# Outlooks on IPv6 Deployment: An European View

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## The European IPv6 Task Force

- The European Commission created the IPv6 TF (2001)
- Goal: Prepare the roadmap for the IPv6 adoption and large scale deployment in 2005





 "Our objective is to ensure that Europe's competitiveness in wireless technology is not jeopardised by the lack of a clear road map towards IPv6," European Enterprise
 Commissioner Erkki Liikanen said in his opening speech to the IPv6 Task Force.





#### The move to IPv6 is Global

- January 2002: The TF concluded
- February, March and June 2002:
  - The EC and the Council publish different documents adopting the TF conclusions.
- e-Europe 2005: IPv6, Broadband and 3G
- Continuation of the TF, in a 2<sup>nd</sup> phase, with the support of the Steering Committee project
- Several European countries (Spain, France, UK, Germany, Switzerland, ...), initiated local activities
- Several TF-like groups across the world, cooperating together







#### R&D "Arena": Past & Present

- A few research projects 2-3 years ago (FP5 IST program)
- Now several Research projects representing investments over 180 MEuros (90 from the EC)
- Major platforms and networks:
  - 6NET, Euro6IX
  - Available NOW, and interconnected
  - With international peering to Japan, Korea, Abilene, ...
  - Also to provide native connectivity for other projects
- Over 40 projects:
  - With IPv6 as the main focus (6POWER, 6QM, 6WINIT, ...), or
  - Using IPv6 for new applications and services (Android, Crumpet, ...)
- 6LINK to support the collaboration in the IPv6 Cluster
- Eurov6 to provide permanent and nomadic showrooms for the industrial and R&D achievements







Information Society
Technologies

#### R&D "Arena": The Future

- Next IST Program, FP6, clearly supports IPv6, Broadband and 3G as key technologies
  - Over 900 MEuros in the 1<sup>st</sup> call (4-5 calls)
  - International cooperation expected and highly encouraged
- The IPv6 Cluster facilitated the creation of the "ALL-IPv6-World" WG
  - 20 Activity areas suggested
  - Towards new applications and services
- IPv6 as a key enabler of "ambient intelligence"











#### **Deployment Status**

- European industry is supporting IPv6
  - In a short term
  - Manufacturers of devices, routers
  - Appliance manufacturers
  - Application developers
- Several Telcos and ISPs seriously considering commercial deployment
  - A few already providing services
  - GEANT moving to IPv6 next March
- Education programs still needed







# A Killer Application?

- 3G and Beyond are delayed ... and they aren't the killer application for v6
- · What then?
  - May be Home automation, Industrial automation
  - Surveillance
  - Gaming
- New application and services
  - End-to-end connectivity
  - Autoconfiguration
  - Mobility
  - Security
  - Ubiquity
- New technologies for broadband:
  - WLAN
  - Power Line







## When, Why and Where?

- Can we talk about massive deployment?
  - End of 2003 will start the competition
  - Industry starting to recover?
  - In 2005 will be very significant, may be only in some countries (national take-up actions)
  - Coexistence is a must
  - Killer "applications" probably, will make the "big-bang"
- Because IPv6 can be cheaper
  - Specially for new services, new ISPs
  - Make our life easier
- Home, Automation, Hot spots
  - Finally Everywhere, but it will take time (2007-2010)







# Everywhere ....

- Yes ... we want to be always-on connected
  - Anytime
  - "Any-media"
  - Seamless
  - Keep Moving
- IP(v6) must be transparent to the user
  - This is the KILLER APPLICATION
- IPv6 will help, definitively to break the digital divide
  - Some governments and organizations still NEED to take this in consideration
- We MUST do it together!







#### Thanks!

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# Next Madrid 2003 IPv6 Summit (12-14th May 2003), pre-register at:

www.ipv6-es.com







