

QUESTION ITU-R 229-2/5*,**

Future development of the terrestrial component of IMT

(2000-2003-2008)

The ITU Radiocommunication Assembly,

considering

- a) that ever increasing demands for mobile radiocommunications requires the continual evolution of systems, and development of new systems where required, for multimedia applications such as high speed data, IP-packet and video;
- b) that future mobile radiocommunications systems' users will continue to require higher data rates;
- c) that for international operation, economy of scale and interoperability it is desirable to agree on the system technical, operational and spectrum related parameters;
- d) that the initial standardization of IMT-2000 radio specifications was completed by the end of 1999 and that ongoing enhancements have been and will continue to be accommodated and the specifications for IMT-Advanced are being developed and will be enhanced over time;
- e) that the implementation of IMT-2000 systems is expanding and that these systems are being continuously enhanced in line with user and technology trends;
- f) ITU-T Recommendations and associated activities that are relevant to this work;
- g) Question ITU-R 77/8 on consideration of the needs of developing countries in the development and implementation of mobile radiocommunication technology;
- h) that the cost of radio technology equipment is continually decreasing, thus making the radio approach an increasingly attractive access option for all mobile and many fixed applications;
- j) that Resolution ITU-R 50 addresses the role of the Radiocommunication Sector in the ongoing development of IMT;
- k) that Resolution ITU-R 56 specifies the nomenclature for the future development of IMT-2000 and systems beyond IMT-2000 through names uniquely associated with the advancement and continuation of International Mobile Telecommunication (IMT) and that the term "IMT" is the root name that encompasses both IMT-2000 and IMT-Advanced collectively;
- l) that Resolution ITU-R 57 specifies the principles for the process for the development of IMT-Advanced,

* Former Question ITU-R 229-1/8.

** This Question should be brought to the attention of the relevant Telecommunication Standardization Sector Study Groups and Radiocommunication Study Group 4.

recognizing

- a) that IMT encompasses both a terrestrial component and a satellite component;
- b) the timescales necessary to develop and agree on the technical, operational and spectrum related issues associated with the ongoing evolution and development of future mobile systems;
- c) that service functionalities in fixed and mobile networks are increasingly converging;
- d) that higher data rates, greater than those associated with enhanced IMT-2000 systems are expected to be required to meet future needs;
- e) the needs of the developing countries;
- f) that the characteristics of IMT systems, with significantly high data rates, will require the adoption of more spectrally efficient techniques,

decides that the following Questions should be studied

Part A – Future development of the terrestrial component of IMT

- 1 What are the overall objectives and user needs for ongoing enhancement of:
 - a) the IMT-2000 terrestrial components, beyond that defined in Recommendation ITU-R M.1457, building upon service capabilities as defined in Recommendations ITU-R M.687, ITU-R M.816 and ITU-R M.1645; and
 - b) IMT-Advanced terrestrial components, building upon service capabilities as defined in Recommendations ITU-R M.1645 and ITU-R M.1822?
- 2 What are the applications and service requirements associated with ongoing enhancement of IMT, including the provision of further enhanced IP based applications?
- 3 What are the technical, operational and identified spectrum related issues for the ongoing enhancement of IMT?
- 4 What are the technical and operational characteristics needed to meet the requirements (such as utilization of identified frequency bands) for ongoing enhancement of IMT?
- 5 What are the optimum arrangements required to facilitate harmonized use of the spectrum identified for IMT-2000 and IMT by WARC-92, WRC-2000 and WRC-07?
- 6 What factors need to be considered in developing a migration strategy to facilitate transition from enhanced IMT-2000 to IMT-Advanced?
- 7 What are the issues concerning the facilitation of global circulation of terminals, mutual recognition agreements and other related aspects regarding the continued deployment of IMT-2000 and the success of IMT-Advanced?
- 8 What are the impacts of convergence of fixed and mobile networks, convergence of technology platforms and convergence of services to the ongoing enhancement and evolution of IMT, taking into consideration work progress on Agenda item 1.2 (Resolution 951(WRC-07)) towards WRC-11?