



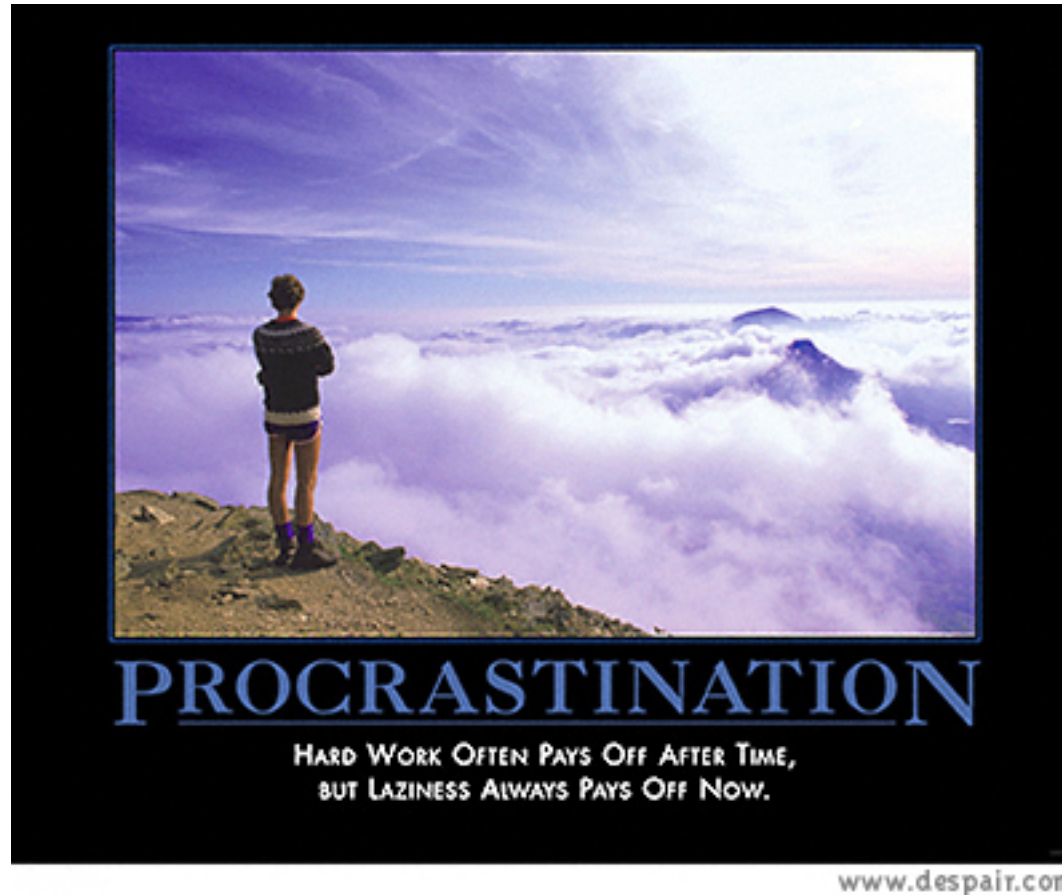
World Class Standards

# ICTSB – RFID Networks Internet Of Things

[Patrick.GUILLEMIN@etsi.org](mailto:Patrick.GUILLEMIN@etsi.org)

ETSI – Strategy and New Initiatives

© ETSI 2007 All rights reserved



RFID and The Internet Of Things (IoT)  
LONG TERM STANDARDIZATION VISION

## Challenges and opportunities for standardization

- ❑ **The Internet of Things needs ICT experts from a wide range of partners**
  - **Multicultural sectors concerning standardization & regulation**
  - **Multidisciplinary participation, including non-technical experts**
  - **Industry experts from different sectors**
    - **Manufacturers, operators, service providers**
  - **NGOs, e.g. users, consumers, environmentalists, researchers**
  - **Authorities and regulators**
  
- ❑ **The Internet of Things is in a multi-vendor and multi-user environment requiring interoperability**
  
- ❑ **Standardization provides the platform for creating end-to-end solutions including networking**
  
- ❑ **Standardization in an open and transparent way is prerequisite for market-acceptance and global application**



## ETSI and standardization for the Internet of Things

- ❑ **Professional standards-making**
  - Permanent technical experts' support
  - Use of Formal Description Techniques (FDT)
  - Standards validation techniques
  - Use of Specialist Task Forces (STF) i.e. Projects Teams
  - Interoperability test events (Plugtests™)
  
- ❑ **World leader in creating cryptographic algorithms and protocols to prevent fraud, unauthorized access and privacy**
  - Algorithms used to protect GPRS, GSM and UMTS
  - Conditional Access for TV etc
  - Lawful Interception
  - Smart cards
    - GSM SIM, 3G USIM card standards for security, authentication etc
  - Electronic signatures
    - supporting the development of a European electronic signature infrastructure
  - Free ETSI White Paper on “Security for ICT”



## ETSI and standardization for the Internet of Things

- ❑ **Long-term experience**
  - From Telecommunications to ICT
  - From authorities-driven to industry-driven standardization
  
- ❑ **Leading IPR policy**
  - The principle of FRAND
  
- ❑ **Geographical aspects**
  - From European standardization to Europe-based global standardization
  - Global and inter-regional co-operations
  
- ❑ **Participation aspects**
  - International direct membership
  - Members from ICT and adjacent industry sectors, e.g. automotive and aeronautical sector
  - Big and small members (SMEs), users and consumers
  - Regulators and authorities



### ETSI and standardization for the Internet of Things

- ❑ **ETSI is a unique resource to meet Europe's standardization requirements for the Internet of Things**
  
- ❑ **Current related ETSI activities include:**
  - **RFID**
  - **Smart Cards, NFC, SIM, USIM**
  - **Automotive, DSRC and road tolling**
  - **NGN**
  - **Security**
  - **Lawful interception**
  - **Wireless LAN and HiperMAN/WiMAX**
  - **Wireless medical devices**
  
- ❑ **Series of workshops to expand ETSI's work programme**
  - **Opportunity for industry to express market needs for standardization**
  - **1<sup>st</sup> workshop: 3-4 December 2007**



[www.despair.com](http://www.despair.com)

ETSI and standardization for the Internet of Things today ?

## IoT and RFID = GA#50 ETSI Strategic Topic

- ❑ **“The Internet of Things” (including RFID Networks)**
  - **Development of a Strategic topic to focus more on Network requirements.**
  - **RFID is relevant to and will compose a major driver of “the Internet of Things”.**
  - **Need to look at important fields and industrial sectors for the application of RFID include Manufacturing and production (e.g., the automotive industry), Transport and logistics, Retail and consumer goods, Public transport, Health care, Anti-counterfeiting, Ticketing, ePayment, (National) Security and Recycling.**
  - **Need to ensure that networks are efficiently designed and standardised to carry this type of traffic.**
  - **Need to increase ETSI involvement in “RFID Networks” and to provide the relevant standards to support the needs of new industry stakeholders.**
- ❑ **ETSI Board Champion = Kirit Lathia**





## Next ETSI RFID Event

### □ 3,4 December RFID and IoT ETSI Workshop

#### Schedule

**Monday 3 December 10:00 - 12:30 14:00 - 17:30,  
Social Dinner**

**Tuesday 4 December 09:00 - 12:30 14:00 16:00**

**I already got confirmation from TI, Lyngsoe, Telenor, ETSI ERM, Orange, CEN, NSN and ICTSB, JRC, ITU-T JCA/NID and I am waiting for the final ok of Siemens, ISMB, DG INFISO, MINEFE, University of Rome, Verisign, BNetzA (former RegTP), NTT...**



## 3,4 December RFID and IoT ETSI Workshop

**This workshop should identify and refine what standardization activities ETSI Members could perform in the context of "The Internet Of Things"**

**A further ETSI workshop on 25th and 26th of February 2008 will determine how and when new standardization projects related to the "Internet Of Things" could be developed at ETSI.**

## 3,4 December RFID and IoT ETSI Workshop

**Presentations should have a focus on international standards.**

**Subjects should include (but not be limited to):**

- Privacy, Security and Data Protection**
- Privacy Enhancing Technologies (PET) applicable for RFID**
- "Data On Tag"**
- RFID middleware**
- RFID infrastructure (network infrastructure to support RFID applications)**
- Wireless Sensor Networks**
- M2M (Machine to Machine communications)**

**In addition, contributions are welcome on the status of work in other bodies, such as ITU JCA-NID, CEN, ISO/IEC and others.**

## RFID, IoT at ETSI?

- ❑ **RFID Networks is a Strategic Topic (Board RFID Ad Hoc Group) with a global dialogue with ITU, ISO, GSC, ICTSB...**
  - **RFID Networks and IoT and ETSI New Initiatives?**
  - **EU RFID Projects and Initiatives in FP6 and FP7 with ETSI**
  - **EU RFID Expert Group (RFID Security and Privacy )**
- ❑ **Existing TC ERM TG28 (SRD) and TG34 (RFID at UHF)**
  - **Radio Spectrum & Regulation with EC and CEPT**
- ❑ **OCG Security, TC LI, TC ESI, PET?**
- ❑ **Smart Cards, NFC, M2M?, WSN?**
- ❑ **Interoperability Testing, RFID Plugtests 2008 and after?**
- ❑ **Pole SCS with RFID, IoT and ETSI?**
- ❑ **RFID in construction and ETSI?**
- ❑ **RFID and eHealth (EP EHEALTH), and Transport (TC ITS)**



## World Class Standards



Thank you for your attention

Contact  
[Patrick.GUILLEMIN@etsi.org](mailto:Patrick.GUILLEMIN@etsi.org)