QUESTION ITU-R 256-1/5

Technical and operational characteristics of the land mobile service in the frequency range 275-1 000 GHz

(2015-2019)

The ITU Radiocommunication Assembly,

considering

*a)* that there is a growing demand for high speed and large capacity radiocommunications having data rates of several tens of Gbit/s to over 100 Gbit/s for land mobile service applications;

*b)* that due to progress in the recent terahertz technologies, the integrated devices and circuits operating above 275 GHz can achieve various sophisticated applications;

*c)* that the above devices and circuits could provide such high speed and large capacity radiocommunications for land mobile service systems;

*d)* that standard development organizations such as IEEE are developing standards for terahertz wireless systems which utilize the broadband contiguous bandwidth larger than 50 GHz using the frequency range above 275 GHz;

*e)* that broadband contiguous bandwidths larger than 50 GHz for the land mobile service are not available in the frequency range below 275 GHz;

*f)* that certain parts of the frequency range 275-1 000 GHz are identified in Radio Regulations No. **5.565** for use by administrations for passive service applications;

*g)* that the use of the frequency range 275-1 000 GHz by the passive services does not preclude the use of this range by active services;

*h)* that the technical and operational characteristics of the land mobile service need to be specified for sharing and compatibility studies with the passive service applications indicated in *considering f)*;

*i)* that the frequency range 275-450 GHz has been studied under WRC-19 for use by the land-mobile and fixed services applications,

recognizing

*a)* that Report ITU-R RS.2431 “Technical and operational characteristics of EESS (passive) systems in the frequency range 275-450 GHz” provides the technical and operational characteristics of Earth Observation (passive) sensors in the frequency range 275-450 GHz;

*b*) that Report ITU-R SM.2352 provides the technology trends of active services in the frequency range 275-3 000 GHz;

*c)* that Report ITU-R RA.2189 initiated sharing studies between the radio astronomy service and active services in the frequency range 275-3 000 GHz,

decides that the following Question should be studied

What are the technical and operational characteristics of the land mobile service in the frequency range 275-1 000 GHz?

further decides

1 that sharing studies between the land mobile and passive services, as well as the land mobile and other active services should be carried out, taking into account the characteristics mentioned in *decides* as well as the relevant results of the studies under WRC-19;

2 that the results of studies in the frequency range 275-1 000 GHz should be brought to the attention of the other Study Groups, in particular, Study Group 7;

3 that the results of the above studies should be included in one or more Recommendations, Reports or Handbooks;

4 that the above studies should be completed by 2023.

Category: S2