question ITU-R 257/5

**Technical and operational characteristics of stations in the fixed service   
in the frequency range 275-1 000 GHz**

(2015)

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 sometime over 100 Gbit/s for fixed service systems;

*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 will be able to provide such high speed and large capacity radiocommunications for fixed service systems;

*d)* that the traffic demands for backhaul and fronthaul for mobile systems are increasing due to mobile broadband communications such as IMT-Advanced;

*e)* that certain parts of the spectrum in the frequency range 275-1 000 GHz are identified for passive services in the Radio Regulations;

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

*g)* that the technical and operational characteristics of the fixed service need to be specified for sharing and compatibility studies with the passive service applications indicated in *considering f)*,

*recognizing*

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

*b)* that Report ITU-R F.2323 provides guidance on the future development of the fixed service operating in the millimetre-wave band;

*c)* that Recommendations ITU-R F.2004 and ITU-R F.2006 recommend radio-frequency channel and block arrangements for fixed wireless systems operating in the 92-95 GHz range and in the 71‑76 and 81-86 GHz bands, respectively;

*d)* that Report ITU-R F.2107 provides characteristics and applications of fixed wireless systems operating in frequency ranges between 57 GHz and 134 GHz;

*e)* that Report ITU-R RA.2189 initiated sharing studies between 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 fixed service in the frequency range 275‑1 000 GHz?

*further decides*

1 that sharing studies between the fixed and passive services, as well as the fixed and other active services should be carried out taking into account the characteristics mentioned in *decides*;

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;

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 2019.

Category: S2