

Standardization and current status of IMT



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ITU/BDT Regional Seminar on BWA, Moscow, 26 - 29 November 2007

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Converging markets, services and technologies

Growth in mobile, Internet and broadband access

Mobile access - IMT-2000

IMT-Advanced (Systems beyond IMT-2000)

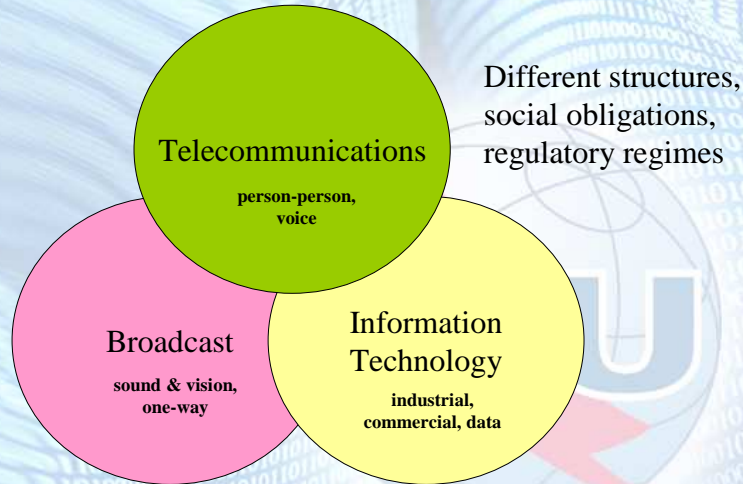
Spectrum requirements

Activities of ITU-R Working Party 5D (ex WP 8F)

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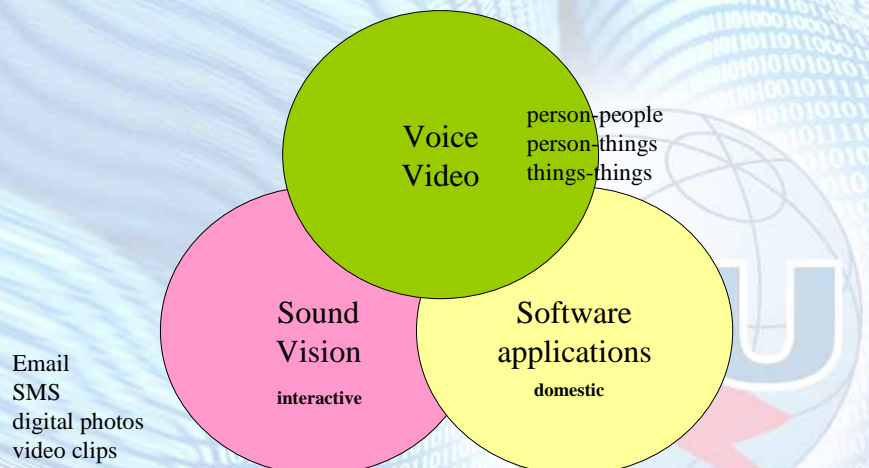
Convergence: market sectors



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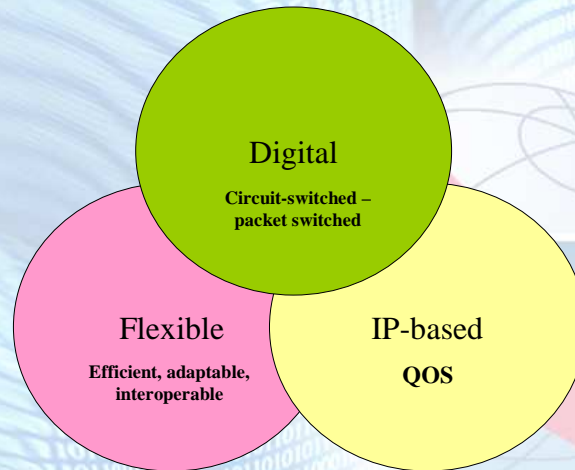
Convergence: services



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Convergence: technology



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Growth of Mobile, Internet and Broadband Access

Previous presentation has provided slides on

- Growth of mobile and how mobile has overtaken fixed globally
- Growth of Internet and the exponentially increase in the penetration rate
- Growth of broadband, also on a non-linear scale
- IMT-2000 radio access standards and the development in partnership with other organizations

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Radio Access - Three Main Phases



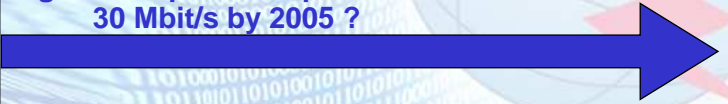
New radio interface(s)
i.e. research target 100 – 1000 Mbit/s (full to low mobility)



Relationship with other radio systems
e.g. Digital broadcast, RLAN, etc.



Enhancing IMT-2000
e.g. “fast packet” up to 30 Mbit/s by 2005 ?



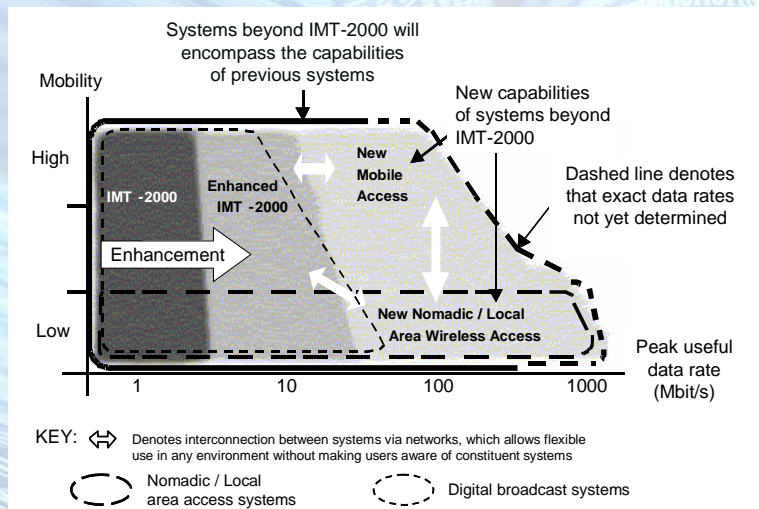
2001

2010

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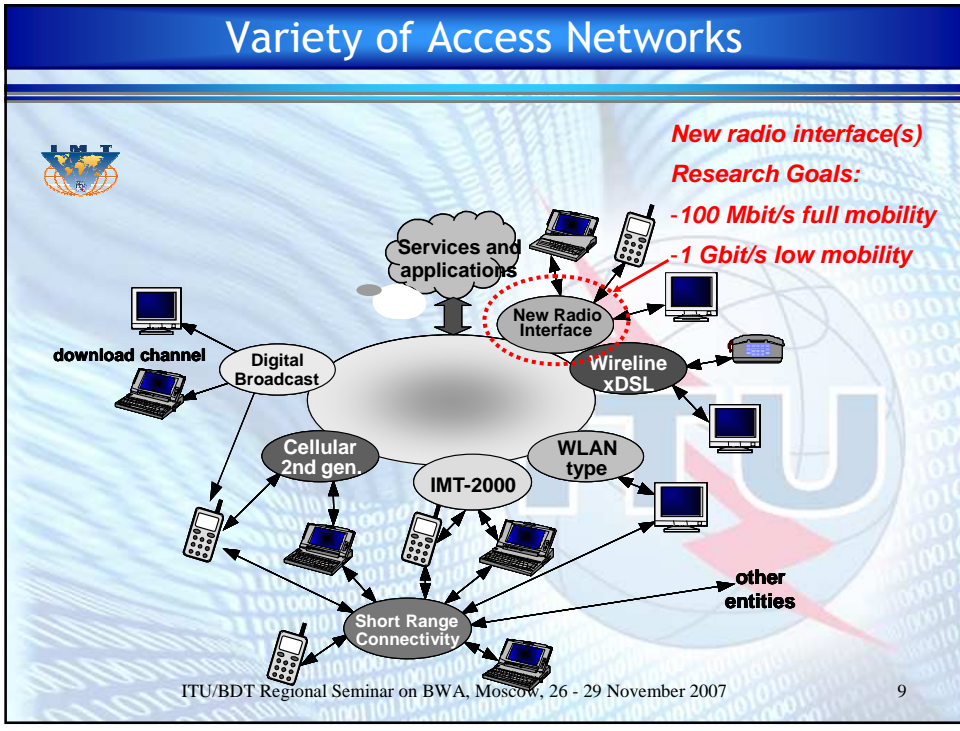
Capabilities ('The Van')



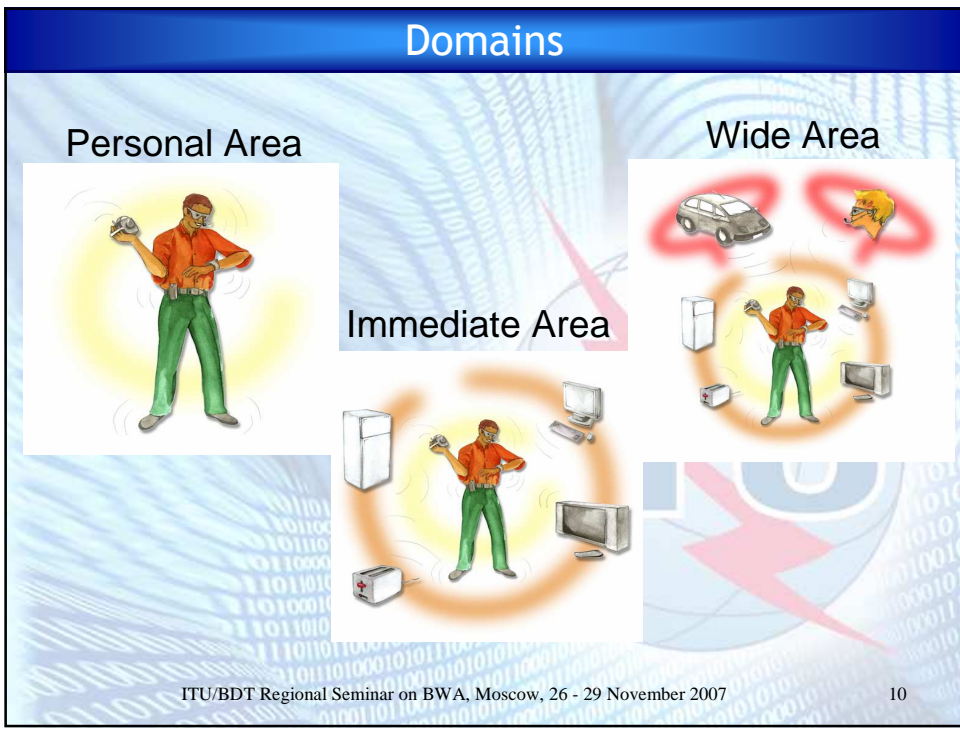
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Variety of Access Networks



Domains



Fusion

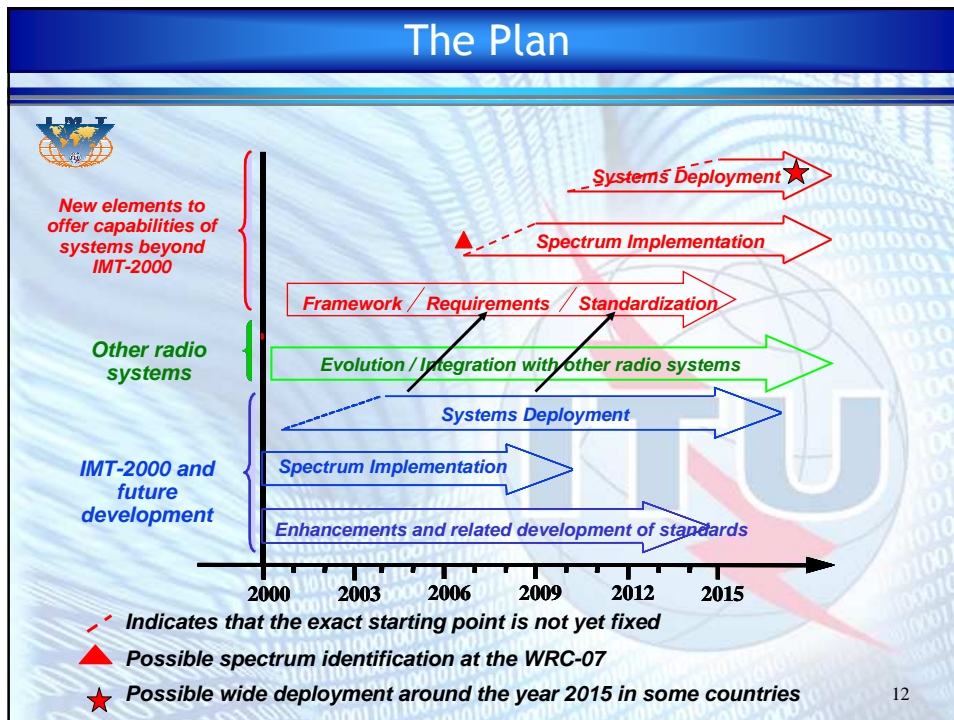
Recommendation ITU-R M.1645

"Systems beyond IMT-2000 (IMT-Advanced) 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"

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The Plan



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Spectrum

Prerequisite for development and operation of radio systems is the availability of spectrum

Most of the usable spectrum is already allocated

There is a long lead-time between identification of spectrum and spectrum availability

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Resolution 802 (WRC-03)

2007 World Radiocommunication Conference

is considering

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)”

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Resolution 228 (Rev.WRC-03)

resolves

- 1 to further study technical and operational issues ...;
- to report to WRC-07 on the spectrum requirements and potential frequency ranges ...;
- to conduct regulatory and technical studies on the usage of frequencies below those identified for IMT-2000 ...;
- to take into consideration the particular needs of developing countries including use of the satellite component of IMT-2000 ...;
- 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 ...;

Summary

Convergence is occurring in many spheres
Mobile, Internet and broadband access is expanding rapidly
IMT-2000 has been standardized and will evolve considerably over next 10-15 years - open and market led process
Ongoing relationship with other access methods
New radio interface(s) are expected to be required sometime between 2010-2015
Spectrum aspects are being considered at WRC-07
ITU-R WP 5D (ex 8F) is undertaking the work on enhancement of IMT-2000 and development of IMT-Advanced systems (systems beyond IMT-2000)