Mobile Wireless working Group

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The future of 3G is bright with IPv6.
In the initial phase of GPRS/UMTS with a few millions of terminals, IPv4 is a perfectly reasonable solution, but to offer a scalable service that will cater for 10s of millions of terminals, IPv6 is an imperative.

There are sever problems and limitations with band-aids i.e. NATs, and although these are valuable in the near term, ultimately they will limit connectivity, interoperability, and performance in enterprises.
COMMON AGREEMENT

New service opportunities and customer benefits

- Operational benefits, including network efficiency;
- Cost Effectiveness (i.e. potential reduction of future operating costs);
- Minimising industry-wide disruption.
“What is ALL-IP???,
„WHAT IS IMS???,“,

???
Evolution towards All-IP

2G
- ANSI-41
- PDC-MAP
- GSM-MAP

3G
- Evolved ANSI-41
- Evolved GSM MAP

Short-term
- ANSI-41
- All-IP
  - GSM MAP
  - IMS

Long-term
- IP

Internet

IPv4
- IPv6
- Mobile IP
- IPvx

Micro Mobility (Fast Handoff, Paging)
Roadmap
IPv6 Draft RFC/ 3GPP capabilities

IPv4/IPv6
IPv6/SIP
GPRS
IMS
IPv6/SIP
Packet
Switched
IPv6/SIP
GPRS
IMS
IPv6/SIP
Packet
Switched

GSM
Circuit
Switched

Phase 1
Phase 2 Rel 96 Rel 97 Rel 98 Rel 99 Rel 4 Rel 5

What does the future hold?

IP-based Multimedia Subsystem (IMS) handling of multimedia services using SIP (Session Initiation Protocol) signalling and the bearers offered by the PS domain. (Note: dependant on availability of IETF RFCs. IMS security will not be available until June 2002).
"The nice thing about standards is that there are so many to choose from."

Today in multimedia rather than choosing one, one uses all of them together.
Anytime
- "Always on" operation requires unique addresses for every mobile device; IPv4 is already nearing exhaustion

Anywhere
- Seamless mobility is needed, along with location privacy and security

IPv6 simplifies challenges
WIRELESS INTERNET

- **Access-independent**
  - Efficient transport across wireless links and effective QOS is essential

- **Application-friendly**
  - Access to the public Internet and IP-based services from a wide variety of terminal devices enables new revenue streams

- **Affordable**
  - "Off the shelf" components, simplified user management, and easy upgrades make this technology economically viable
Numbers & Numbering and Names

Addressing and naming becomes easier for operators
No need for messy and non-scalable workarounds like
Schemes based on NAT and IPv4/IPv6 mapping.

International Numbering
Calling line Identification
Directories
Business use of Numbers
Personal numbering and Universal telephony

INTERNET PROTOCOL ADDRESSING

SIMPLIFY YOUR LIFE
Recommendations

- Recommendations to EU Member States Governments
- Recommendations to the Commission
- General Recommendations to the Industry at large
IPv4 and IPv6 will coexistence for many years before IPv4 will be soft and gradually phased out.

No magic date imposed on anyone to move to IPv6, there will be an incentive to move before it becomes too late and expensive.
Europe needs to strengthen its key position in the Mobile Industry. With the Asian industry already investing millions of US dollars in IPv6 enabled consumer appliances, Wireless devices and in other industry sectors, Europe needs to do the same.

Besides, IPv6 in its wide expected deployment, is not limited to fixed core networks, wireless and cellular systems ONLY.
Recommendations

For IPv6-enabled services to be deployed in a timely manner - consolidate and integrate European efforts on IPv6.

The Industry should contribute towards the acceleration and alignment of on-going IPv6 work within standards and specifications bodies.
Recommendations

THE EUROPEAN COMMISSION SHOULD initiate a discussion of IPv6 policy matters at European LEVEL AND ASSIST AND ENCOURAGE THE WIDE SPREAD DEPLOYMENT of IPv6 IN A TIMELY MANNER.

ITU COULD ASSIST IN supporting A global strategic action plan.
Applications and Tool kits

Some Vendors are fully integrating IPv6 in their OS!

Europe needs to encourage more SME’s and SW Developers TO BE INVOLVED IN IPv6 APPLICATIONS!

IP in Devices

PDA / Phone
Conclusion (1)

The work of the IPv6TF identifies a number of issues and key findings.

IPv6TF summarises on a high level a way forward and presents recommendations for a number of industry sectors.

Europe needs IPv6 Fast
Conclusion (2)

- **More detailed work in a given time frame is needed.**

- **Recommendations made TO BE ELABORATED IN INDIVIDUAL WORKPLANS.**

  **Europe needs IPv6 Fast**
Thank you for your attention!!

IPv6 is our future