

ITU-R mobile convergence issues

**ITU-BDT Regional Seminar
on Fixed Mobile Convergence
and new network architecture
for the Arab Region**

**Tunis
21-24 November 2005**

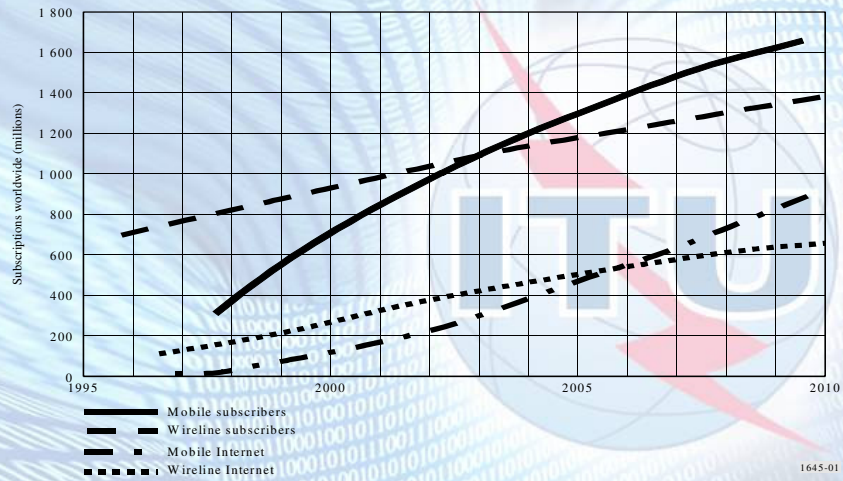
Kevin Hughes
Senior Counsellor, ITU-BR

Contents

- Growth in mobile, Internet and broadband access
- The multiple facets of convergence
- IMT-2000 radio access standards
- Systems beyond IMT-2000
- Spectrum requirements
- Activities of ITU-R Working Party 8F

Growth of mobile and wireline

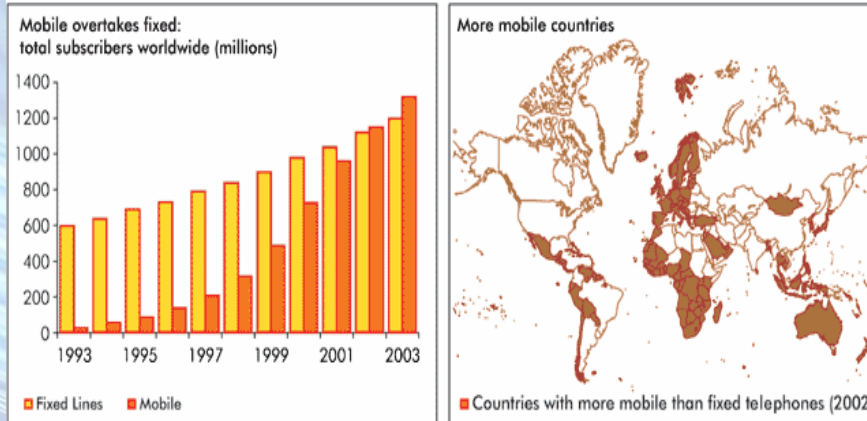
FIGURE 1
Global growth of mobile and wireline subscribers



1645-01

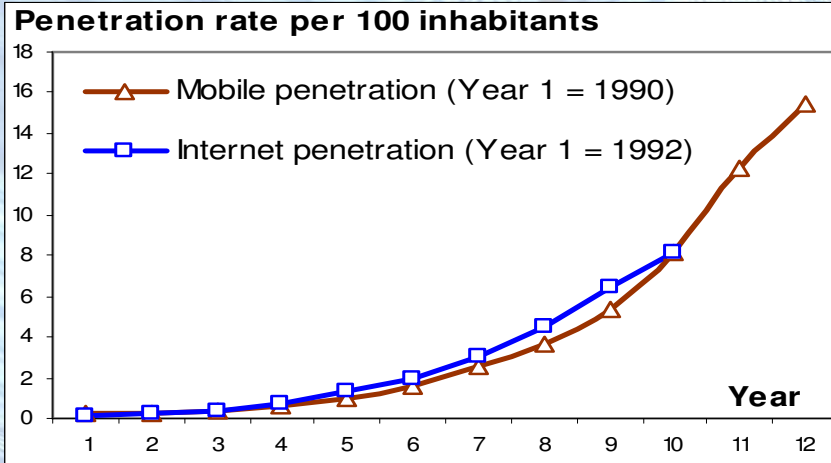
Growth of mobile

Fixed lines and mobile subscribers (millions) and countries in which mobile has overtaken fixed



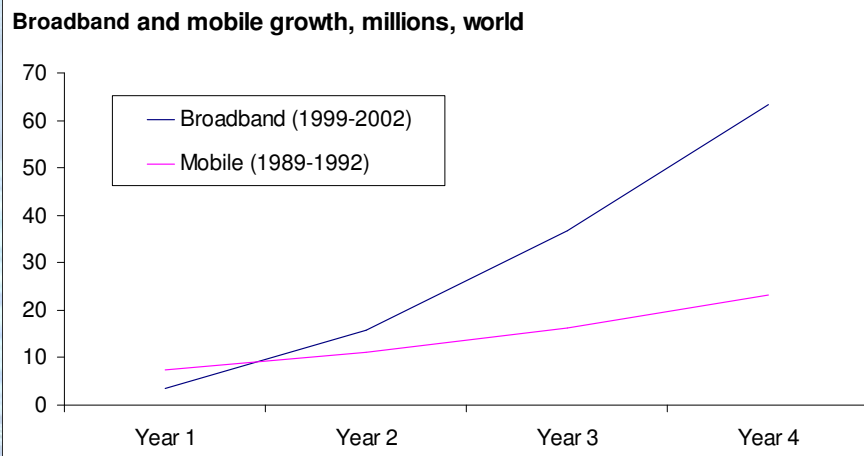
Source: ITU World Telecommunication Indicators Database

Growth of Internet



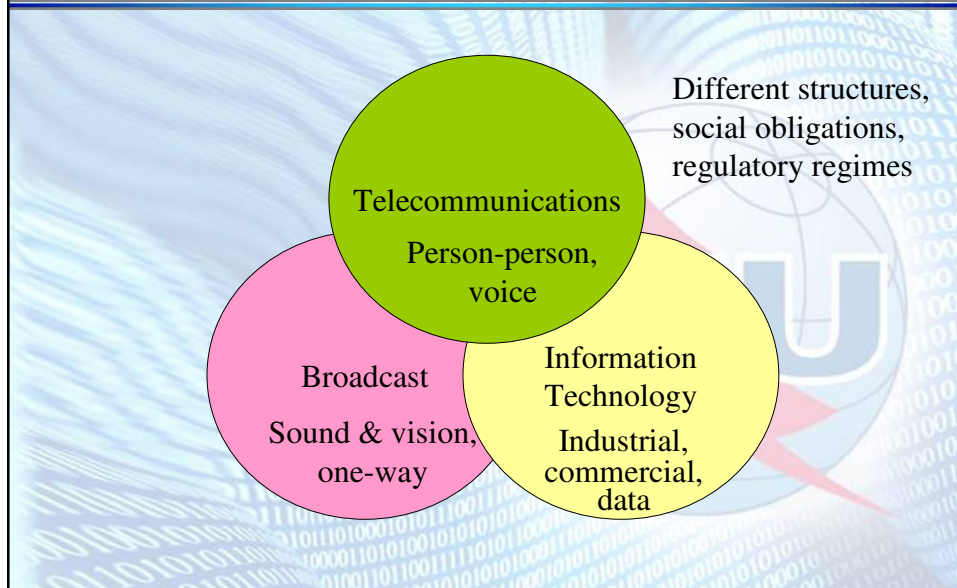
Source: ITU World Telecommunication Indicators Database

Growth of broadband

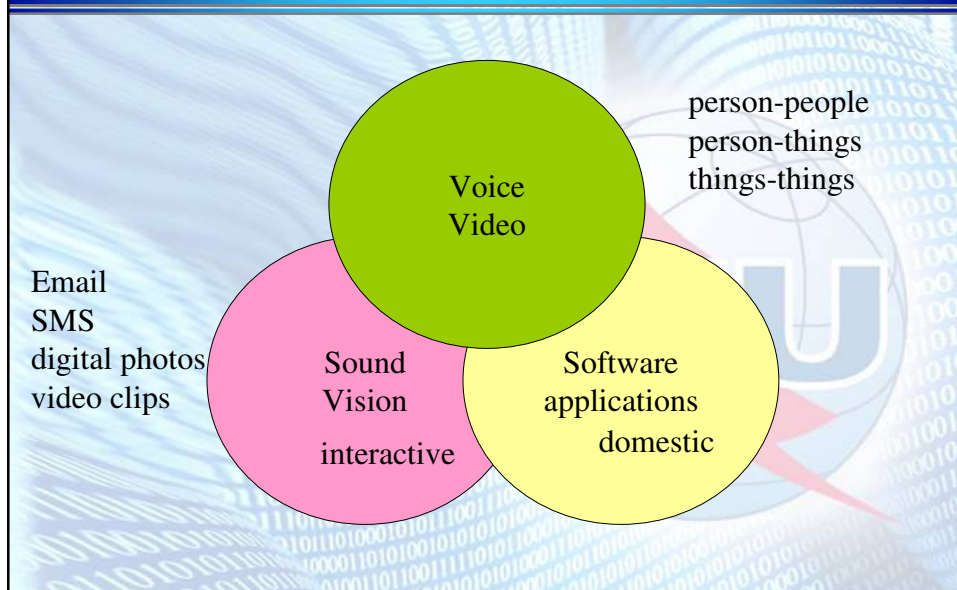


Source: ITU World Telecommunication Indicators Database

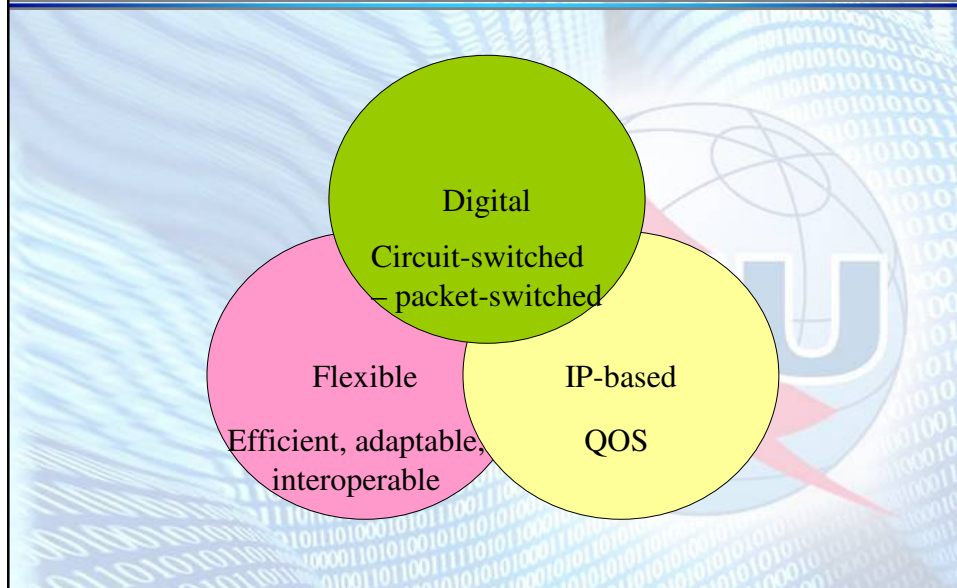
Convergence: industry sectors



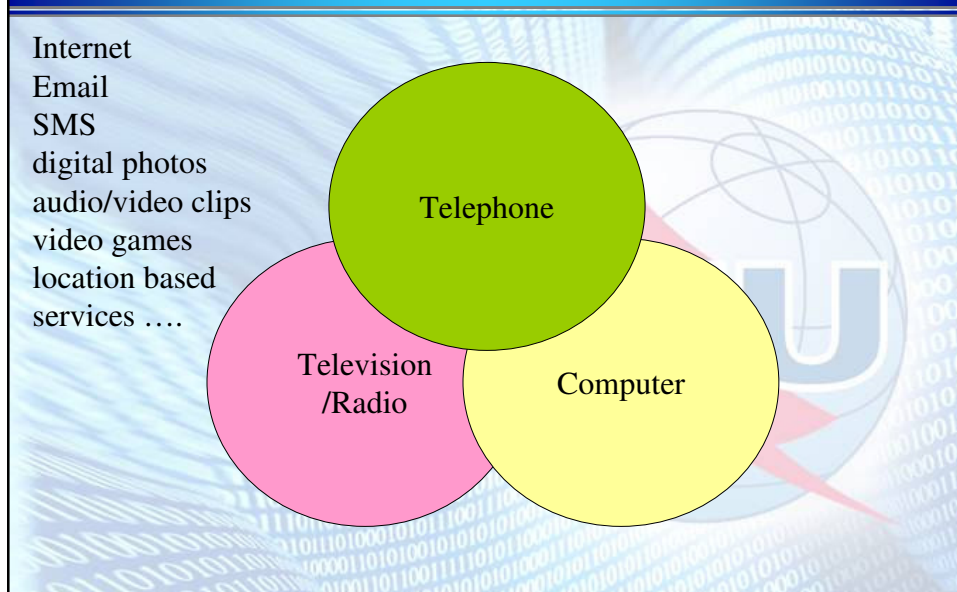
Convergence: services



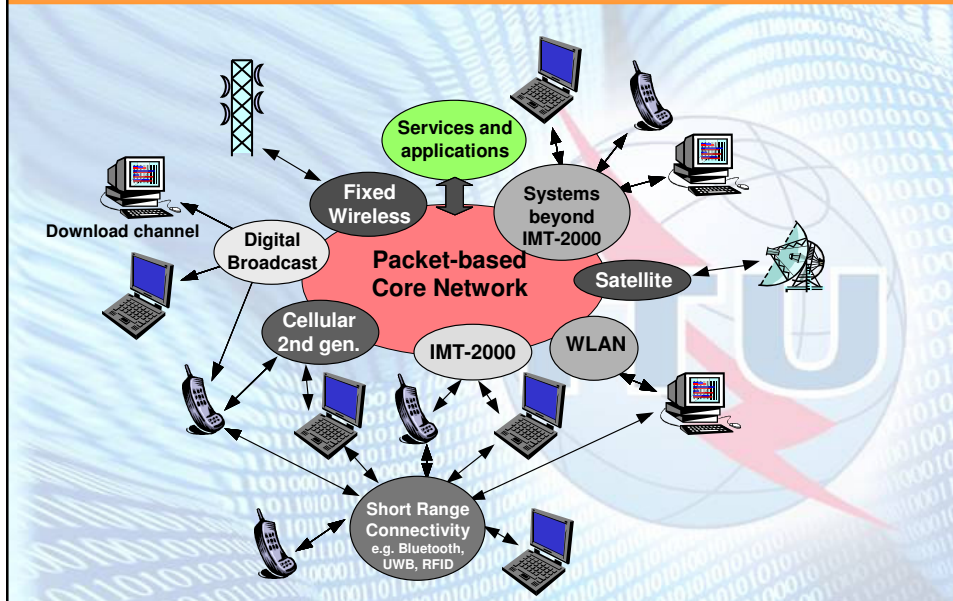
Convergence: technology



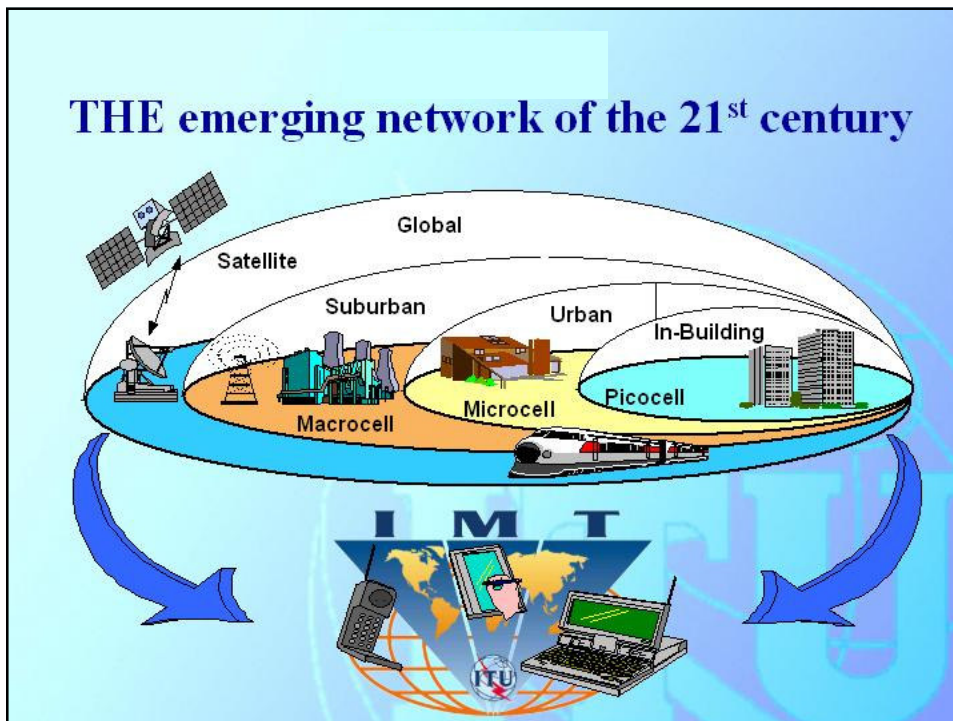
Convergence: device



Convergence: Access Networks

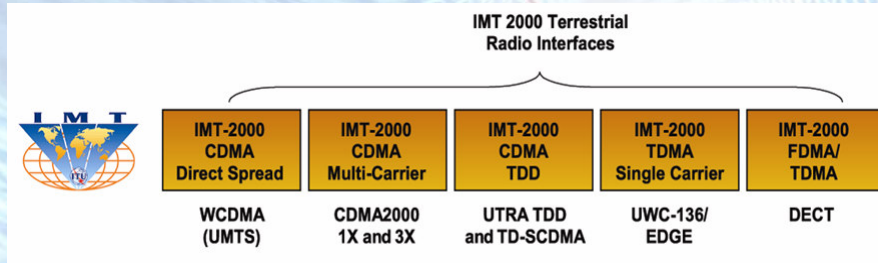


THE emerging network of the 21st century



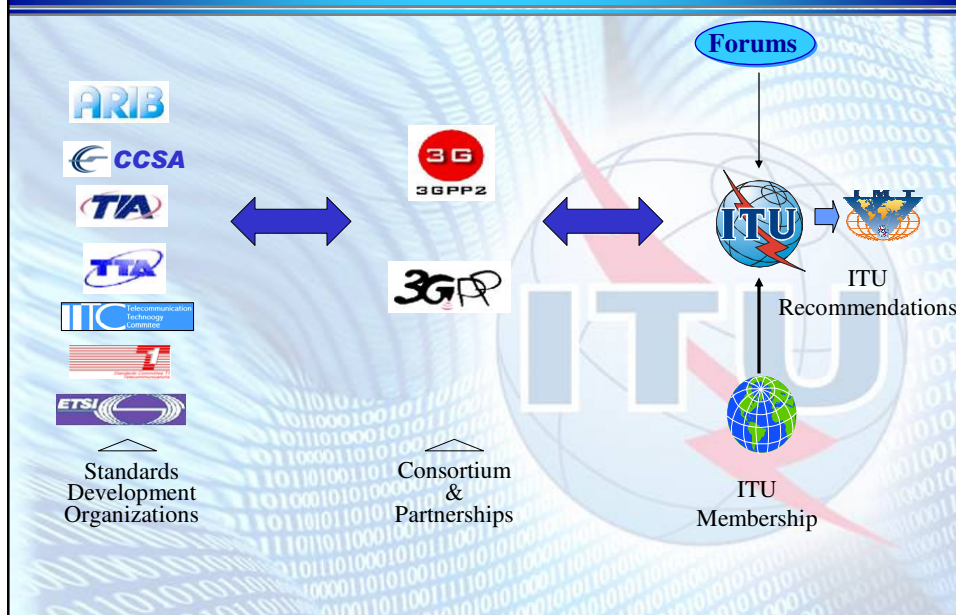
IMT-2000 Radio Access Standards

- A reminder



- Designed mainly in response to market, technology & regulatory opportunities & segments
- Many of these standards are already being enhanced

IMT-2000 Standards Development

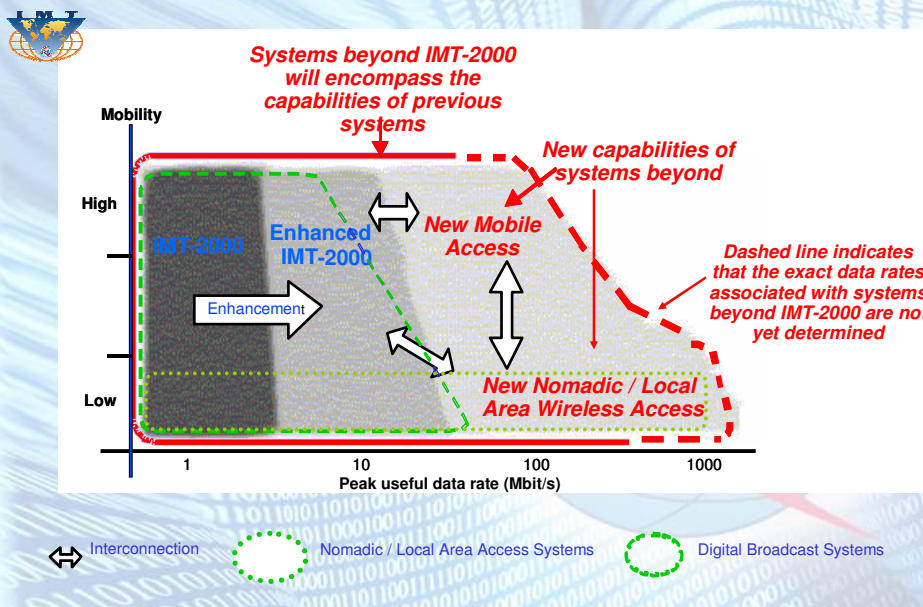


Fusion

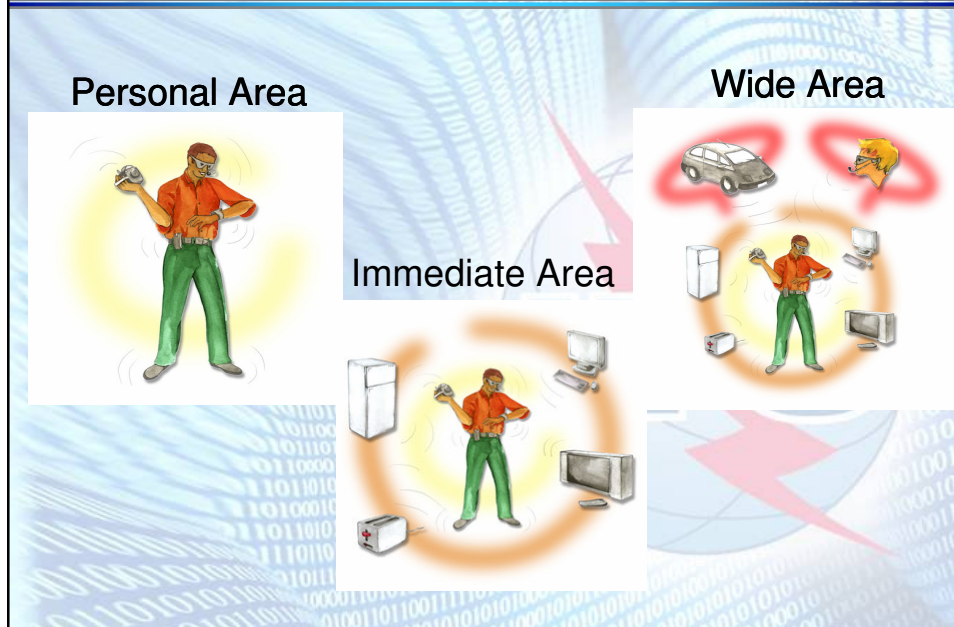
Recommendation ITU-R M.1645

"Systems beyond IMT-2000 will be realized by functional fusion of existing, enhanced and newly developed elements of IMT-2000, nomadic wireless access systems and other wireless systems, with high commonality and seamless interworking"

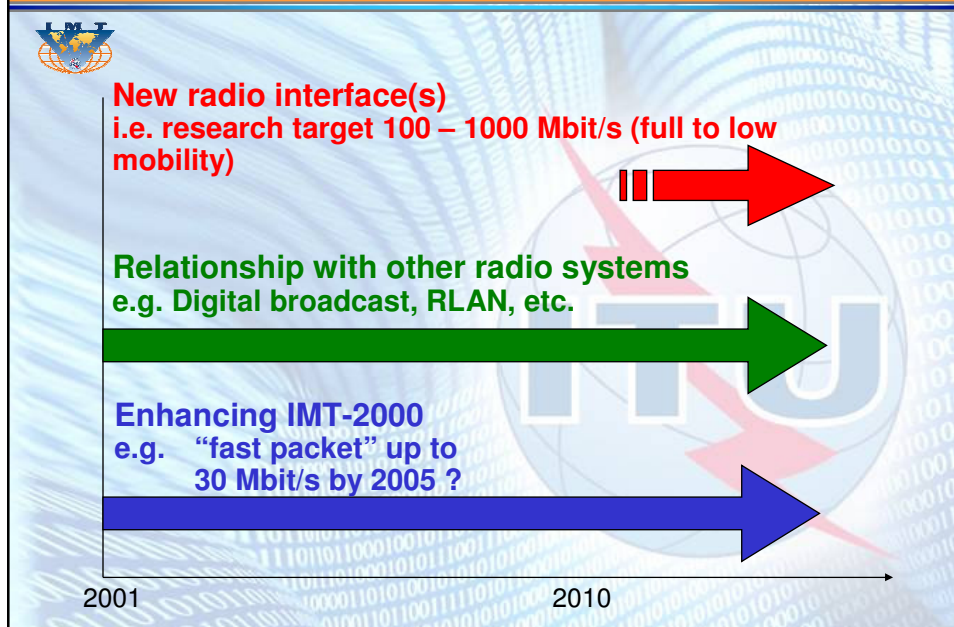
Capabilities ('The Van')



Domains



Radio Access - Three Main Phases



Spectrum

- Prerequisite for development and operation of radio systems is the availability of spectrum
- Most of the usable spectrum is already allocated
- Decisions on global spectrum allocations/identification are taken at ITU World Radiocommunication Conferences
- There is a long lead-time between identification of spectrum and spectrum availability

Resolution 802 (WRC-03)

2007 World Radiocommunication Conference

Agenda item 1.4

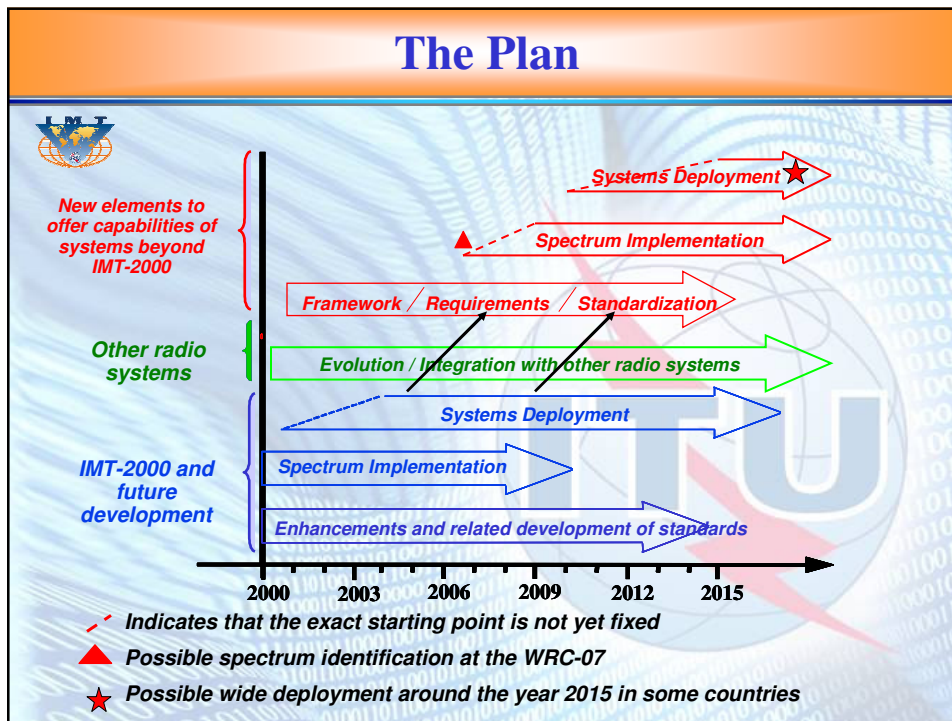
“to consider frequency-related matters for the future development of IMT-2000 and systems beyond IMT-2000, taking into account the results of ITU-R studies in accordance with Resolution 228 (Rev.WRC-03)”

Resolution 228 (Rev.WRC-03)

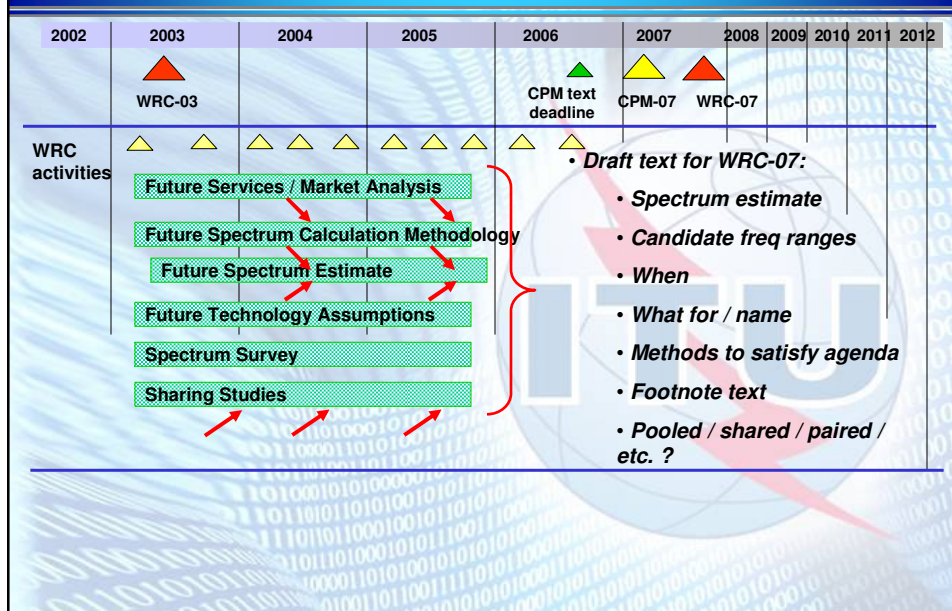
resolves

- 1 to further study technical and operational issues ...;
- 2 to report to WRC-07 on the spectrum requirements and potential frequency ranges ...;
- 3 to conduct regulatory and technical studies on the usage of frequencies below those identified for IMT-2000 ...;
- 4 to take into consideration the particular needs of developing countries including use of the satellite component of IMT-2000 ...;
- 5 to include sharing and compatibility studies with services already having allocations in potential spectrum ...;
- 6 that WRC-07 should consider frequency-related matters for the future development of IMT-2000 and systems beyond IMT-2000 ...,

The Plan



WP 8F WRC preparation



WP 8F web page

<http://www.itu.int/ITU-R/study-groups/rsg8/rwp8f/index.asp>

Working Party 8F - IMT-2000 and systems beyond IMT-2000 - Microsoft Internet Explorer

International Telecommunication Union
Our Sites News Events Publications Site Map About Us

Home : ITU-R : Study-Groups : SG 8 : WP8F

Working Party 8F - IMT-2000 and systems beyond IMT-2000

- ▶ Scope
- ▶ Terms of reference
- ▶ Chairmen and Vice-Chairmen [ITU-R Users](#)
- ▶ Counsellor
- ▶ Questions

Documents

- ▶ Chairman's Report: 16th meeting
- ▶ Contributions - Archives
- ▶ Information Documents - Archives
- ▶ Administrative Documents
- ▶ GCS updates [ITU-R Users](#) for Rec. ITU-R M.1457

Next meeting

- ▶ ITU-R meeting schedule
- ▶ Invitation to next WP 8F meeting: 12-19 October, Finland

Structure and workplan

- ▶ [WP 8F structure and workplan](#)

Research activities

- ▶ Focus areas [ITU-R Users](#)
- ▶ Recommendation ITU-R M.1645 - Framework and overall objectives of the future development of IMT-2000 and systems beyond IMT-2000
- ▶ Draft Report on Technology Trends [ITU-R Users](#)
- ▶ Questionnaire on services and market [ITU-R Users](#)

Other IMT-2000 activities at ITU

- ▶ Telecommunication Development (ITU-D Question 18/2)
- ▶ Telecommunication Standardization (ITU-T Special Study Group)
- ▶ Research and Analysis (SPU), General Secretariat

Seminars and workshops

- ▶ Working Party 8F Workshop on services and market aspects (Edinburgh, 8 October 2003)

Electronic facilities

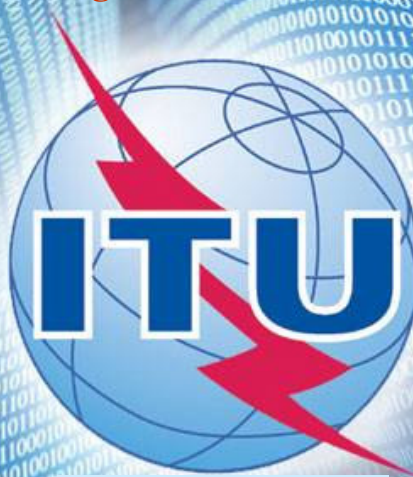
- ▶ ITU-R electronic facilities
- ▶ Mailing lists - FTP server [ITU-R Users](#)
- ▶ "Jive" discussion forums
- ▶ How to use Jive
- ▶ Contributions submission: rsg8@itu.int

Summary

- Mobile, Internet and broadband access is growing rapidly
- Convergence is occurring in many spheres
- IMT is being implemented and will evolve considerably over next 10-15 years - an open and market led process
- New radio interface(s) are expected to be required sometime between 2010-2015
- Spectrum aspects will be considered at WRC-07
 - WP 8F is leading the preparatory studies

**ITU-BDT Regional Seminar
on Fixed Mobile Convergence
and new network architecture
for the Arab Region**

Thank you!



Kevin Hughes
Senior Counsellor, ITU-BR