

*IPv6 take-up
[by public administrations]
clearly too slow...*

**Introducing IPv6 in the
Portuguese public administration**

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Two **IPv6 Communications** were tabled with priorities and action plans:

"Next Generation Internet-priorities for action in migrating to the new Internet protocol IPv6" (COM/2002/96) in 2002

"Advancing the Internet, Action Plan for the deployment of IPv6 in Europe" (COM/2008/313) in 2008

Further, in the **Digital Agenda for Europe** Communication of 2010, the Commission again enjoined Member States to make eGovernment services fully interoperable by supporting IPv6.

- **Vice-President Nelie Kroes** repeatedly expressed the need for timely planning the migration to IPv6, so as not to compromise the services to citizens and negatively impact the economy by making it difficult, if not impossible, the launch Internet-based services, and in particular those related to the Internet of Things (IoT).

Commission actions

- Over last 15 years, more than 100 M€ on IPv6-related projects, whilst promoting the adoption of IPv6 in **GÉANT**, the European Union's flagship research network, in fact the world's largest, which is **full-IPv6 since 2005**.
- More recently, with the objective of promoting and facilitating the adoption of IPv6, the Commission, in the scope of the **Competitiveness and Innovation framework Programme**, funded a number of Pilots focusing on the deployment of IPv6 in Government, but also in Industry

- Two **studies** were launched with the objective of monitoring IPv6 take-up.
- The Commission has introduced a specific indicator - **IPv6 readiness** – in the Digital Agenda Scoreboard (http://digital-agenda-data.eu/datasets/digital_agenda_scoreboard_key_indicators/indicators).
- This was directly fed by the **IPv6 Observatory** (www.ipv6observatory.eu) established in the context of the study SMART 2011/0059 on IPv6 Monitoring.

Provide

- Best Practices
- Roadmaps
- Benchmarks

to potential interested parties, to facilitate deployment and in particular transition from IPv4

GEN6 - Governments enabled with IPv6 –

www.gen6-project.eu

"The aim is to stimulate the upgrade of eGovernment infrastructures, and services of public interest to IPv6".

- National pilots in Germany, Turkey, Greece, Slovenia, Spain, Luxembourg and cross border pilots.
- Successful implementation of eGovernment can improve services, strengthen our societies, increase productivity and welfare, and reinforce democracy.

IPv6 and Future Internet priorities

- IoT/M2M

- SPITFIRE – spitfire-project.eu
- IoT6 - www.iot6.eu



- Cloud

- BonFIRE - www.bonfire-project.eu



- eGov

- GEN6 – www.gen6.eu



- 5G

In all of them, IPv6 has a major role to play!

Trends of IPv6 adoption

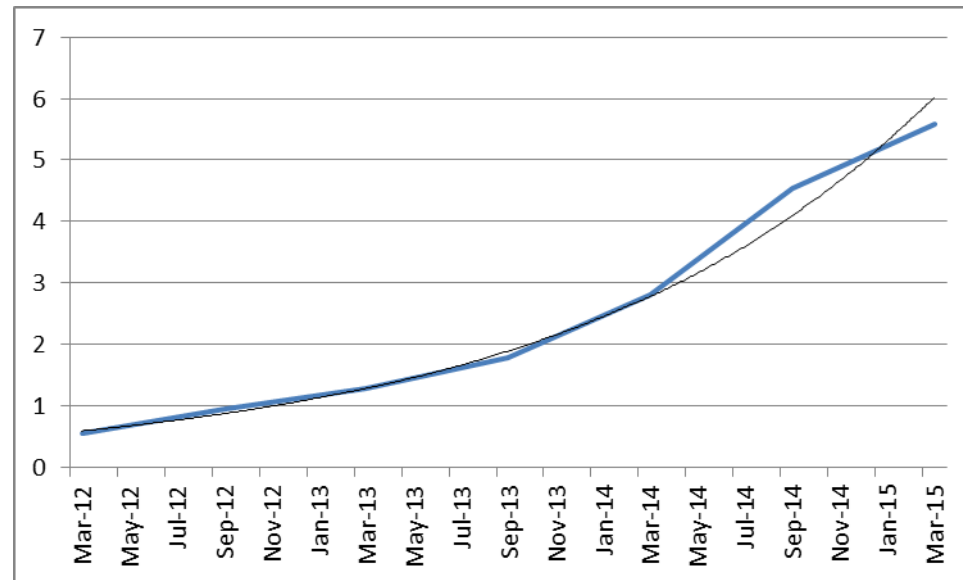
- Google figures show that the worldwide **IPv6 traffic has more than doubled every 8 months**

5.58% Mar 15

2.81% Mar 14

1.28% Mar 13

0.56% Mar 12



The need for end-to-end Experimentation

- The heterogeneity of the "**all-IP scenarios**" implies that none of the many players involved will be able to address the totality of the problem, or understand the "whole network"
 - too complex, too variable, too ill-defined
- Thus the need to **experiment, hands-on and on an as-large-scale-as-possible, end-to-end**, with the different "components", wireless and fixed, public and private, and with "realistic" **applications**



IPv6 is spreading ...



but too slowly!

IPv6 is critical!

In Conclusion...

- IPv6 has started taking-up, doubling its penetration every 7⁺ months, but a lot remains to be done
 - the level of preparedness varies across Europe
 - the same with the level of commitment of operators
- Companies, and in particular SMEs, are not ready; nor are Governments in general, not even many Universities...
- The Future Internet depends on IPv6
- We need to accelerate deployment of IPv6 in order to be able to fully exploit the potential of IoT/M2M, Cloud and eventually of 5G – as well as of the European experimental facilities



Thanks for your attention !



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Experimental Platforms

Net Futures

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cordis.europa.eu/fp7/ict/fire