

# 1st EU-Japan Symposium on NGN and Future of Internet

## Closing Session – Ubiquitous Tag (RFID)

Gérald Santucci  
Head of Unit  
Networked Enterprise and RFID unit  
Information Society and Media Directorate General  
European Commission



# Key features of presentation by Mr S. HALLER (SAP Research)

- ❖ With the IOT **there will be more things online than people!**
- ❖ **New technological challenges**
  - Increasing sensing, actuation & computing capabilities
  - Increasing networking capabilities
  - New architectural requirements
    - Which identifiers? How to retrieve information about objects? How to deal with massive amounts of data? How to manage heterogeneity of devices & networks?
- ❖ **New socio-economic opportunities**
  - High resolution management of events (e.g. fire)
  - New services available to interact with ‘smart objects’ over the Internet
  - Innovative applications in e.g. Supply chain integrity, Healthcare, Energy, and “Green” applications
- ❖ **New emphasis on policy issues**
  - Reliability of systems, information security, privacy protection
  - Governance of the IOT

# Key features of presentation by Dr R. HATTORI (Hitachi Ltd.)

- ❖ **RFID technology constantly challenges the limits of physics**
  - From the  $\mu$ -chip (size: 0.4 x 0.4 mm) to the ultra-small  $\mu$ -chip (0.05 x 0.05 mm)
  - RFID “Crystagram” label combining a hologram with a contactless IC chip to enable visual counterfeiting check and product tracing through production and distribution
  - Ultra-small embedded antenna...
- ❖ **Policy drivers**
  - 1st phase (2004-2006): cost; stable supply; global standard
    - Hibiki project
  - 2<sup>nd</sup> phase (2006-2007): security for privacy and data protection
    - Secure RFID project
- ❖ **New RFID applications**
  - 10 examples given for Japan, including admission ticket to exhibitions, Smart Library, Maintenance & Asset Management, Factory Automation, Autonomous Walking Support for physically-challenged people...)

# Preliminary conclusions

- ❖ **Both EU and Japan are exploring the potential of RFID technology and its applications in the emerging Internet of Things/Future Internet**
  - Ubiquitous computing and networking
  - “Deeply networked” systems of objects
  - Network robot systems...
  - Internet of Things as a very innovative use case of the Internet of the Future
- ❖ **EU-Japan cooperation in RFID has developed steadily since 2006**
  - Experts from both Japan’s Government and EC undertake fact-finding and cooperation-driven missions on a regular basis
  - Increasing flow of contacts between scientists, engineers and managers (Prof. Sakamura, Dr. Imura, Mr. Haller etc.)
  - In the wake of the recent EU-Japan Cooperation Forum on ICT Research (March 2008), there is an ongoing development of a Cooperation Agreement on RFID between METI and DG INFSO
- ❖ **Strong Potential for further cooperation is emerging**
  - Logistics & Supply chain management (economic emphasis)
  - Environmental protection & Consumer safety (societal emphasis)

