3GPP and IPv6

- IPv6 is now mandated for Release 5
  - Core Network
    - IP Multimedia Subsystem
  - Radio Access Network
  - Terminals
- We are embracing IPv6

Advantages of IPv6

- Huge address Space
- Hierarchy in address space
- Optional Headers
- Auto-configuration
  - stateless & stateful
- Better Multicast support
- Better Macro Mobility support with Mobile IPv6

Impact of IPv6 on Mobile Operators

- 2.5 G and 3G (Release 4) Core Networks need to be converted to IPv6.
- IPv4 and IPv6 coexistence with the Internet
- Availability of IPv6
  - core network equipment
  - enabled terminals
- IPv6 has not yet been deployed in the Internet

Issues of Concern (1/2)

- Compression of IPv6 header to reduce bandwidth requirements
- Micromobility is still in its infancy
- IP QoS is still in its infancy
- Mobile IPv6
  - security of binding updates
  - impact of Location Updates on Traffic Volumes

Issues of Concern (2/2)

- User Privacy
  - push services
  - Static IP Address Vulnerability
- Portability is a new issue has not yet been discussed
  - may not be necessary at the IP Address Level
- Simultaneous migration of the Internet and the mobile Internet to minimise interoperability problems

What we would like to see done in this Task Force (1/2)

- Operators
  - discuss and exchange information on interoperability issues
  - participate in trials to test the technology
- Suppliers to develop cost effective solutions for
  - IPv4 and IPv6 coexistence
  - IPv6 in terminals and in the Core Network
  - work together with academia to develop innovative and practical solutions to issues

What we would like to see done in this framework (2/2)

- Research to focus in solving some of these practical issues through the IST 6th Framework
  - identify issues not yet discovered
- More active participation in the IETF by European mobile operators, suppliers and researchers
- EU and National Governments to remove barriers and encourage early adoption of IPv6