ITU Workshop on IPv6

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Daily wrap-up

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Highlights from *Session 1*: "Factual introduction: Current situation"

- Remind ourselves IPv6 is a problem because of the success of the Internet
- IPv6 does not change much technically – which is an advantage and disadvantage
- NGN – IP layer is getting stretched
- Get ready needs about 3 years, therefore need to start now
- Chance in countries with less legacy infrastructure
- Problem is not in the core network, but in the periphery, support for smaller ISPs

Highlights from *Session 1*: "Factual introduction: Current situation"

- China Next Generation Internet
  - IPv6: On the way to commercialisation
  - Olympics experience
- Today, major challenges remain and are reported (for instance cost efficient IPv6 capable modems)
- Where does the demand come from?
  - Research network leading, but corporate customers hesitating, consumers ignorant

Highlights from *Session 1*: "Factual introduction: Current situation"

- Countries on different paths
  - "needs active involvement of governments"
- Training is an important issue, including practical experience and testbeds
- Information about EU projects:
- http://ec.europa.eu/information_society/policy/ipv6/index_en.htm
  - http://ec.europa.eu/information_society/policy/ipv6/fap_rd/index_en.htm

Highlights from *Session 2*: "Technical issues of IPv6 migration"

- Only few AS's offer IPv6
- Most of IPv6 networks are not production networks
- DNS getting IPv6 ready
  - Measurement of queries possible
- Standardisation needed to adapt IPv6 to NGN
- Migration strategy: from government to market

Highlights from *Session 2*: "Technical issues of IPv6 migration"

- IPv6 protocols mature and ready products proliferate, but transition mechanism still need research
- There is no major business driver
  - However ISPs are aiming for business continuity
- Application driven views show IPv6 advantages

Highlights from *Session 3* "Economic dimension of IPv6 adoption. What is at stake?"

- Migration to IPv6 is uncertain, as regards when and if.
- Allocation model today is on (technical) need; problem of early address allocation; mechanics/economics of re-allocation (reclaim, transfer, …)
  - Avoiding routing problems
  - Different models proposed
  - Quality and Integrity of address allocation

Highlights from *Session 3* "Economic dimension of IPv6 adoption. What is at stake?"

- Involvement of all actors
- IPv6 address allocation does not seem to create any problems
- Historical imbalance of IPv4 address allocation, hence smooth IPv6 transition needed
  - What costs issues are implied?
  - Specific issues of developing countries?

The “biased” conclusions of the Chair

- Wait for IPv4 pain to grow sufficiently or do something particular?
- Governments have a role to play
  - However, they should seriously start to use IPv6
- Presumably, IPv6 will be driven by ISPs keen to ensure business continuity or/and by edge networks (multi-play applications, sensor networks, ...)
- In case IPv6 takes off, I would not be surprised to see a faster migration (i.e. no dual stack) than commonly expected today

The “biased” conclusions of the Chair

- Architecture comparisons of IPv4 to IPv6 could be helpful,
  - to demonstrate the value of a more agile network to decision makers
- Uncertainty about IPv6 migration; what happens if IPv6 does not get deployed?
  - Transfer markets
  - Role of RIRs
  - Policy framework
- Routing table issues
- DNS seems to be managed without major issues, however responding issue, DNSSec and NAT-PT