



SmartSantander: Experimenting The Future Internet in the City of the Future

Large Scale Deployment of Wireless Sensor Networks: Challenges and opportunities

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Outline

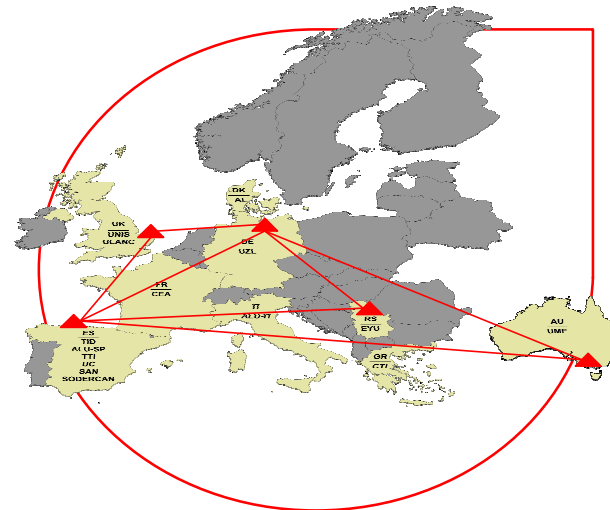


- Objective
- Vision
- Tangible results
- When architecture meets reality

Objective



- Creation of a European experimental test facility for the research and experimentation
 - Unique in the world city-scale experimental research facility
 - The facility will comprise of more than 20,000 IoT devices



Objective



- Non-suitability of current FIRE facilities for IoT experimentation
 - Real-World Internet (RWI) sessions of the Future Internet Assembly in Prague in early 2009.
- Many requirements not addressed
 - Horizontality
 - Verticality
 - Heterogeneity
 - Support for mobility testing
 - Support for scalability testing
 - Security, privacy, and trust
 - Confidentiality
 - ...

... AND THE END USER PERCEPTION ABOUT IoT PARADIGM

Vision



- Around 700 million people will be urbanized in 10 years.
- By 2025, there will be 100 new million-plus cities.
- About three billion people will be connected to the internet in the next 10 years.
- The internet is expanding from an information superhighway to a platform that is transforming industries.

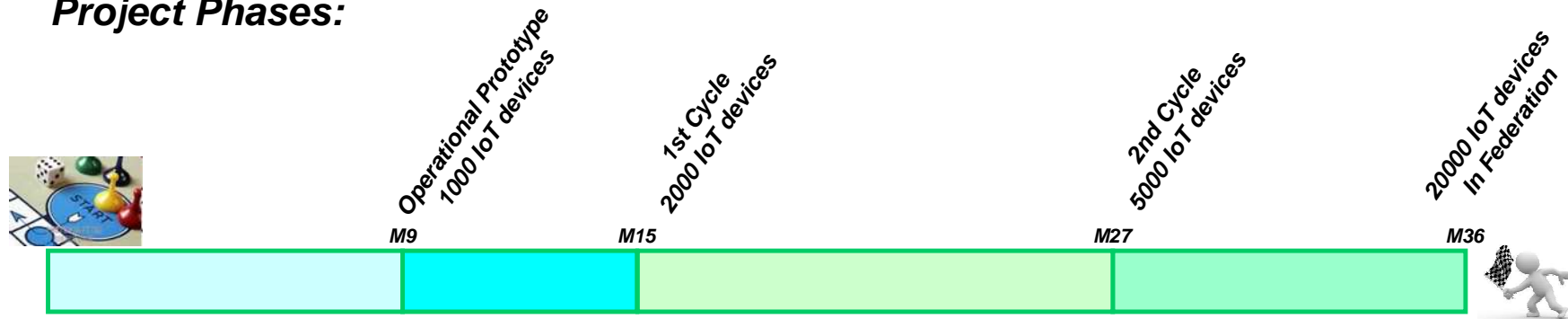
Smart City as the most promising FI playground

Vision



- Large-scale experimentation facility

Project Phases:



- Open to the world
 - 2 Open Calls for experimentation with budget allocated for the testers
 - FIRE scientific community
 - IoT service providers
 - Operators
 - Etc
 - 1st in July 2011 will use the first cycle of the facility.
 - 2nd in July 2012 using the second cycle of the facility.

Tangible results



- Architectural reference model for IoT experimentation facilities
- Experimental facility deployed
- FI experiments carried out within Open Calls
- Attractive platform for:
 - Communities of users
 - FIRE researchers
 - Service providers

When architecture meets reality



- Many models missing in ns-2, OPNET, ...
 - Vandalism
 - Work permits
 - Legislation
 - ...
- Far from the 1€ device dream
- Real Smart City applications
 - FI scenarios vs real-world services



Thank you 😊

SmartSantander: The meeting Point between the Future Internet and the Smart City Paradigm

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