RESOLUTION 219 (WRC-23)

Terrestrial component of International Mobile Telecommunications in the frequency band 10-10.5 GHz in Region 2

The World Radiocommunication Conference (Dubai, 2023),

considering

a) that International Mobile Telecommunications (IMT), including IMT-2000, IMT-Advanced and IMT-2020, is intended to provide telecommunication services on a worldwide scale, regardless of location and type of network or terminal;

b) that adequate and timely availability of spectrum and supporting regulatory provisions are essential to realize the objectives set out in Recommendation ITU-R M.2083;

c) that there is a need to continually take advantage of technological developments in order to increase the efficient use of spectrum and facilitate spectrum access;

d) that IMT systems are now evolving to cover diverse usage scenarios and applications, such as enhanced mobile broadband, massive machine-type communications and ultra-reliable and low-latency communications,

recognizing

a) that timely availability of wide and contiguous blocks of spectrum is important to support the development of IMT;

b) that the frequency band 10.6-10.68 GHz is allocated on a primary basis to both active and passive services with the specific conditions outlined in Resolution **751 (WRC-07)**, based on the conclusions of the studies contained in Report ITU-R RS.2096, which allow for sharing with the Earth exploration-satellite service (EESS) (passive);

c) that the frequency band 10.68-10.7 GHz is globally allocated to passive services, including the radio astronomy service, and No. **5.340** applies;

d) that the frequency band 10-10.4 GHz is allocated to the EESS (active), whose capability to perform very high-resolution cloud-free imaging offers a multitude of benefits to society, such as topographic and cadastral mapping, urban planning, emergency management, climate change monitoring and enhanced maritime monitoring;

e) that the use of the frequency band 10-10.5 GHz for IMT is only intended for microcell base stations,

resolves

1 that administrations wishing to implement IMT consider use of the frequency band 10-10.5 GHz identified for IMT in No. **5.480A** in countries in Region 2, taking into account the most recent versions of relevant ITU-R Recommendations;

2 that administrations shall take practical measures to ensure that transmitting antennas of outdoor base stations are normally pointing below the horizon when deploying IMT base stations within the frequency band 10-10.5 GHz; the mechanical pointing needs to be at or below the horizon;

3 that the maximum equivalent isotropically radiated power (e.i.r.p.) per base station shall not exceed 30 dB(W/100 MHz) and that the maximum e.i.r.p. per base station for elevation angles higher than 34 degrees shall not exceed 0.5 dB(W/100 MHz);

4 that, for the purposes of protecting the EESS (passive), and considering the conditions under *resolves* 3, the total radiated power (TRP)[1] produced per IMT base station operating in the frequency band 10-10.5 GHz shall not exceed −37.9 dB(W/100 MHz) in the frequency band 10.6-10.7 GHz;

5 that, for the purposes of protecting the EESS (passive), the TRP produced by IMT user equipment operating in the frequency band 10-10.5 GHz shall not exceed −39 dB(W/100 MHz) in the frequency band 10.6-10.7 GHz;

6 that IMT stations within the frequency range 10-10.5 GHz shall be used only for applications of the land mobile service,

invites the ITU Radiocommunication Sector

1 to develop harmonized frequency arrangements to facilitate IMT deployment in the frequency band 10-10.5 GHz, taking into account the results of sharing and compatibility studies conducted in preparation for WRC-23;

2 to continue providing guidance to ensure that IMT can meet the telecommunication needs of developing countries;

3 to develop an ITU Radiocommunication Sector (ITU-R) Report and/or Recommendation on methodologies for calculating coordination zones around radio astronomy stations operating in the frequency band 10.6-10.7 GHz in order to avoid harmful interference from IMT systems operating in the frequency band 10-10.5 GHz;

4 to review existing ITU-R Recommendations/Reports and, as appropriate, to update them or develop new ITU-R Recommendations to provide information and assistance to the administrations concerned regarding possible coordination measures for fixed-service stations with IMT stations in the frequency band 10-10.5 GHz,

instructs the Director of the Radiocommunication Bureau

to bring this Resolution to the attention of relevant international organizations.

[1] The TRP is to be understood here as the integral of the power transmitted from all antenna elements in different directions over the entire radiation sphere.