

## RESOLUTION 614 (WRC-07)

**Use of the band 15.4-15.7 GHz by the radiolocation service**

The World Radiocommunication Conference (Geneva, 2007),

*considering*

- a)* that the aeronautical radionavigation service (ARNS) has an allocation on a primary basis in the frequency range 15.4-15.7 GHz;
- b)* that the radionavigation service is a safety service used permanently or temporarily for the safeguarding of human life (No. **1.59**);
- c)* that in accordance with No. **4.10** Member States are to recognize that the safety aspects of radionavigation and other safety services require special measures to ensure their freedom from harmful interference; it is necessary therefore to take this factor into account in the assignment and use of frequencies;
- d)* that the mobile aspect of the aeronautical radionavigation service may require the stations of this service to be used in unspecified points;
- e)* that the fixed-satellite service has an allocation on a primary basis in the frequency range 15.43-15.63 GHz taking into account the constraints of No. **5.511A**, as well as the bands 15.4-15.43 and 15.63-15.7 GHz taking into account constraints of No. **5.511D**;
- f)* that there are no ICAO-standard ARNS systems operating in this band and that those ARNS systems that do use this band are radars that have similar technical and operational characteristics as radiolocation systems;
- g)* that, to provide adequate spectrum for new radar systems, there is a need to allocate on a primary basis worldwide additional spectrum in the band 15.4-15.7 GHz for the radiolocation service;
- h)* that emerging requirements for increased resolution and range accuracy necessitate wider emission bandwidths;
- i)* that radiolocation services using system low duty cycle emissions, scanning beams and interference reduction have demonstrated compatible operations with radionavigation radars in several bands (2 900-3 100 MHz, 9 000-9 200 MHz and 9 300-9 500 MHz) over many years;

## RES614-2

j) that radars in the radiolocation service operate on a primary basis worldwide in the band 15.7-17.3 GHz;

k) that Recommendation ITU-R M.1372 identifies interference reduction techniques which enhance compatibility among radar systems;

l) that Report ITU-R M.2076 contains further mitigation factors for radiolocation interference to radionavigation radars in the 9 GHz band, many of which apply to the band 15.4-15.7 GHz;

m) that Recommendation ITU-R M.1730 provides information on the technical characteristics and protection criteria for the radiolocation service in the band 15.7-17.3 GHz,

*recognizing*

a) that it is important to ensure radiolocation radars can be operated compatibly with the existing primary services having allocations in the band 15.4-15.7 GHz and with the radio astronomy service (RAS) in the adjacent band 15.35-15.40 GHz;

b) that a primary allocation worldwide may be required to give developers of radar systems operating in the radiolocation service, manufacturers and investors confidence that their systems will have the regulatory assurance to operate globally;

c) that the safety aspects of the radionavigation service in No. **1.59** require special measures to ensure the freedom of harmful interference in accordance with No. **4.10**,

*resolves*

to consider at WRC-11 a primary allocation to the radiolocation service in the band 15.4-15.7 GHz, taking into account the results of ITU-R studies,

*invites ITU-R*

1 to study, as a matter of urgency, the technical characteristics, protection criteria, and other factors to ensure that radiolocation systems can operate compatibly with systems in the aeronautical radionavigation and fixed-satellite services in the band 15.4-15.7 GHz, taking account of the safety nature of the aeronautical radionavigation service;

2 to study, as a matter of urgency, the compatibility between the radiolocation service in the band 15.4-15.7 GHz and RAS in the adjacent band 15.35-15.40 GHz;

3 to include the results of the above studies in one or more new or existing ITU-R Recommendations;

4 to complete these studies in time for WRC-11.