RESOLUTION 654 (WRC-12)

Allocation of the band 77.5-78 GHz to the radiolocation service to support automotive short-range high-resolution radar operations

The World Radiocommunication Conference (Geneva 2012),

considering

a) that the use of information and communication technologies (ICT) within intelligent transport systems (ITS), such as automotive short-range high-resolution radars (SRR), may significantly contribute to the improvement of road safety;

b) that the availability of spectrum for components of ITS such as SRR would contribute to the goal of improving road safety, including distracted driving, transport efficiency and the quality of the environment;

c) that ITU-R has been studying short-range vehicular radars;

d) that worldwide compatibility of spectrum allocation would be beneficial in terms of efficient use of spectrum and economies of scale, in order to give the automotive industry as well as the components industry the confidence to make substantial investment in SRR technology;

e) that the frequency bands 76-77.5 GHz and 78-81 GHz are already allocated to the radiolocation service on a primary basis in all three ITU Regions;

f) that the 77-81 GHz frequency band seems to be the most suitable band for SRR, since 76-77 GHz is designated for long-range automotive radars in many countries and sharing studies have concluded that sharing is not achievable between short-range and long-range automotive radars;

g) that the frequency band 77-81 GHz is already designated for SRR in many countries worldwide;

h) that the frequency band 77.5-78 GHz is allocated to the amateur and amateur-satellite services on a primary basis and to the radio astronomy service (RAS) and space research (space-to-Earth) service on a secondary basis;

i) that the aggregate effect of the automotive SRR must be considered;

j) that the 76-77.5 GHz and 79-81 GHz bands are allocated to the RAS on a primary basis, and the 77.5-79 GHz band is allocated to the RAS on a secondary basis;

k) that the 76-77.5 GHz and 78-81 GHz bands are allocated to the amateur, amateur-satellite and space research (space-to-Earth) services on a secondary basis;

l) that sharing with the radio astronomy service has been studied in some countries concluding that SRR operating in the vicinity of radio astronomy stations may cause interference to those stations, but that regulatory measures could be identified enabling coexistence between SRR and the radio astronomy service in the frequency band 77-81 GHz, which is dependent on the aggregated impact of SRR devices transmitting in the direction of a radio astronomy station;

m) that Resolution ITU-R 54-1 calls for studies to achieve harmonization for SRDs,

recognizing

ITU Council Resolution 1318 (Council 2010), on ITU's role in ICTs and improving road safety,

noting

a) that Recommendation ITU-R M.1890, on intelligent transport systems (ITS) – guidelines and objectives, provides general guidelines for ITS radiocommunication systems which covers also SRR;

b) that Recommendation ITU-R M.1452 provides guidance on the use of millimetre wave vehicular radar equipment and on technical characteristics of millimetre wave radiocommunication systems for data communications to be used for ITS;

c) that, while vehicular SRR is expected to contribute significantly to road safety, such applications have not been defined as a safety service according to No. **1.59** or subject to No. **4.10**,

resolves to invite WRC-15

to consider a primary allocation to the radiolocation service in the 77.5-78 GHz frequency band, taking into account the results of ITU-R studies,

invites ITU-R

to conduct, as a matter of urgency, and in time for consideration by WRC-15, the appropriate technical, operational and regulatory studies, including:

i) sharing studies and regulatory solutions to consider a primary allocation to the radiolocation service in the band 77.5-78 GHz, taking into account incumbent services and existing uses of the band;

ii) compatibility studies in the band 77.5-78 GHz with services operating in the adjacent bands 76-77.5 GHz and 78-81 GHz;

iii) spectrum requirements, operational characteristics and evaluation of ITS safety-related applications that would benefit from global or regional harmonization,

invites administrations

to contribute actively to ITU-R studies on this issue,

instructs the Secretary-General

to bring this Resolution to the attention of the international and regional organizations concerned, including ISO and the ITU's Collaboration on ITS Communication Standards.