

European Commission policy towards the Internet of Things

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The European policy roadmap

❑ 1: Policy towards RFID

- ❑ Public debate on RFID (2005 – 2006)
- ❑ Communication on RFID (2007)
- ❑ Recommendation on RFID (2008 - 2009)
- ❑ Actions defined in recommendation (2009 – 2011)
- ❑ The International dimension (2006 - ...)

❑ 2: Policy towards Internet of Things (IoT)

- ❑ Staff working paper on Internet of Things (2008)
- ❑ Communication on the Internet of Things (2009)
- ❑ Integration with the Future Internet initiative (2009)
- ❑ Planned Internet of Things activities (2009 - 2011)



1. A brief history

- British developed “identify friend or foe” tag
- In the 70’s, Los Alamos National Laboratory uses RFID
- 1999 Establishment of Auto-ID Center at MIT
 - David Brock and Sanjay Sarma started research on how to put low-cost RFID tags on how to track products through the supply chain and turned RFID into a networking technology by linking objects to the Internet through the tag
- 1999-2003: DoD adopt Auto-ID standards
- October 2003: EPCglobal, successor of the MIT Auto-ID Center, manages the EPC network and standards.

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Project timeline in the EU Commission

- **2005**
 - September: Creation of an EC Inter-Service Coordination Group
- **2006**
 - March: Commissioner Reding launches RFID open consultation at CeBIT
 - March-June: 5 thematic workshops
 - July-September: Public consultation on 'Your voice in Europe'
 - 16 October: Large conference in Brussels
- **2007**
 - Communication COM(2007) 96 (15 March)
 - EESC opinion on RFID
- **2008 - 2009**
 - EDPS opinion on RFID
 - May 2009: Recommendation on Privacy and Security
 - June 2009 (?): Communication on the "Internet of Things"
- **2008 - 2011**
 - Large scale RFID pilot projects in the ICT policy support programme

RFID



2007 Communication "RFID in Europe: steps towards a policy framework"

- ❑ Sets the scene (to provide a clear and predictable legal and policy framework)
 - ❑ Security and Privacy
 - ❑ Radio spectrum
 - ❑ Research and innovation
 - ❑ Standardisation
 - ❑ Governance
- ❑ Sets an agenda for 2007-2008
 - Creation of an Expert Group
 - ~30 representatives of all categories of stakeholders
 - 4 Observers from successive EU Presidencies (DE, PT, SI, FR)
 - Recommendation on Privacy, Data Protection and Information Security
 - Communication analysing the nature and effects of the move towards the "Internet of Things"

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2009 RFID Recommendation: aims

- To clarify the existing European legislative framework
 - Data Protection Directive (95/46)
 - ePrivacy Directive (2002/58)
- To provide guidance to stakeholders on how to implement RFID in a way that is
 - socially and politically acceptable
 - ethically admissible
 - legally allowable

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2009 RFID Recommendation: content

- ❑ Privacy and data protection measures
 - ❑ Privacy Impact Assessment to be conducted by RFID operators before they deploy any RFID system
- ❑ Information on RFID use
 - ❑ For individuals that are subject to RFID technology
 - ❑ Includes RFID logo on tags and RFID reader identifiers
- ❑ Specific provisions for use in retail
 - ❑ Opt in / Opt out scenarios
 - ❑ Tag de-activation
- ❑ Information security risk management
 - ❑ Identify set of RFID applications that can pose a security risk
- ❑ Awareness raising actions
 - ❑ For SMEs and the general public
- ❑ Research and development
 - ❑ 'Security- and privacy-by-design'

RFID



2009 RFID Recommendation: timeline

- 2 EU Presidency conferences provided valuable feedback
 - Berlin (25-26 June 2007)
 - Lisbon (15-16 November 2007)
- Input from RFID Expert Group received from July 2007 to January 2008
- Public consultation on draft text conducted from February 2008 to April 2008
 - ~640 replies (~1000 pages in A4 format)
- Impact assessment April 2008 – November 2008
- Re-drafting, interservice, translation (November 2008 - May 2009)
- Adoption May 2009

RFID



2009 RFID Recommendation: next steps

- European RFID LOGO and indicators
 - Role for ESO
 - Timing 2009 – 2011
- RFID standard mandate
 - European ESO's
 - Timing: 2009 – 2011
- Privacy Impact Assessment Framework
 - Stakeholders
 - 2009 – definition
 - 2010 – endorsed by the article 29 Working party
 - 2010 – 2011 European standard / norm (?)

Monitoring of the adoption of the RFID recommendation

- 2009 - 2012
- Report of the EU commission and next steps

RFID



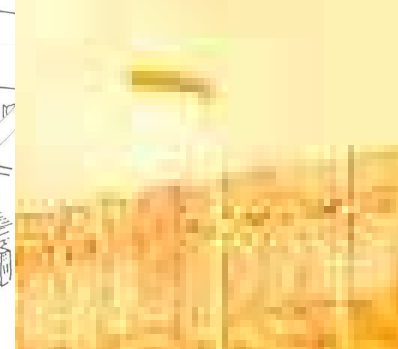
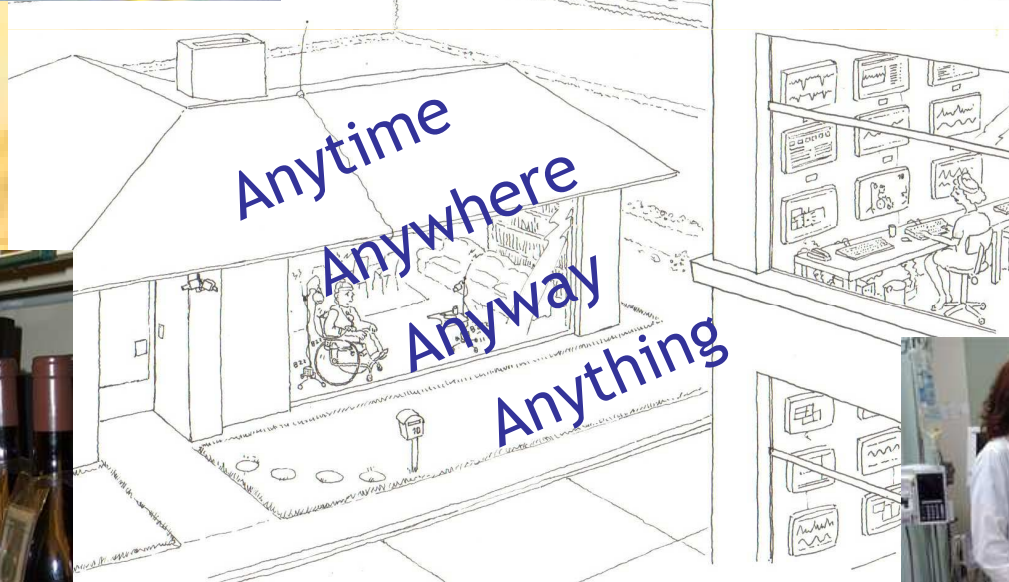
The international dimension

- Share best practices/conferences
 - OECD (2005, 2009)
 - RFID/USN South Korea (October 2007)
 - Exchanges with China (MOST2006, 'planned' CESI 2009)
 - FTC / DoC / DoD ... conferences (2006 – 2009)
 - Exchanges with Japan (METI)
- Enhanced co-operation
 - EU-US RFID lighthouse project (2008)
 - Co-operation agreement with METI Japan
 - Partnership of standards organisations under GRIFS project
 - (EU / US / Japan / China / South Korea / ...)

RFID



2. Policy on Internet of Things



101



IoT Timeline in the EU Commission

- **2008**

- ❑ Staff paper on Internet of Things challenges
- ❑ Consultation of European Citizens and Industry
 - ❑ September 29th - November 28th, 2008
 - ❑ 490 hits on the web site; 36 replies
- ❑ Consultation of the RFID expert group on the staff paper
- ❑ Opinion of the European Economic and Social committee

- **2009**

- ❑ Communication on the Internet of Things
- ❑ Integration with the Future Internet initiative
- ❑ Part of the Framework 7 research programme

- **2009 - ...**

- ❑ Part of the Framework 7 research and development programme
- ❑ Part of the Public Private Partnership initiative on the Future Internet

IoT



IoT is part of Future Internet initiative

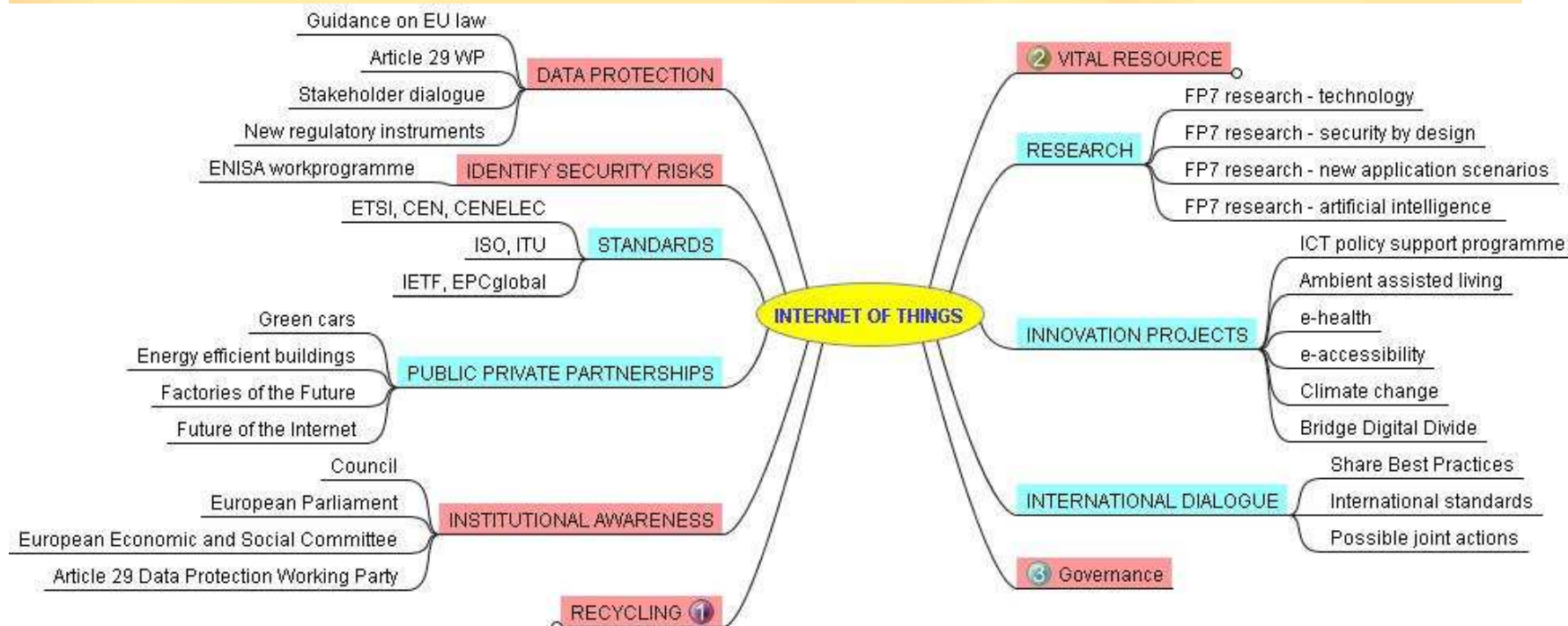
- ❑ Work on the Future Internet (FI) is part of:
 - ❑ The EU FP7 Framework Programme
 - ❑ EU Member State level initiatives
 - ❑ Other worldwide initiatives (U.S., Japan, China, etc.)
 - ❑ The global debate (e.g. OECD Ministerial Conference)

- ❑ Internet of Things is specific part of FI debate:
 - ❑ Real-World Integration
 - ❑ Heterogeneity of “devices” and networks
 - ❑ Mobility
 - ❑ Managing scale
 - ❑ Distributed intelligence

IoT



An IoT action plan



IoT

1. <http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/06/378&format=HTML&aged=0&language=EN&guiLanguage=en>
2. http://ec.europa.eu/information_society/policy/nis/strategy/activities/ciip/index_en.htm
3. http://ec.europa.eu/commission_barroso/reding/docs/speeches/2008/nice-20081006.pdf



Thank you

For more information on IOT and RFID visit the policy pages of the European Commission:

http://ec.europa.eu/information_society/policy/rfid/index_en.htm

Access to an extensive library, events, links and news section

