

Moving towards IPv6

Warsaw, 26th April 2012

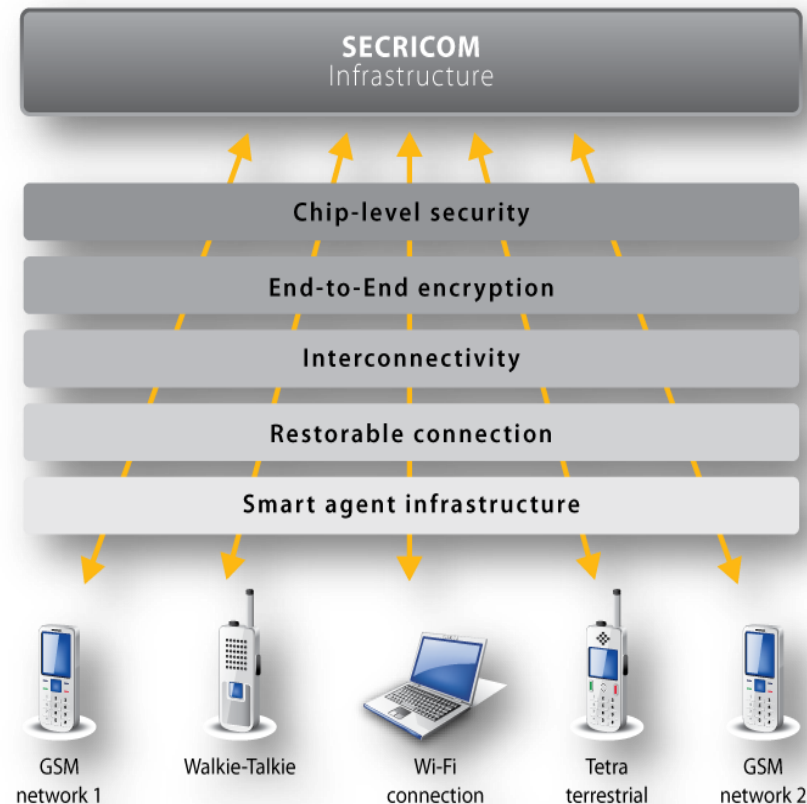
SECRICOM ACHIEVEMENTS

- Designed and built a reference platform and demonstrated:
 - A resilient and secure communication infrastructure to enhance existing capabilities
 - The Exploitation of existing communication systems
 - Scalable from day to day business to cross border crisis management
 - Interfaces towards emerging systems such as Software Defined Radio



Enhanced Capabilities from a Global IP based Solution

- Interoperability across heterogeneous communication systems
- Interconnectivity between different networks and user access devices
- Security through network monitoring, specialised chips and secure agents
- Resilience through the seamless use of multiple IP bearers



Safety Generations

1 st Gen.	2 nd Gen.	IP(v6) Based
<i>NCP</i>	<i>IPv4 / NAT</i>	IPv6
Pioneers	Innovators	Everyone Everything
Radio Voice only	GSM-based Voice, ..	Wireless, Media, LTE, SAT, GPS,..
No Interoperability		End 2 End
Silo Solutions	Public Solutions	Global Networked Solutions

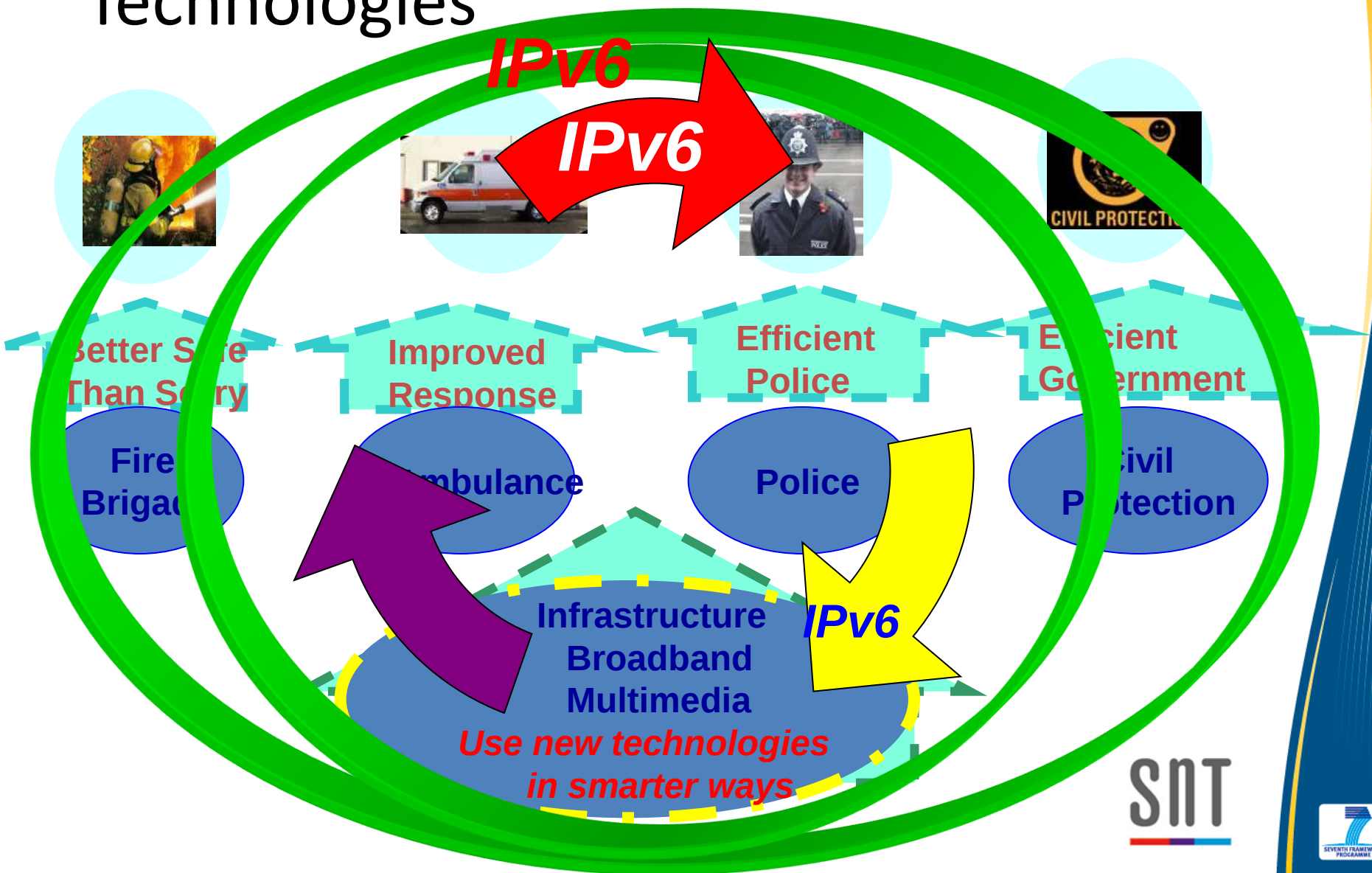
Internet Generations

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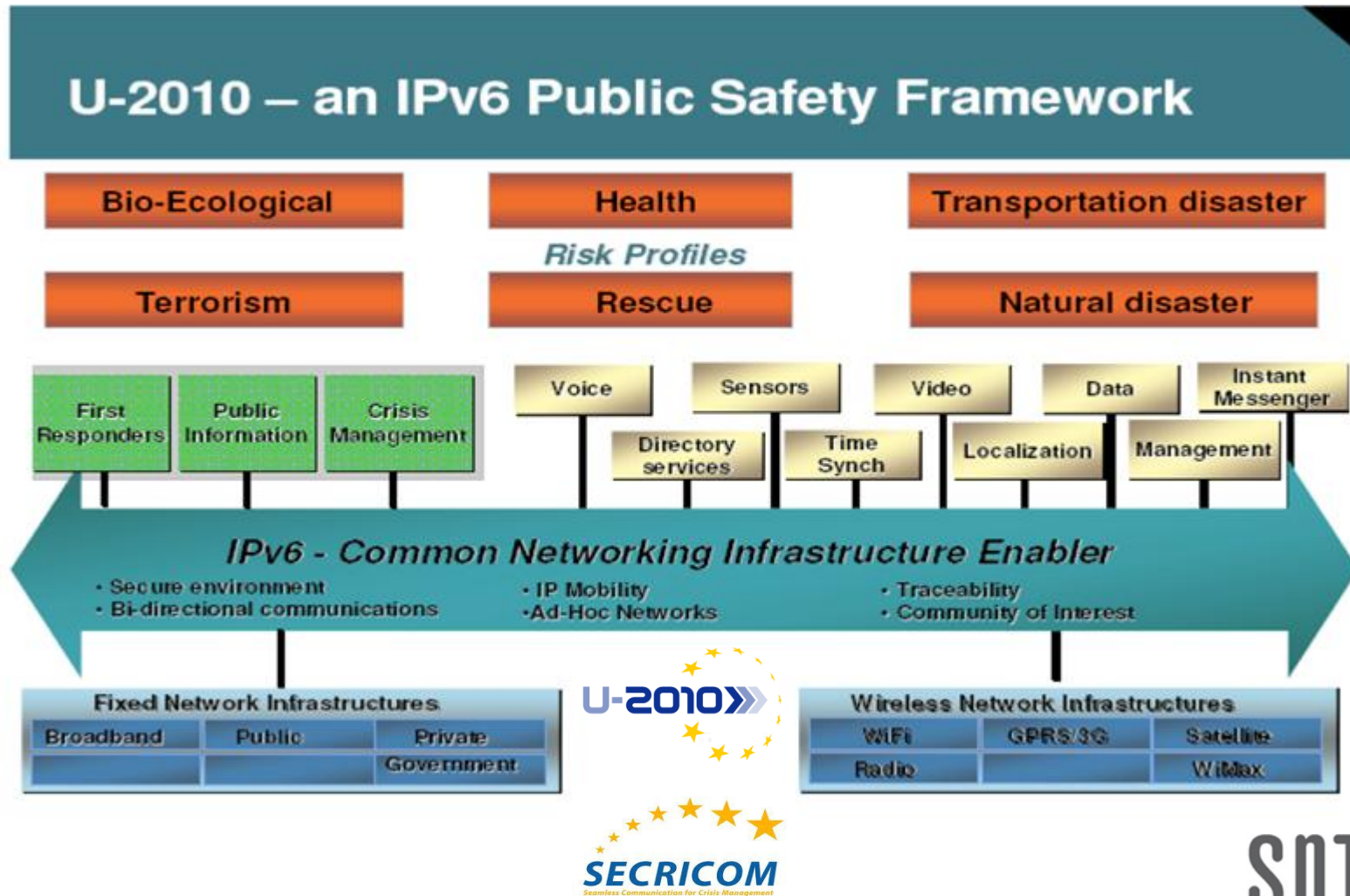
TETRA: Silo-Fragmented Safety Communication



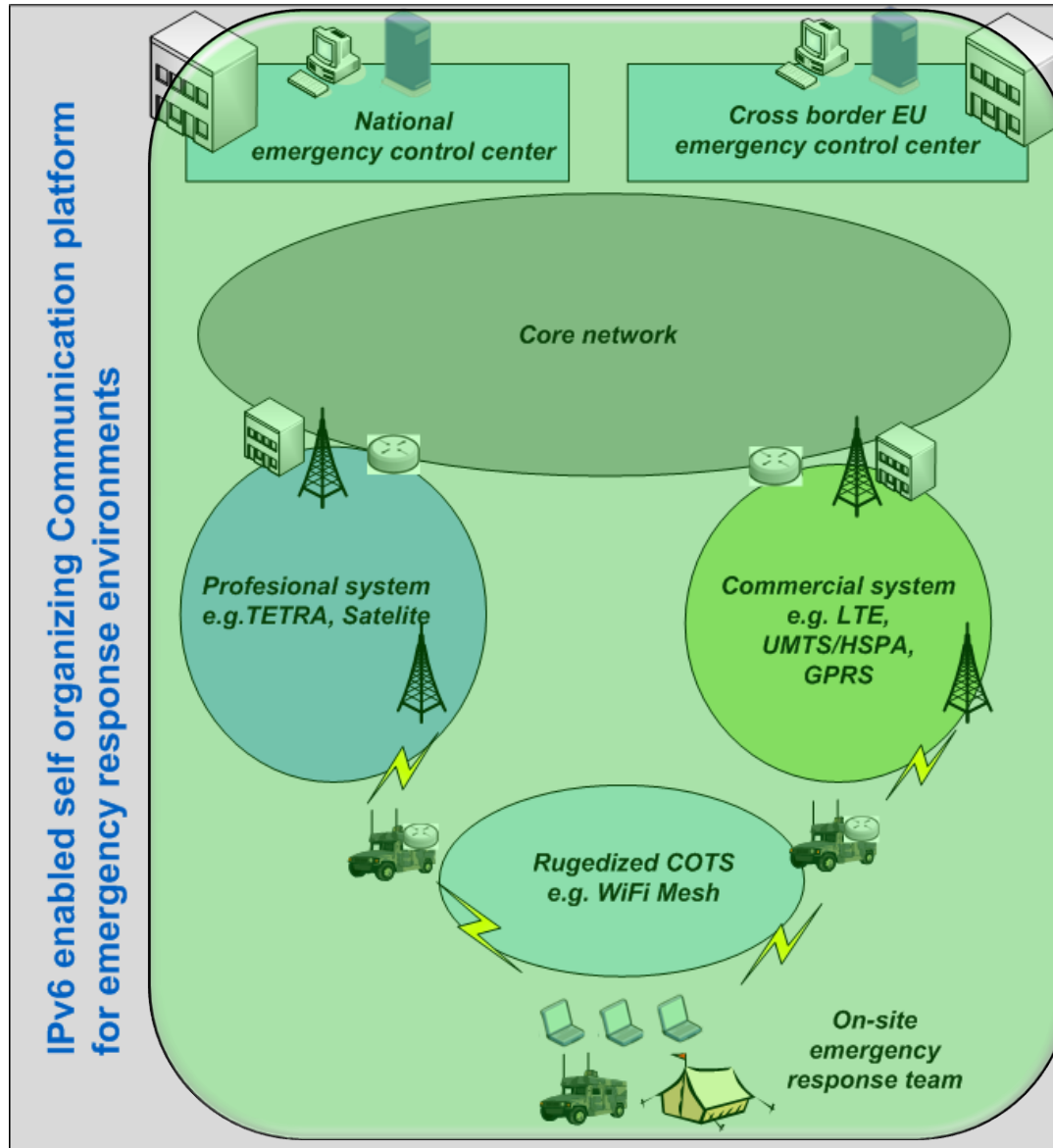
IPv6: For Most Advanced Safety Technologies



Global Networking Solution



High Level System view



IPv6 enabled domain

IPv6 – Based Public Safety Communication

IPv4 address exhaustion: 0% left

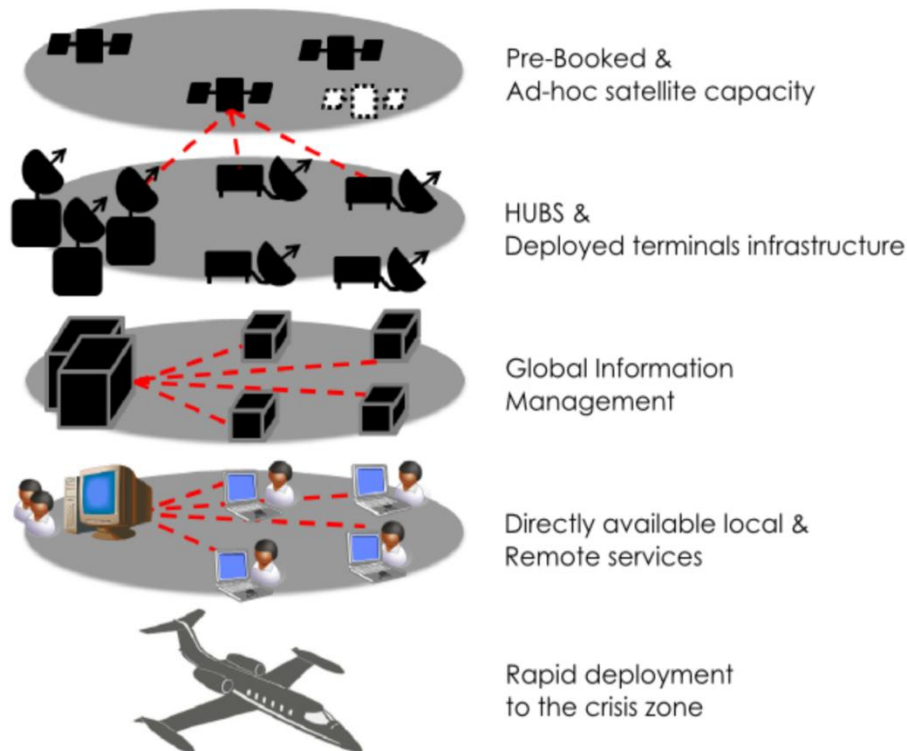
D-Day: 1/2/2010

The benefits of IPv6-based services are numerous:

- Cost savings in deployment of public safety networks
- Proliferation of innovative safety products (networked RFID, Sensors)
- Interoperable IP capable networks nation-wide and worldwide
- Enablement of Trusted End-to-End IP based Network Security
- Enablement of IP based Network Management
- Enablement of IP based Seamless Network and Node Mobility
- Enablement of Next Generation Network Application Services to Users
- Common open standards communication protocol to support multiple wireless networks configuration and integration (e.g. Sensor, Link, Internet)

SnT Achievements

- The Luxembourg Government has committed 17 M€ on this follow-up project on the u2010 project (www.u2010.eu)



emergency.lu

SNT

Visualisation



- ★ Command & Control Centre,
- ★ Secricom Silentel Server,
- ★ MBR, Monitoring tool, Secricom Agents,
- ★ End user devices with various OS.



Why IP? And why IPv6

- Why IP ?
- Standardized Platform for all applications, independent of underlying technology
- Seamless Network and Node Mobility
- End-to-End Management
- Commercial Off The Shelf products (COTS)
- Service-orientation and Common open standards communication protocols
- Proliferation of innovative safety products (networked RFID, Sensors)
- Any issues with IPv4 ?
 - **Warning: IPv4 public address pool ran out in 2010 !!!**
 - **IPv4: ok for the enterprise → IPv6: internet of things**

- Why IPv6 ?
- 128-bit Addressing
- End-to-End Addressing
- Network Layer IPsec
- New QOS Support
- Auto configuration

- Security Addressing
- Enhanced Multicast
- Multihoming Features
- Simplified Header
- Advanced Network Services

Thank you!