

The Internet of Things Stimulate or Regulate?

Internet Dagarna 09
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European Commission



Stimulate or regulate?

- An easy question? ... Or?
- The European Action plan for the Internet of Things
- (the RFID Recommendation)
- A (symetric) wish

Stimulate or regulate?

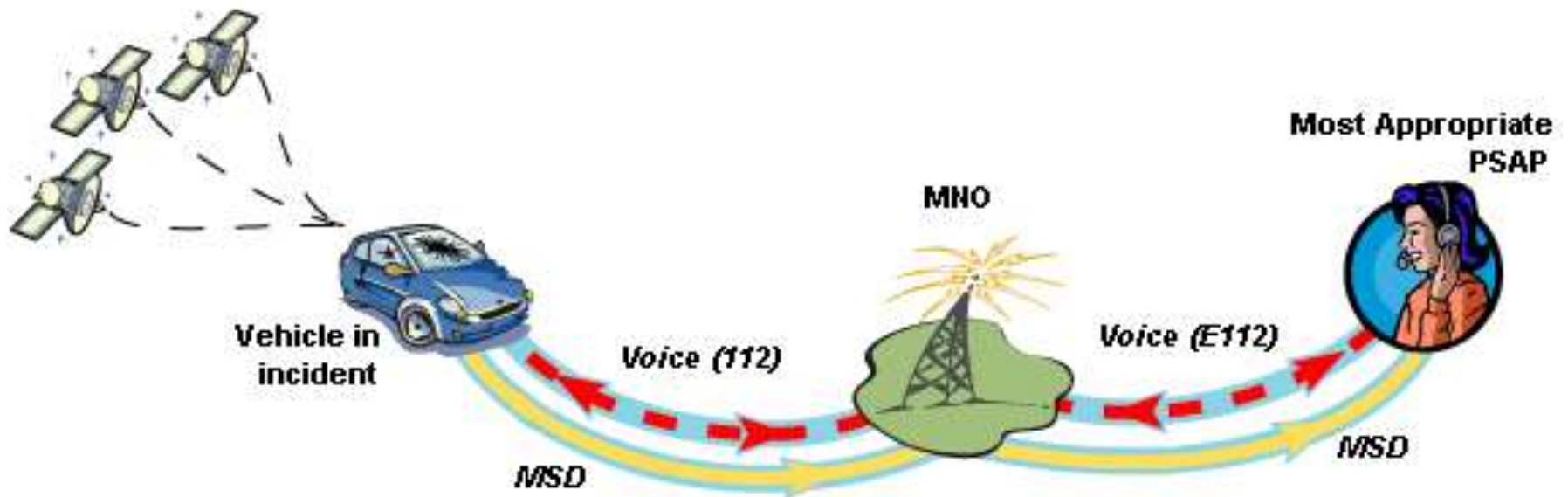
Last call to implement car safety system voluntarily

Reference: IP/09/1245 Date: 21/08/2009

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Mark Weiser, Xerox 1988

"They weave themselves into the fabric of everyday life until they are indistinguishable from it"

Kevin Ashton, 1998, Auto-ID Center:

"Adding radio-frequency identification and other sensors to everyday objects will create an Internet of Things, and lay the foundations of a new age of machine perception" -

UN report, 2005

"We are heading into a new era of ubiquity, where the users of the Internet will be counted in billions, and where humans may become the minority as generators and receivers of traffic.

Changes brought about by the Internet will be dwarfed by those prompted by the networking of everyday objects "

ITU, 2005

"Connections will multiply and create an entirely new dynamic network of networks –an Internet of Things"

Adam Greenfield, 2006

Ever more pervasive, ever harder to perceive, computing has leapt off the desktop and insinuated itself into everyday life. Such ubiquitous information technology "everyware"

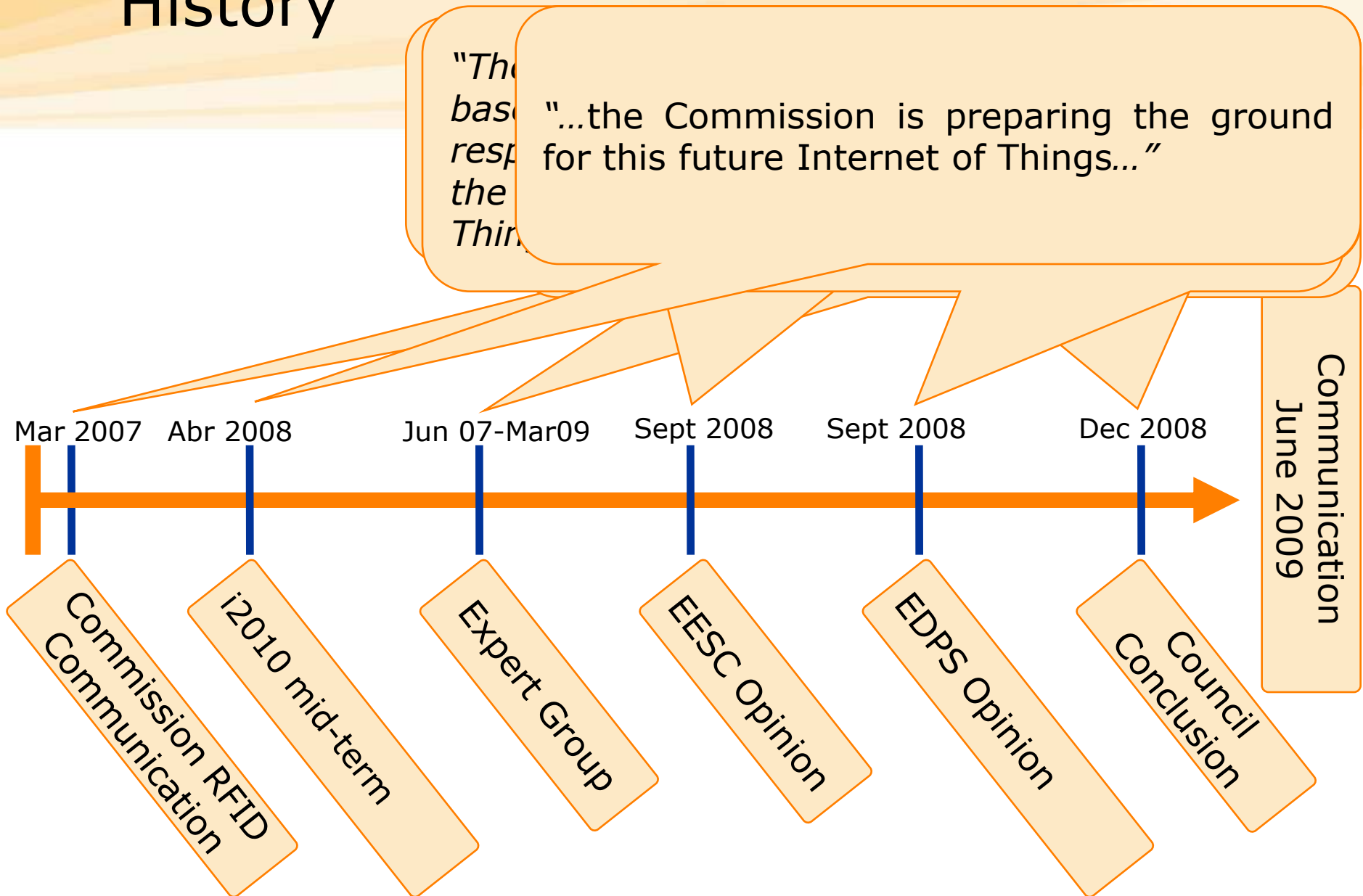
Viviane Reding, 2007

"... a new phase of the Information Society – the Internet of Things in which the web will not only link computers but potentially every object created by mankind."

CASAGRAS, 2008

A global network infrastructure, linking physical and virtual objects through the exploitation of data capture and communication capabilities. This infrastructure includes existing and evolving Internet and network developments. It will offer specific object-identification, sensor and connection capability as the basis for the development of independent federated services and applications. These will be characterised by a high degree of autonomous data capture, transfer event network connectivity and interoperability.

History



Governance



- How is this identification's structured?
- Who assigns the identifier?
- How is information security ensured?
- Which ethical and legal framework applies?
- ...

Action 1

Public authorities cannot shirk their responsibilities towards their citizens:

- *Define a set of principles underlying the governance of IoT*
- *Design an 'architecture' with a sufficient level of decentralised management*

Privacy and protection of personal data



Fundamental Rights

Action 2

- Continuous monitoring of the privacy and the protection of personal data
- Communication on trust and privacy in the ubiquitous society

Action 3

The 'right to the silence of the chips': individuals should be able to disconnect from their networked environment at any time

Trust, Acceptance and Security



Security for individuals

Security in the business

Action 4

The Commission will follow ENISA work on the identification of emerging risks and provide a policy frameworks to develop IoT

Action 5

The Commission will follow the development of IoT infrastructures becoming a vital resource to economy and society

Standardisation



- Interoperability
- Economies of scale
- Low entry barriers
- Level playing field

Action 6

Standards Mandate:

- Launch or extend currently standards mandates to include issues related to IoT
- Ensure IoT standards are developed in an open, transparent and consensual manner

Research and Development



Connecting a thousand objects is easy, connecting several billions remains a faraway challenge

Action 7

Finance research projects through FP7 projects

Action 8

Contribute to the respective Public-Private Partnership:

- Green cars
- Energy-efficient buildings
- Factories of the Future
- Future Internet



Openness to innovation



- New applications
- New uses
- New business models
- New barriers to innovation

Action 9

Innovation and pilot projects: promoting the deployment of IoT applications by launching pilot projects through CIP

Institutional awareness



- Act hand-in-hand with other institutions
- Understand the challenges
- Understand the opportunities

Action 10

The Commission will inform European Institutions and relevant stakeholders about IoT developments

International dialogue



Borderless applications
mean joint solutions

Action 11

International dialogue to promote the lines of action laid down in this Communication

Waste management



- RFID tags can have negative impacts on environments
- RFID tags could help the recycling process

Action 12

To assess the difficulties of recycling tags and the benefits and nuisances that the presence of tags can have on the recycling of object

Future developments



The story has just only started

Action 13

Eurostat will start publishing statistics

Action 14

The Commission will assessment the evolution of IoT

A wish...



Are you ready?

We believe the "winning solution" to making the most open, inclusive and innovative Internet of Things is to transcend the short-term opposition between social innovation and security by finding a way to

Forecasting

What we offer is forecasting through prototyping, focusing on the granularity of experience of input models, devices and experiences of people with the devices, and the quality of output that we measure in terms of real innovation in everyday life, not in a lab or 'Living lab'. *Are you ready for the Internet of Things?*

The changing balance in the roles of citizens, industry and government is hard to map in white papers. They are running behind actual practices the very moment of reading. You pay for expertise, but maybe expertise itself is no longer leading in the network. It is only one of the key factors. *Timing* is perhaps even more important. [Read more](#)

Input and Output

Council researches how applications can capture more granularity of experience. If the IOT wants to be like the real world, then it has to try to have the same kind of all out sensorial input. [Read more](#)

Timo Arnall



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[Elastic Space](#)

