ITU-T

Leader in globalizing IMT-2000 and next-generation network mobile solutions

Study Group 19, "Mobile Telecommunication Networks", the successor to the Special Study Group on "IMT-2000 and Beyond", is responsible for studies relating to network aspects of mobile telecommunication networks, including International Mobile Telecommunications 2000 (IMT-2000) and beyond, wireless Internet, convergence of mobile and fixed networks, mobility management, mobile multimedia functions, internetworking, interoperability and enhancements to existing ITU-T Recommendations on IMT-2000.

SG 19 is the lead study group on mobile telecommunication networks and for mobility.

The Q.174x series of Recommendations includes the latest results from the work on combining the essential elements of packet-based core network next-generation network concepts applied in mobile networks.

For more information on the activities and work programme of SG 19, please visit the ITU-T website at:

http://www.itu.int/ITU-T/studygroups/com19

Key technical standards and related publications produced by ITU-T SG 19

Q.1701	Framework for IMT-2000 networks
Q.1702	Long-term vision of network aspects for systems beyond IMT-2000
Q.1703	Service and network capabilities framework of network aspects for systems beyond IMT-2000
Q.1711	Network functional model for IMT-2000
Q.1721	Information flows for IMT-2000 capability set 1
Q.1731	Radio-technology independent requirements for IMT-2000 layer 2 radio interface
Q.1741.1	IMT-2000 references to release 1999 of GSM evolved UMTS core network with UTRAN access network
Q.1741.2	IMT-2000 references to release 4 of GSM evolved UMTS core network with UTRAN access network
Q.1741.3	IMT-2000 references to release 5 of GSM evolved UMTS core network
Q.1741.4*	IMT-2000 references to release 6 of GSM evolved UMTS core network
Q.1742.1	IMT-2000 references (July 2001) to ANSI-41 evolved core network with cdma2000 access network
Q.1742.2	IMT-2000 references (July 2002) to ANSI-41 evolved core network with cdma2000 access network
Q.1742.3	IMT-2000 references (June 2003) to ANSI-41 evolved core network with cdma2000 access network
Q.1742.4*	IMT-2000 references (June 2004) to ANSI-41 evolved core network with cdma2000 access network
Q.1742.5*	IMT-2000 references (June 2005) to ANSI-41 evolved core network with cdma2000 access network
Q.1751	Internetwork signalling requirements for IMT-2000 capability set 1
Q.1761	Principles and requirements for convergence of fixed and existing IMT-2000 systems
Supplement 47	Emergency services for IMT-2000 networks – Requirements for harmonization and convergence
Supplement 52	Technical Report on NNI mobility management requirements for systems beyond IMT-2000

Handbook on Deployment of IMT-2000 Systems
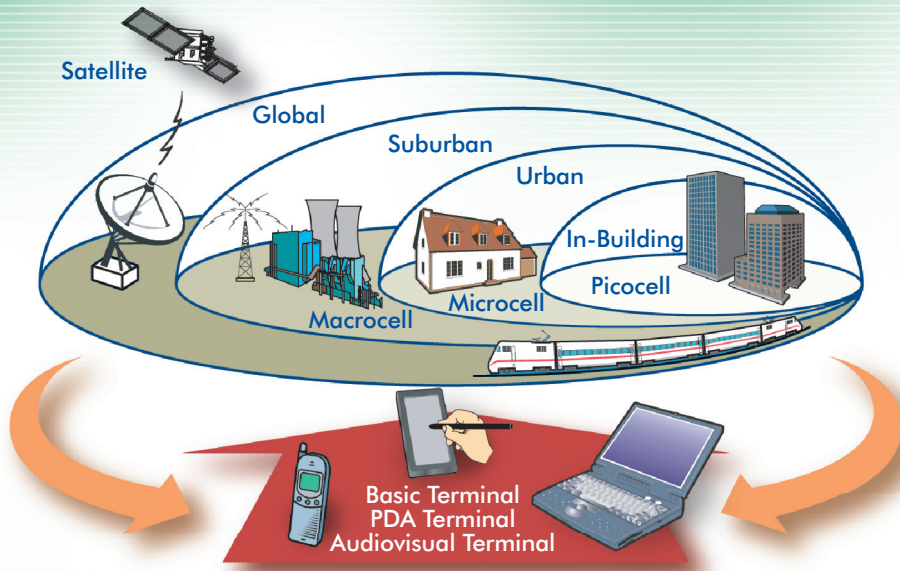
* Recommendations due to be finalized in 2005.

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04.2005

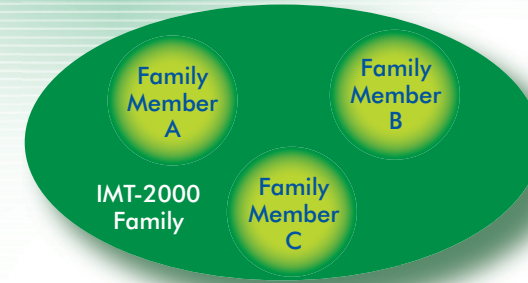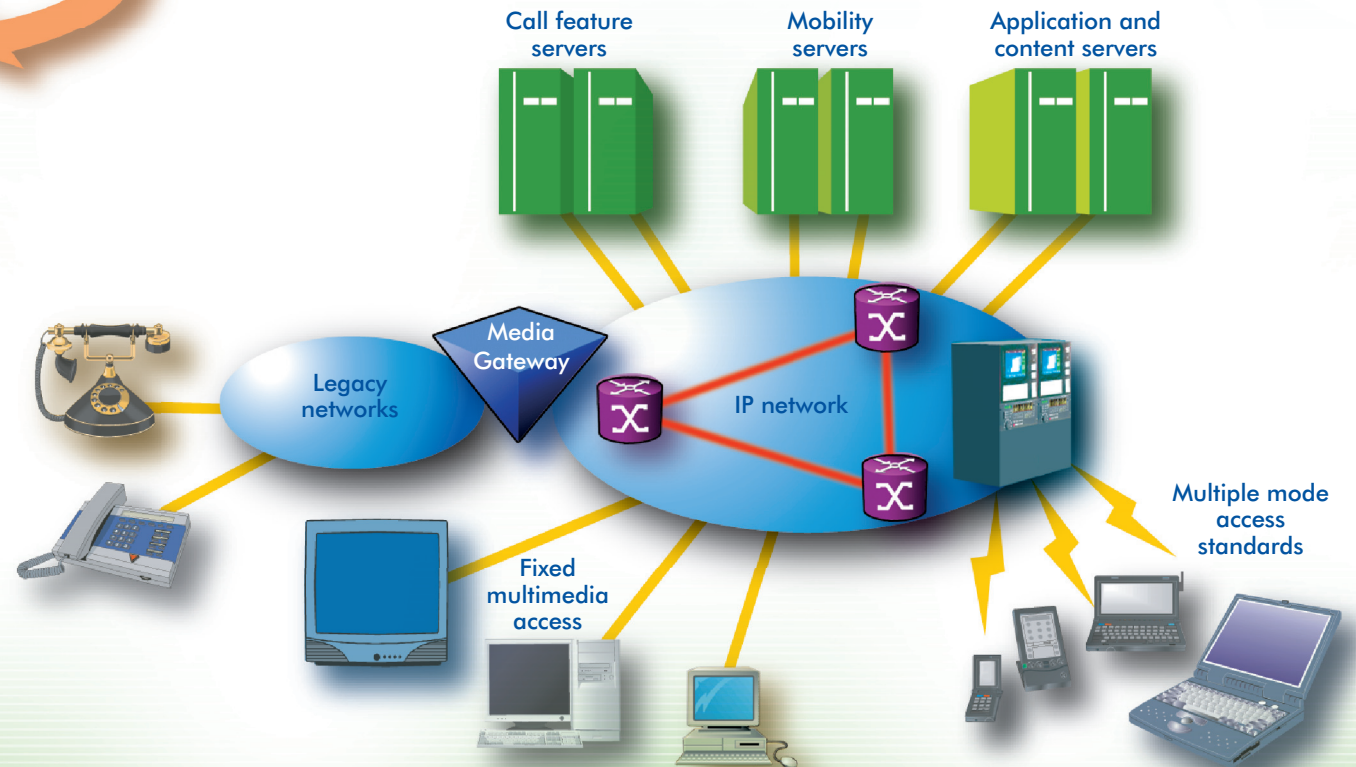# IMT-2000

Mobile Solutions in Next-Generation Networks

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workshops: www.itu.int/ITU-T/worksem/
e-flash and news: www.itu.int/ITU-T/news/
membership: www.itu/ITU-T/membership/

International Telecommunication Union

1) The global vision for IMT-2000...

Satellite

Global

Suburban

Urban

In-Building

Picocell

Microcell

Macrocell

Basic Terminal
PDA Terminal
Audiovisual Terminal

2) ...coupled with the existence of multiple IMT-2000 systems leads to the IMT-2000 Family concept...

Family Member A

Family Member B

IMT-2000 Family

Family Member C

4) ...leads to a generalized IMT-2000 functional architecture closely coupled with work on next-generation networks, including a generic "all-IP" access-independent core network architecture.

Call feature servers

Mobility servers

Application and content servers

3) ...combined with the explosive growth of wireless and the Internet...

- Mobile subscribers
- Internet users
- Mobile penetration
- Internet penetration

Users (millions) and penetration per 100 population

Percentage (Number of subscribers per 100 people)

1994 95 96 97 98 99 2000 01 02 2003
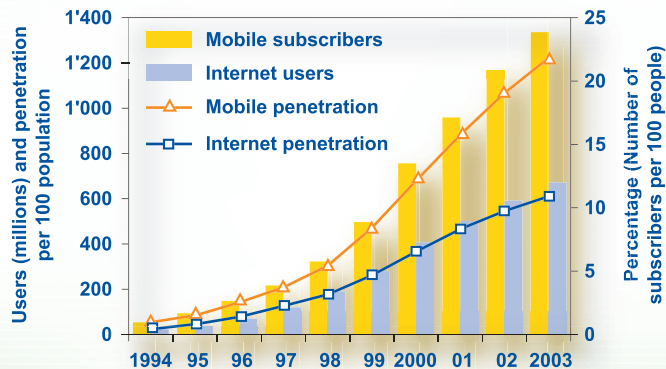
Source: ITU Internet Reports 2004: The Portable Internet.

Legacy networks

Media Gateway

IP network

Fixed multimedia access

Multiple mode access standards

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