

## RESOLUTION 767 (WRC-15)

### **Studies towards an identification for use by administrations for land-mobile and fixed services applications operating in the frequency range 275-450 GHz**

The World Radiocommunication Conference (Geneva, 2015),

*considering*

- a) that a number of bands in the frequency range 275-1 000 GHz are identified for use by administrations for passive services, such as the radio astronomy service, the Earth exploration-satellite service (passive) and the space research service (passive);
- b) that No. **5.565** states that the use of the range above 275 GHz by the passive services does not preclude use of this range by active services;
- c) that administrations wishing to make available frequencies in the 275-1 000 GHz range for active service applications are urged to take all practicable steps to protect these passive services from harmful interference until the date when the Table of Frequency Allocations is established for the relevant frequencies;
- d) that active devices which can operate at frequencies above 275 GHz are available due to technology developments;
- e) that studies on technical and operational characteristics of some active services operating in the range 275-1 000 GHz have been carried out by the ITU Radiocommunication Sector (ITU-R);
- f) that the technical and operational characteristics of land-mobile and fixed services operating in the bands above 275 GHz have not been specified, and further studies are required;
- g) that propagation characteristics of the frequencies above 275 GHz are being studied by ITU-R Study Group 3;
- h) that propagation models for the land-mobile and fixed services operating in the band above 275 GHz are required;
- i) that sharing and compatibility studies between land-mobile, fixed and passive services identified by No. **5.565** operating in the band above 275 GHz are required,

*noting*

- a) that Question ITU-R 228-1/3 addresses the study of which propagation models best describe the relationship between atmospheric parameters and electromagnetic wave characteristics on terrestrial links operating at frequencies above 275 GHz;
- b) that Question ITU-R 235-1/7 addresses the study of the technical and operational characteristics of systems operating at frequencies above 275 GHz within the science services;
- c) that Question ITU-R 237/1 addresses the study of the technical and operational characteristics of active services in the frequency range 275-1 000 GHz;

- d) that Question ITU-R 256-0/5 addresses studies on the technical and operational characteristics of the land-mobile service in the frequency range 275-1 000 GHz;
- e) that Question ITU-R 257-0/5 addresses studies on the technical and operational characteristics of the fixed service in the frequency range 275-1 000 GHz;
- f) that other international organizations are developing standards for the suitable frequency ranges for ultra-high-speed (100 Gbit/s) data communication systems for Wireless Personal Area Network (WPAN);
- g) that several ultra-high-speed data communication systems are identified by other international standards bodies,

*recognizing*

that other active services, including the radiolocation service and the amateur service, are also developing and demonstrating applications above 275 GHz,

*resolves to invite the 2019 World Radiocommunication Conference*

taking into account the results of ITU-R studies on sharing and compatibility between passive and active services as well as spectrum needs for those services, to consider identification for use by administrations for the land-mobile and fixed service applications operating in the frequency range 275-450 GHz, while maintaining protection of the passive services identified in No. **5.565**, and take appropriate action,

*invites ITU-R*

- 1 to identify technical and operational characteristics of systems in the land-mobile and fixed services operating at frequencies above 275 GHz;
- 2 to study spectrum needs of systems in the land-mobile and fixed services, taking into account the results of the above studies;
- 3 to develop propagation models within the frequency range 275-450 GHz so as to enable sharing and compatibility studies between the land-mobile, fixed and passive services in this frequency range;
- 4 to conduct sharing and compatibility studies between the land-mobile, fixed and passive services operating in the frequency range 275-450 GHz, while maintaining protection of the passive services identified in No. **5.565**;
- 5 to identify candidate frequency bands for use by systems in the land-mobile and fixed services, taking into account the results of the studies under *invites ITU-R* 1, 2 and 4, and the protection of passive services identified in No. **5.565**,

*encourages Member States, Sector Members, Associates and Academia*

to submit contributions during the study period on their assessment of the impact on the identified services, based on the studies carried out under this Resolution.