

# **IPv6 deployment, European Commission involvement**

**RIPE 60 Prague**

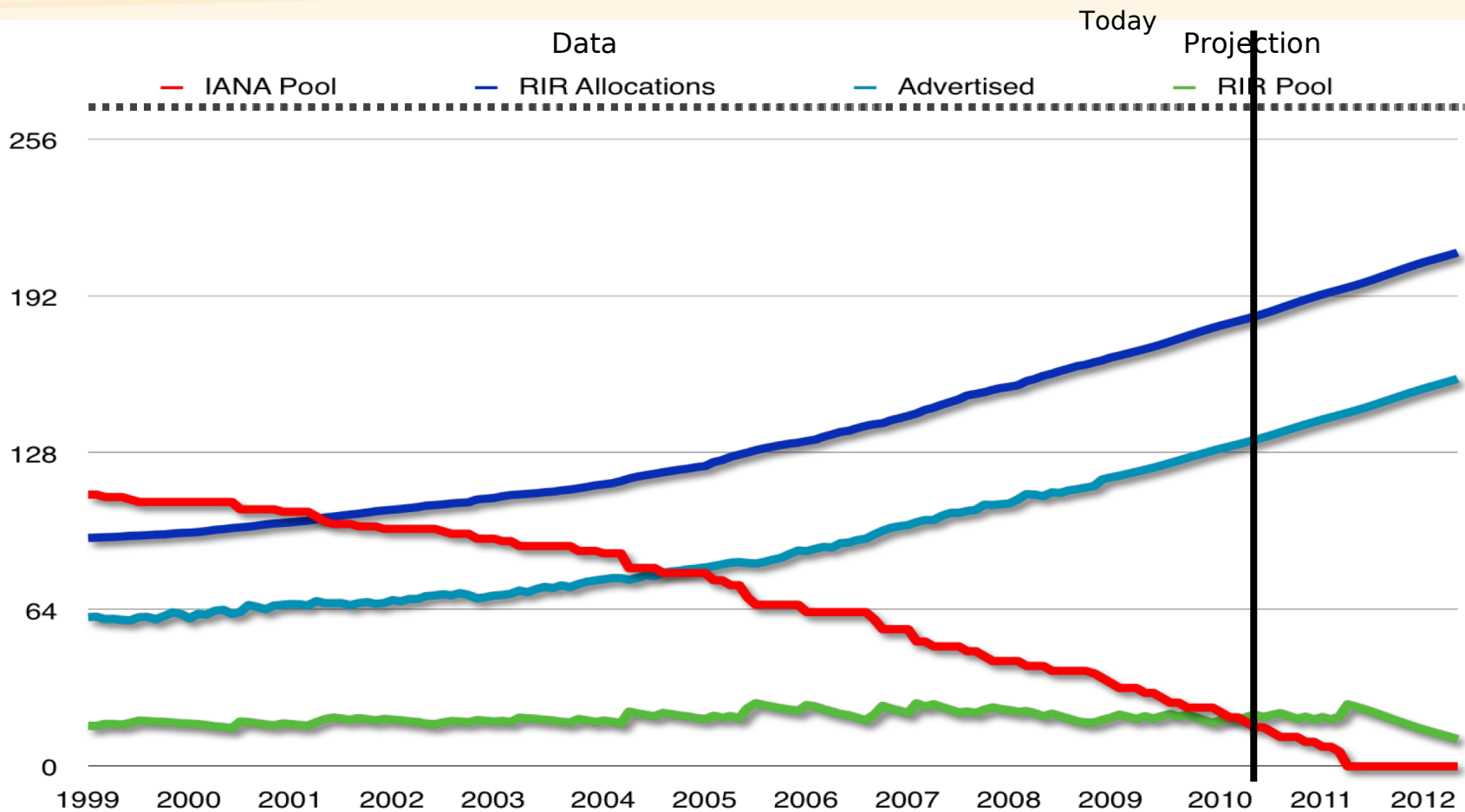
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# 50 Millions left





"We're ripe, take us!"

"I'm here, Mommy"  
H 51.30.24 W 008.19"

"Time for walks!"

"You left me here"

"Ground needs  
fert. flier"

"Can't wait, waiting"

"I'm all out of it!"

"We're 50% off!"

"Blood pressure  
rising!"

"Aren't I ahead?"

"I'm causing  
contamination!"

"Send me energy"

# Why EC involvement in IPv6 deployment?

- *Slow down of Internet growth*
- *Distortion of the market*
- *Negative effects on innovation*



# European steps..

Focus of R&D moving from research to industrial uptake

TIME

R&D projects.. international cooperation... Prepare deployment

R&D projects

IPv6 testbeds demonstrated the feasibility and the value added. GEANT and NRENs IPV6 enable.

Large scale testbeds

Launching of National and EU Task Forces

Dissemination

New communication to the MS

Policy actions

Procurement

European Defence Ag has IPv6 enablement in its work plan

ISP Commercial offers

FREE in France and others coming

EU Action plan



# Commission Communication to Parliament and Council on IPv6

## *ADVANCING THE INTERNET*

### *Action Plan for the deployment of Internet Protocol version 6 (IPv6) in Europe*

May 2008



# ACTION PLAN TARGETS

- Europe should sets itself a target: at least 25% of users should be able to connect to IPv6 2010.



- Cooperate with content and service providers – encourage ISP to provide IPv6 connectivity.



# ACTION PLAN TARGETS

- IPv6 to be used by Research Projects under FP 7 whenever possible
- "Europa" and "CORDIS"
- IPv6 accessible 2010.



- Encourage Member States to use Public Procurement



- Awareness campaigns intended for different users groups.





# ACTION PLAN TARGETS

- Support of the inclusion of IPv6 on education curricula through a separate study.



- Security and Privacy (S&P) issues.
- Support from ENISA



- Progress Review 2010 to assess the progress through separate study.



# Study on Security

- Advantages of IPv6
  - **Planning reliability: extended lifetime compared to IPv4**
  - **Simplified and extensible address plan**
  - **Standard routing (i.e. no NAT)**
  - **Direct availability of secure mobility (NEMO w/ IPsec/IKE)**
  - **Simplified deployment of IPsec/IKE**
  
- Shortcomings/challenges of IPv6
  - **Maturity of proposed solutions (work in progress)**
  - **Scalability to be asserted (work in progress)**
  - **Migration of current infrastructures (core, airports...) , planes and legacy applications**
  - **Training of administrators**



# Study for Curricula

- **The objective of the IPv6 Curricula study is to analyse**
  - **the actors** (offer and needs)
  - the **processes** related to the **stakeholders' training** on the new Internet Protocol IPv6.
- **The study will permit:** to establish scenarios aimed at evaluating **how actions aimed at developing the IPv6 training offer would support and potentially accelerate the IPv6 adoption in Europe.**
- **The study will be illustrated:** by **case studies** and will be expressed through **recommendations.**



# Project IPv6 Monitoring Deployment

## Four main objectives:

- **Calculate the number of IPv6 enabled users**
- **Conducting two specific IPv6 measurement campaigns for Europe in 2009 and 2010**
- **Assessing the global deployment, quality and security of current IPv6 products and services**
- **Disseminating the results**



# *Possible next steps.....*

Gather with interested stakeholders to follow up the piloting of IPv6 in relevant EU programmes. The objective will be to encourage and support the deployment of IPv6 in Member States, through activities that might include:

- Show cases
- Training
- Exchange of best practices
- Applications and services
- ...



# DG INFSO Trial

## Hardware setup

Cable provider /IP provider/ EC infrastructure /WIFI IPv6 access point to DG INFSO.

## Connectivity

IPV6 connectivity / EC DNS service

## Services

Europa web site cloned on an IPV6 web server in DG INFSO

**Url: [ipv6-infso.ec.europa.eu](http://ipv6-infso.ec.europa.eu)**



- Home
- Action Plan
- Events

POLICY :: IPv6

# IPv6 has reached DG INFSO!

On Monday 26th April, DGINFSO has aunched an IPv6 trial in Beaulieu 25.

Native IPv6 WIFI access will be possible from BU25 S1, as well as access to the DGINFSO web pages of EUROPA for IPv6 users from all over the world!

[Please click here for IPv6 connection](#)

## IPv6: Enabling the Information Society



All languages have syntactic rules. Those rules govern the structure of sentences and

- Highlights**
- Workshop on IPv6: Upgrade for Europe. **Presentations available.**
  - Study Monitoring IPv6**
  - Study IPv6 Curricula**
  - Study on IPv6 security models

- News**
- ICT 2010: Deadline extended - call for exhibition proposals** (29/03/10)
  - Call for Proposals for Networking sessions at ICT 2010** (17/03/10)
  - Radio spectrum: public consultation on future policy; 22-23 March Summit** (04/03/10)
- [All news...](#)

- Funding**
- No funding opportunities available for the moment.
- Next Events**
- Promoting Western Balkan research excellence in the fields of eHealth and Network & Service Infrastructures** (Skopje, F.Y.R. of Macedonia, 10 May 2010)

# In conclusion

- *Deployment of IPv6 is not happening fast enough*
- *Negative effects on innovation have to be avoided*
- *Awareness and Cooperation*





# Let's cooperate!

## Thank you..

[http://ec.europa.eu/information\\_society/policy/ipv6](http://ec.europa.eu/information_society/policy/ipv6)

[per.blixt@ec.europa.eu](mailto:per.blixt@ec.europa.eu)



# RIPE Community Resolution on IPv4 Depletion and Deployment of IPv6

News | Amsterdam, 26 October 2007

**"Growth and innovation on the Internet depends on the continued availability of IP address space. The remaining pool of unallocated IPv4 address space is likely to be fully allocated within two to four years. IPv6 provides the necessary address space for future growth. We therefore need to facilitate the wider deployment of IPv6 addresses.**

**While the existing IPv4 Internet will continue to function as it currently does, the deployment of IPv6 is necessary for the development of future IP networks.**

**The RIPE community has well-established, open and widely supported mechanisms for Internet resource management. The RIPE community is confident that its Policy Development Process meets and will continue to meet the needs of all Internet stakeholders through the period of IPv4 exhaustion and IPv6 deployment.**

**We recommend that service providers make their services available over IPv6. We urge those who will need significant new address resources to deploy IPv6. We encourage governments to play their part in the deployment of IPv6 and in particular to ensure that all citizens will be able to participate in the future information society. We urge that the widespread deployment of IPv6 be made a high priority by all stakeholders."**

# DG INFSO Trial

## **Hardware setup challenge**

Dual stack / DNS configuration for client detection (V4/V6) and transparent rerouting to V4/V6 web servers

## **Applications challenge**

Find specific IPV6 applications to better demonstrate the benefits to citizens

