RFID



Standardization in Europe

- **CEPT ECC:**
 - Harmonised spectrum allocation and management policies
- **ETSI:**
 - Harmonised Standards for “Radio Interface and usage”
 - ERM EMC (Electromagnetic Compatibility)
 - ERM Close Range Inductive Data Communications (ERM TG23)
 - ERM Generic Short range devices (ERM TG 28)
 - ERM RF Identification Devices (ERM TG34)
 - Network Standards for (tele-)communication systems (not specific for RFID application!)
- **CEN:**
 - ISO related Standards
- **CENELEC:**
 - IEC related Standards



ETSI Standardization Potential

- **Potential scope of RFID standardization is in:**
 - Technology – RF air interface
 - Multi-vendor Interoperability testing (Plugfests)
 - Conformance & Performance of devices
 - “Middleware” protocols defining how data is processed
 - Data content definition (in different business cases)
 - Applications per sector (data capture and management)
 - NETWORKED secure transport and transactions
 - Privacy, confidentiality, ... (data encryption)
- **The standardization landscape is fragmented**
 - ITU-T, ISO, IEC, JTC1, CEN, CENELEC, ETSI, ...
 - EPCGlobal, W3C, IETF, IRTF, ...
- **Regulatory Issues in Interoperability, Security, Privacy, Radio Spectrum Regulation, Global Cooperation**



ETSI Standardization - Security & Privacy

- ETSI is a world leader in creating cryptographic algorithms and protocols to prevent fraud, unauthorised access and to protect customers' privacy
- They include:
 - algorithms used to protect GSM and IMT-2000 mobile communications
 - to date, never compromised in real-life situations
 - Dual-Tone Multi-Frequency (DTMF) receiver algorithm for PBX and Central Office applications
 - used around the world, outperforming all traditional solutions
 - Conditional Access for TV etc
- Smart Card applications and toolkit (SIM/USIM/ISIM, ...)
- Active RFID will require similar high and secure data protection



ETSI Role in RFID - today

- **All 4 standards (*) are going through an update cycle based on the ETSI Plugtests results and practical field experience**
 - (*) TR 102 436, TR 101 445, EN 302 208-1 and -2
- **Listen Before Talk / Adaptive Frequency Agility (LBT/AFA)**
 - LBT mechanism is to avoid “harmful interference” to other devices already operating in that spectrum band (e.g. other SRDs, military equipment, broadcasts, ...)
 - If one RFID Reader device is already operating, then, another RFID Reader device must not create “harmful interference”
 - However, this puts limits on how close the readers can be
 - Since main application is warehouses, gates need to be further apart (not always possible in existing warehouses)
 - Warehouse Users know where they put devices and can control their “radio environment” to not cause interference to neighbours
 - Can alternative acceptable solution be found?



RFID - ETSI increased involvement

- OPEN public standards both “passive” and “active” RFID tags for higher value chain / products / applications
- Broaden scope to protocols, middleware, services
 - ETSI Members do cover all the RFID standard food chain
- Use ETSI unique strength
 - Global cooperation with direct participation
 - RFID Security & Privacy can benefit from unique ETSI experience in this domain
 - RFID Interoperability at all levels in all sectors
 - ..and ETSI unique strength in regulation and access to EU market

ETSI's Unique Strength for RFID standards

- RFID technology is very important for data access, verification. Will ONS be like DNS? What is the role ETSI will play?
- Formally recognised as an European Standards Body (ESO) and has partnership with many Standards bodies worldwide
- Direct Participation by all stake-holders, not via NSOs:
 - Administrations, Vendors, Operators, Users, Research Bodies, ...
 - Members determine Standardisation Work Programme and priority
 - Open, transparent, consensus based standards vs. “consortia” standards which create high (IPR) costs for non-members
- Clear FRAND IPR Policy developed by ETSI Membership



Way Forward - ETSI RFID standards

- Set up a small group to explore what ETSI can do in which areas (macro work programme).
- Examine “Partnerships” with other bodies, e.g. EPCglobal; Standards Bodies in China, Japan, USA, ...
- Create a separate RFID TC (for end-to-end applications)
- Maintain Direct Participation by all stake-holders, not via NSOs



Thank You!

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