Barriers to IPv6 adoption

Mat Ford

Background

- Requested at the TF London meeting 17/01/03
- Aims:
  - To get a list of areas requiring further work
  - Provide steer to FP6 projects
  - Provide steer to national TFs
- Process
  - Input requested from experts
  - Reviewed at TF Berlin meeting 30/04/03
  - Document published on web site

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Technical barriers

- Multihoming still undefined
- IPv6 access network equipment
- Network management
- Host OS support
- IP version-neutral applications
  - Not just new apps
  - Existing enterprise apps, network services
- DNS infrastructure
  - AAAA glue & Anycast
- Security / UNI
- Site-local address resolution

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Recent news

- **Speak Freely EOL announcement**
  - **But won't NAT go away once we migrate to IPv6?**
    - Even if [IPv6 will actually be implemented end-to-end for a substantial percentage of individual Internet users], don't bet on NAT going away. Certainly it will change, but once the powers that be have demoted Internet users from peers to consumers, I don't think they're likely to turn around and re-empower them just because the address space is now big enough. Besides, the fraction of users who care about such issues, while high among those interested in programs such as *Speak Freely*, is minuscule among the general public.

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Commercial barriers

- Business case
  - Make money: new apps, customers, market segments
  - Save money: OSS, customer support
- Practice of charging for multiple static IPv4 addresses
- Bandwidth costs for VoIP higher for IPv6
- Perception of NAT as a security technology
- Perception of P2P as a copyright-infringement technology
- Core network infrastructure replacement cycles

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Other factors

- Training for engineers, customer support, marketing
- Lack of awareness of the IPv6 benefits amongst those who could benefit

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