



# EU Data Protection and the Internet of Things

Andreas Krisch <[andreas.krisch@edri.org](mailto:andreas.krisch@edri.org)>  
[www.edri.org](http://www.edri.org)

# European Digital Rights - EDRI

---

- Association of European Digital Rights Associations
  - founded in 2002
  - 28 Member Organisations
  - 18 European Countries
- 
- bi-weekly newsletter EDRI-gram since 2003
  - German edition since 2006 at [www.unwatched.org](http://www.unwatched.org)

# Agenda

---

- News from EU RFID data protection
  - Privacy Impact Assessments
  - Definition of personal data
- EC Internet of Things Expert Group
  - Requirements for RFID data protection
- Data breach notifications
- The EU data protection reform
  - Leaked documents

---

# News from EU RFID data protection

# 2004: RFID meets society



# RFID data protection

---

- 2007: EC RFID Expert Group (2007 - 2009)
  - On data protection and security
  - Industry, trade unions, consumer orgs, DPAs, standardisation bodies, EDRI, ...
  - Discussing requirements for RFID data protection
- 2008: RFID Logo



Quellen: FoeBuD; Informationsforum RFID



# RFID data protection (2)

---

- 2009: EC Recommendation on RFID data protection
  - Privacy Impact Assessments
  - Retail: mandatory deactivation at POS
  - Transparency (RFID Logos; info on application)
- 2011: RFID Privacy Impact Assessment
  - Self regulation
  - Endorsed by Article 29 Working party (WP 180)
  - Signed by industry and European Commission
  - Risk assessment approach

# RFID data protection (3)

---

- Article 29 Working Party (WP 175)
  - „if the tag is carried by a person [...], and if the tag contains a unique ID, then by definition the tag contains personal data“
  - „regardless of the fact that the “social identity” (name, address, etc.) of the person remains unknown“
  - “... even in those cases where a tag contains solely a number that is unique within a particular context, ..., care must be taken to address potential privacy and security issues if the tag is going to be carried by persons.“



---

# EC Internet of Things Expert Group

# EC IoT Expert Group

---

- 2010 – 2012
- Stakeholder involvement
  - Industry, standardisation bodies, consumer organisations, DPAs, IT security orgs, EDRI, ...
- Internet of Things
  - ... a global network infrastructure, linking physical and virtual objects through the exploitation of data capture and communication capabilities ...
  - ... independent cooperative services and applications ...
  - ... high degree of autonomous data capture ...

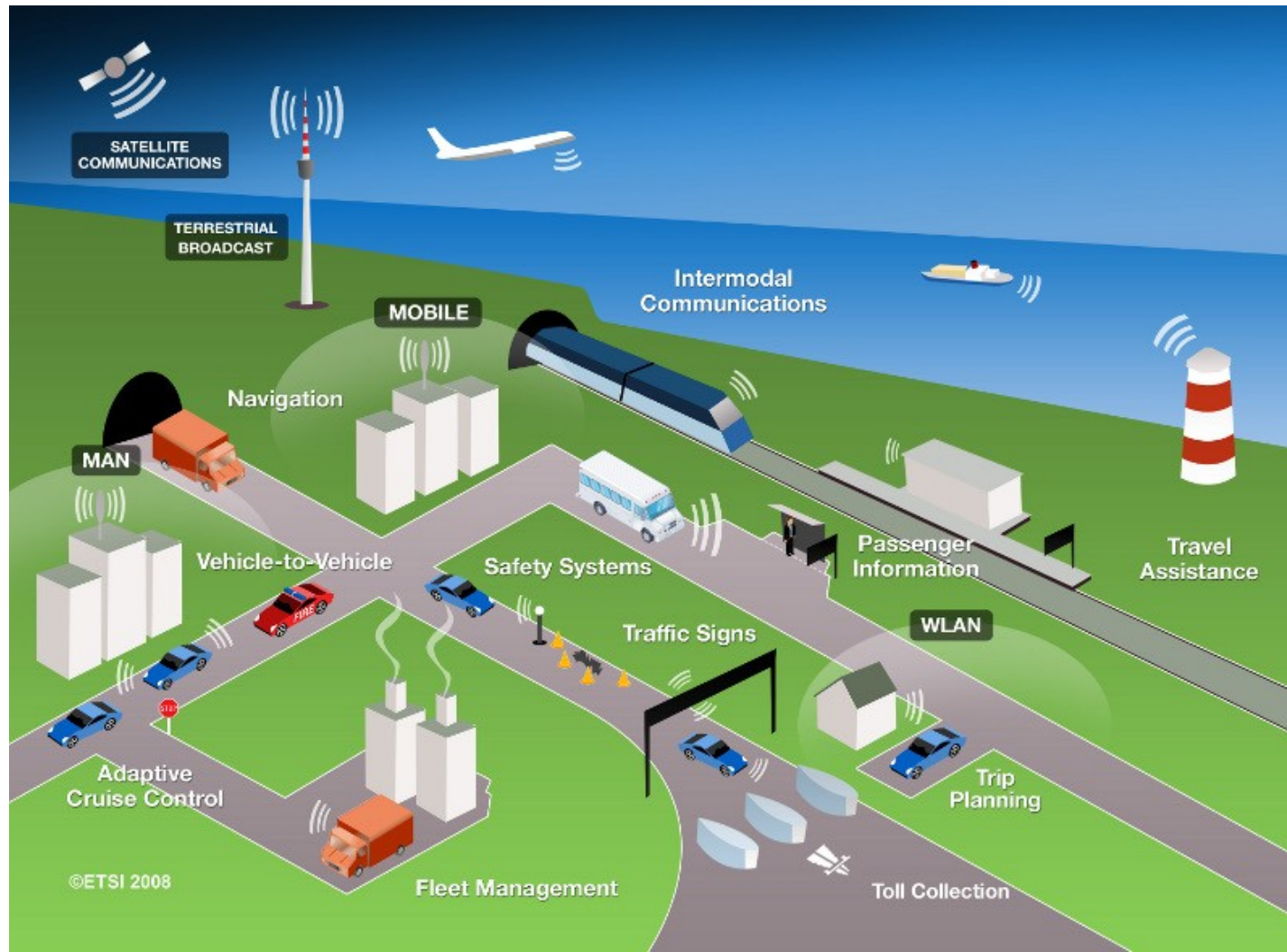
# e.g. Smart Metering

---



Quelle: EVB Energie AG; CC-BY-SA 3.0  
[http://de.wikipedia.org/w/index.php?title=Datei:Intelligenter\\_zaezler-\\_Smart\\_meter.jpg](http://de.wikipedia.org/w/index.php?title=Datei:Intelligenter_zaezler-_Smart_meter.jpg)

# e.g. Intelligent Transport Systems



Quelle: ETSI

# IoT data protection: challenges

---

- Automatic object identification may lead to automatic identification of persons
  - Collection of information based on object IDs, sensor data, connection capabilities
  - May reveal information on individuals, their habits, location, interests, ...
  - Traceability / profiling / unlawful processing, authentication and trust in the objects
- Combination of data
  - From different sources / services + data mining
  - Might create new knowledge on individuals

# IoT data protection: challenges (2)

---

- With IoT
  - Already existing data protection problems become even more pressing
  - Due to autonomous collection, processing and communication of data
  - By “intelligent” objects with only limited computing power

# IoT data protection: challenges (2)

---

- Data subject's rights
  - Individuals will often not be aware of IoT-systems and processing of personal data
  - How to ensure, that no unwanted processing of personal data takes place?
  - How to inform individuals?
- Data protection principles
  - How to ensure data minimisation, purpose limitation, ... with autonomously operating and communicating objects?



# IoT data protection: objectives

---

- Effective personal data protection entailing
  - Application of legal principles
  - Accountability
  - Enforcement
- A concept or tool is needed
  - Minimize privacy-, data protection-, security-risks
  - For citizens, customers, third parties

# IoT data protection: objectives (2)

---

- Ensure that
  - Individuals remain in control of their personal data
  - IoT systems provide sufficient transparency to enable individuals to exercise their rights
  - Information on IoT systems can also be understood by the average individual, not familiar with IoT
  - A clear and non-discriminative choice exists, where processing takes place based on consent
- Increase
  - Harmonisation and level of enforcement of DP law

# IoT data protection: measures

---

- Privacy, data protection & security risk assessments
- Catalogue of best practices & common risks
- DP as design goal for IoT systems
- Technical measures for better data protection
  - e.g. privacy policies that can – on user level – be pushed inside the objects
- Better harmonisation of DP legislation
  - + coherent application & better enforcement

# IoT data protection: measures (2)

---

- Bring Privacy by design to practice
  - Incl. Data minimisation & data deleting
- Enhance possibilities to exercise data subject's rights
  - Clear, easily understandable information on IoT data processing needs to be provided
  - Effective mechanisms to make individuals aware of the processing, the identity of the processor and the purposes of the processing need to be found

# IoT data protection: measures (3)

---

- Strengthen DPAs
- Introduce significant sanctions for DP violations
- Extend data breach notifications to all areas
- Make appointment of data protection officers mandatory
- Clarify requirements for valid informed consent
- Clarify definition of personal data
- Make DP mandatory design goal in standardisation

---

# The EU data protection reform

# The EU data protection reform

---

- Current DP directive adopted in 1995
- EC drafts reform documents
- Leaked documents
  - General Data Protection Regulation  
<http://statewatch.org/news/2011/dec/eu-com-draft-dp-reg-inter-service-consultation.pdf>
  - Police and Criminal Justice Data Protection Directive  
<http://www.statewatch.org/news/2011/dec/ep-dp-leas-draft-directive.pdf>



# The EU data protection reform (1)

---

- Better harmonisation
- Clarification of field of application
  - “... activities of an establishment of a controller or a processor in the Union”
  - “... where processing activities are directed to data subjects residing in the Union ...”
- Binding corporate rules
  - For processing outside of the Union
- Significant access barriers for foreign LEAs

# The EU data protection reform (2)

---

- Data Protection Officers
  - Mandatory for companies > 250 employees if core activity is not related to processing of personal data
- Informed consent
  - Not a legal basis for processing if significant imbalance – in terms of dependency – exists between data subject and controller
- Right to be forgotten; right to deletion
- Right to data portability

# The EU data protection reform (3)

---

- Mandatory data breach notifications
- DPAs
  - Clear(er) definition of powers & independence
  - Increased powers
  - Definition of co-operation between DPAs
  - Increased powers of Art. 29 WP → DP Board
- Increased sanctions
  - Depending on severity up to 5% of global annual turnover


# EU data protection reform (4)

---

- Time schedule
  - 25.01.2012: Official publication of draft legislation
  - Public consultation
  - Discussion in European Parliament & council
  - Loads of lobbyism, spinning & twisting
  - Adoption probably by end of term of EP (2014)
  - Transition period: ~ 2 years

**BürgerInneninitiative:**  
**Stoppt die Vorratsdatenspeicherung!**

**BürgerInneninitiative für eine Abschaffung der EU-Richtlinie zur Vorratsdatenspeicherung 2006/24/EG und Evaluation sämtlicher Terrorgesetze.**



[Text vorlesen](#)


Am 1. April 2012 tritt in Österreich die Vorratsdatenspeicherung in Kraft. Das bedeutet, dass ab diesem Zeitpunkt die Kommunikationsdaten aller BürgerInnen ohne Verdacht **sechs Monate lang** "auf Vorrat" gespeichert werden. Die Polizei kann überprüfen, **mit wem Du, wann, wie lange telefoniert** und vor allem **wo** Du dich zu diesem Zeitpunkt aufgehalten hast. ... [mehr](#)

[Text der BürgerInneninitiative](#)

**20775 Personen haben bereits mitgezeichnet!**

4471 Unterstützungen auf Papier und 16304 online

**1. Jetzt online unterschreiben!**  
Direkt auf der Webseite des österreichischen Parlaments unterschreiben.





**Thank you for  
your attention!**

Andreas Krisch

[andreas.krisch@edri.org](mailto:andreas.krisch@edri.org)

[www.edri.org](http://www.edri.org)

European Digital Rights AISBL

IBAN: BE32 7330 2150 2102

BIC: KREDBEBB