QUESTION ITU-R 229-4/5[[1]](#footnote-1)\*

**Further development of the terrestrial component of IMT**

(2000-2003-2008-2012-2015)

The ITU Radiocommunication Assembly,

*considering*

*a)* that by the end of 2014 approximately 7 billion mobile subscriptions roughly corresponding to the total global population are supporting access to global telecommunication networks; however an estimated 2 billion people worldwide live in places which are still out of reach of mobile cellular services;

*b)* that mobile data traffic is drastically increasing driven largely by the introduction of new types of advanced devices;

*c)* that service functionalities in fixed and mobile networks are increasingly converging;

*d)* that the cost of radio technology equipment is continually decreasing, thus making the radio approach an increasingly attractive access option for many applications including broadband communications;

*e)* that ever-increasing user demand for mobile radiocommunications requires the continual evolution of systems and development of new mobile broadband systems where required, in order to accommodate higher data rates and provide larger data capacity for applications such as multimedia, video and machine-to-machine services;

*f)* that for international operation, economies of scale, and interoperability it is desirable to agree on common system technical, operational, and spectrum-related parameters;

*g)* that, after the initial standardization of the terrestrial component of IMT, ongoing enhancements of the IMT specifications have been and will continue to be accommodated over time;

*h)* that the implementation of IMT systems is expanding and that these systems will continue to be widely deployed in the near future;

*i)* that ITU-R has been endeavouring to facilitate globally harmonized use of the spectrum identified for IMT by developing relevant ITU-R Recommendations;

*j)* Question ITU-R 77/5 on consideration of the needs of developing countries in the development and implementation of IMT;

*k)* that the ITU Handbooks on “Deployment of IMT-2000 systems” and “Global Trends in IMT” were developed through a collaborative effort among the three ITU Sectors,

*recognizing*

*a)* that IMT encompasses both a terrestrial component and a satellite component;

*b)* the time-scales necessary to develop and agree on the technical, operational and spectrum-related issues associated with the ongoing evolution and further development of future mobile systems;

*c)* the needs of the developing countries, taking account of *considering j)* and *k)* above;

*d)* that the characteristics of current and future IMT systems, with significantly high data rates, large data traffic capacity and new types of applications, will necessitate the adoption of more spectrally efficient techniques;

*e)* that some frequency bands are identified for the use of IMT in the ITU Radio   
Regulations (RR);

*f)* that harmonized use of IMT spectrum is important to bridge the digital divide and bring the benefits of ICTs through IMT systems to all,

*noting*

*a)* that Resolution ITU-R 50 addresses the role of the Radiocommunication Sector in the ongoing development of IMT;

*b)* that Resolution ITU-R 56 specifies the naming for IMT;

*c)* that Resolution ITU-R 57 specifies the principles for the process of the development of IMT-Advanced;

*d)* that Resolution ITU-R [IMT.PRINCIPLES] specifies the principles for the process of future development of IMT for 2020 and beyond[[2]](#footnote-2)1,

*decides* that the following Questions should be studied

1 What are the overall objectives and user needs for the further development of IMT, beyond the work carried out so far by the Radiocommunication Sector on IMT?

2 What are the new applications and service requirements associated with further development of IMT?

3 What are the technical and operational issues, and spectrum-related issues for the further development of IMT and increasingly efficient use of spectrum?

4 What are the technical and operational characteristics needed for the further development of IMT?

5 What are the optimal radio-frequency arrangements required to facilitate harmonized use of the spectrum identified for IMT?

6 What factors need to be considered in developing a migration strategy to facilitate transition from current IMT technologies to more advanced ones?

7 What are the issues concerning the facilitation of global circulation of terminals and other related aspects regarding the continued development and deployment of IMT systems?

8 What are the terrestrial radio interface technologies of IMT and the detailed radio interface specifications which need to be provided by the 2020 timeframe?

9 What should be the objectives for the long-term development of IMT?

*further decides*

1 that the results of the above studies should be included in one or more Report(s) and/or Recommendation(s);

2 that the IMT studies described in *decides* 1 through 7 above should be completed by 2019;

3 that the studies described in *decides* 8 and 9 may extend beyond the 2019 time‑frame.

Category: S1

1. \* This Question should be brought to the attention of the relevant Telecommunication Standardization Sector Study Groups and Radiocommunication Study Group 4. [↑](#footnote-ref-1)
2. 1 *noting d)* refers to a draft new Resolution ITU-R [IMT.PRINCIPLES] which will be considered by the Radiocommunication Assembly 2015. The inclusion/exclusion of *noting d)* will be editorially addressed by the Secretariat based on the decision of RA-15 on this proposed new Resolution. [↑](#footnote-ref-2)