

RESOLUTION 256 (WRC-23)

Sharing and compatibility studies and development of technical conditions for the use of International Mobile Telecommunications (IMT) in the frequency bands 4 400-4 800 MHz, 7 125-8 400 MHz (or parts thereof), and 14.8-15.35 GHz for the terrestrial component of IMT

The World Radiocommunication Conference (Dubai, 2023),

considering

- a)* that International Mobile Telecommunications (IMT) is intended to provide telecommunication services on a worldwide scale, regardless of location and type of network or terminal;
- b)* that the continuous development of IMT and other mobile broadband systems contribute to global economic and social development by providing diverse usage scenarios and a wide range of applications;
- c)* that ultra-low latency and very high bit-rate applications of IMT will require contiguous blocks of spectrum for use by administrations wishing to implement IMT;
- d)* that there continues to be an increase in the data-traffic demand for mobile communications beyond 2030 to satisfy numerous connections and user experience, especially in areas of high user density;
- e)* that the ITU Radiocommunication Sector (ITU-R) is working on the development of IMT-2030 and beyond;
- f)* that the appropriate choices of contiguous frequency bands to provide coverage, capacity and performance are necessary and are important to the cost-effective implementation of future systems, taking into account the radio-wave propagation characteristics and implementation complexity and cost factors;
- g)* that harmonized worldwide/regional frequency bands and frequency arrangements for IMT are highly desirable in order to achieve global roaming and the benefits of economies of scale;
- h)* that the implementation of IMT may differ among administrations in different frequency bands identified for IMT;
- i)* the need to protect existing services and to allow for their continued development when considering frequency bands for possible additional allocations to any service;
- j)* that continuation of studies regarding additional spectrum identification for IMT is needed in order to provide proper conditions for use of IMT, which provides sharing and compatibility with other incumbent applications, and then to give flexibility for administrations to select the frequency bands among those bands identified for IMT;

noting

- a) that relevant information relating to terrestrial IMT technology and previous sharing studies are contained in Recommendations ITU-R M.2083, ITU-R M.2150, ITU-R M.2160, ITU-R M.2101 and ITU-R M.2116 and Reports ITU-R M.2410, ITU-R M.2320, ITU-R M.2516, ITU-R M.2370 and ITU-R M.2376;
- b) that Resolution ITU-R 65 addresses the principles for the process of development of IMT-2020 and IMT-2030;
- c) that IMT encompasses IMT-2000, IMT-Advanced, IMT-2020 and IMT-2030 collectively, as described in Resolution ITU-R 56;
- d) that Question ITU-R 77/5 considers the needs of developing countries in the development and implementation of IMT;
- e) that Question ITU-R 229/5 seeks to address the further development of IMT;
- f) that Question ITU-R 262/5 addresses the study of usage of IMT systems for specific applications;
- g) that relevant ITU-R Recommendations provide information on propagation models that may be relevant to the studies,

recognizing

- a) that there is a lead time between the allocation of frequency bands by WRCs and the deployment of systems in those bands, and that timely availability of wide and contiguous blocks of spectrum is therefore important to support the development of IMT;
- b) that, in order to ensure the future development of IMT, it is important to ensure the timely identification of additional spectrum;
- c) that any identification of frequency bands for IMT should take into account the use of the frequency band(s) and adjacent frequency bands by other services and the evolving needs of these services;
- d) that administrations may have different spectrum requirements for IMT depending on national conditions and particular circumstances;
- e) that the frequency bands 4 400-4 800 MHz, 7 125-8 400 MHz (or parts thereof), and 14.8-15.35 GHz are also allocated to the radiocommunication services on a primary basis and that those allocations are used by a variety of incumbent systems in many administrations;
- f) that No. **5.457D** identifies the frequency band 6 425-7 025 MHz for IMT for certain countries of Region 3, and that some other countries in Region 3 could propose adding their names to this footnote in accordance with Resolution **26 (Rev.WRC-23)**,

resolves to invite the ITU Radiocommunication Sector to complete in time for the 2027 world radiocommunication conference

1 the appropriate studies of technical, operational and regulatory issues pertaining to the possible use of the terrestrial component of IMT in the frequency bands listed in *resolves to invite the ITU Radiocommunication Sector to complete in time for the 2027 world radiocommunication conference 2*, taking into account:

- evolving needs to meet emerging demand for IMT;
- technical and operational characteristics of terrestrial IMT systems that would operate in these specific frequency bands, including the evolution of IMT through advances in technology and spectrally efficient techniques;
- the deployment scenarios envisaged for IMT systems and the related requirements of balanced coverage and capacity;
- the needs of developing countries; and
- the time-frame in which spectrum would be needed;

2 sharing and compatibility studies, with a view to ensuring the protection of services to which the frequency band is allocated on a primary basis, including protection of stations operating in international waters or airspace which cannot be registered in the MIFR, without imposing additional regulatory or technical constraints on those services, and also on services in adjacent bands, for the frequency bands:

- 4 400-4 800 MHz;
- 7 125-8 400 MHz; and
- 14.8-15.35 GHz,

invites administrations

to participate actively in the studies and provide the information required for the studies listed under *resolves to invite the ITU Radiocommunication Sector to complete in time for the 2027 world radiocommunication conference* by submitting contributions to ITU-R,

invites the 2027 world radiocommunication conference

to consider, based on results of studies, the identification of frequency band(s):

- 4 400-4 800 MHz, or parts thereof, in Region 1 and Region 3;
- 7 125-8 400 MHz, or parts thereof, in Region 2 and Region 3;
- 7 125-7 250 MHz and 7 750-8 400 MHz, or parts thereof, in Region 1;
- 14.8-15.35 GHz,

for the terrestrial component of IMT.