

QUESTION ITU-R 77-6/5*,**

Consideration of the needs of developing countries in the development and implementation of mobile radiocommunication technology

(1986-1992-1993-1997-2000-2003-2007)

The ITU Radiocommunication Assembly,

considering

- a) the work carried out so far by Radiocommunication Sector on mobile radiocommunication systems, in particular on International Mobile Telecommunications-2000 (IMT-2000) and the evolution of first and second generation mobile systems to IMT-2000;
- b) ITU-R IMT-2000 Recommendations, in particular Recommendation ITU-R M.819 on IMT-2000 for developing countries and Recommendations ITU-R M.1308 and ITU-R M.1457;
- c) studies being carried out in ITU-R on the application of mobile-derived technologies for use as fixed wireless access (e.g., Recommendation ITU-R F.747);
- d) that different frequency bands are identified in the ITU Radio Regulations (RR) for use, on a worldwide basis, by administrations wishing to implement IMT-2000 systems;
- e) Resolution 43 (WTDC, Rev.Doha 2006), which instructs the Director of the BDT, in collaboration with the Director BR, to encourage and assist developing countries to implement IMT-2000 systems, to provide assistance on the interpretation of ITU Recommendations relating to IMT-2000 and beyond, and to support activities related to ITU-D Q18-1/2 "Implementation aspects of IMT-2000 and information sharing on systems beyond IMT-2000 for developing countries";
- f) ITU-T Recommendations and on-going work items that are relevant to this work;
- g) the ITU Handbook on deployment of IMT-2000 systems jointly prepared by the three Sectors;
- h) the rapid development and deployment of digital mobile systems for both "fixed" and mobile uses;
- j) the potential further improvement in the cost effectiveness of wireless access technologies for the provision of basic, essentially fixed, applications;
- k) the desirability of specific research and development activities to support the development of optimum low cost wireless access standards;
- l) the aggressive plans of many developing countries to enhance considerably their level of telecommunication access, which include major wireless access investments, and that these plans are primarily constrained by the cost of access;

* This Question should be brought to the attention of Radiocommunication Study Groups 3 and 9, Telecommunication Standardization Special Study Group on IMT-2000 and Telecommunication Development Study Group 2.

** Former Question ITU-R 77-6/8.

- m) the potential increase in speed of deployment and provision of basic telecommunication services in the developing countries through the use of wireless access technology;
- n) that the implementation of IMT-2000 systems has commenced and that these systems are being continuously enhanced in line with market and technology trends,

decides that the following Questions should be studied

1 How can the ITU-R studies of IMT-2000 and other mobile technology developments meet the urgent need of developing countries for cost effective access to the global telecommunication networks?

NOTE 1 – Particular emphasis should be given to the following items:

- modular design (easily expandable) for both hardware and software;
- evolution adaptability to allow for cost effective migration from current mobile systems towards inter-operable IMT-2000 systems;
- universal protocols and standards for terminal-to-base station and base station-to-central control unit, etc.;
- harmonization of interworking of radio telecommunication systems with the public switched telephone network;
- harmonized use of frequency bands to the extent possible.

NOTE 2 – Effective coordination of the work carried out in ITU-R with ITU-D Question 18/2 activities is needed to avoid duplication.

NOTE 3 – Special attention should be given to:

- implications for special needs for developing countries;
- implications for the services currently provided by existing networks and those provided by IMT-2000;
- implications for the interoperability between existing networks and among IMT-2000 radio interfaces;
- the need for common access to emergency services and lawful interception,

2 What are the optimum arrangements and technical characteristics needed to use mobile technology/equipment (cellular type or others) in urban, rural or remote areas in developing countries?

NOTE 1 – Special attention should be paid to:

- the need to provide an economical, reliable and high-quality telecommunication infrastructure;
- propagation problems in building complexes, and mountainous, coastal and sandy desert areas;
- the possibility of using the equipment in a variety of environments including extreme of heat and cold, high humidity, dust, corrosive atmospheres and other environment hazards;
- the need for rugged, simple-to-maintain equipment;
- efficient and economical spectrum usage in local conditions where there may be only a small number of users and where severe propagation conditions may be encountered;
- the possibility of using satellite, and other radio systems.