Barriers to IPv6 adoption

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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
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
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.
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
Other factors

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