UNITED STATES OF AMERICA

DRAFT PRELIMINARY VIEWS ON WRC-11

AGENDA ITEM 1.14: to consider requirements for new applications in the radiolocation service and review allocations or regulatory provisions for implementation of the radiolocation service in the range 30-300 MHz, in accordance with Resolution 611 (WRC-07)

ISSUE: To determine if any new radiolocation service allocations or applications in a portion of 30-300 MHz, with bandwidth no larger than 2 MHz, are compatible with existing services and applications in these bands

BACKGROUND: Resolution 611 (WRC-07) asks WRC-11 to determine if any new radiolocation service allocations or applications in a portion of 30-300 MHz, with bandwidth no larger than 2 MHz, are compatible with existing services and applications in these bands. The resolution recognizes the importance of radiolocation radars operating compatibly with the existing primary services having allocations in portions of the VHF band. Further, the resolution states that introduction of new systems in the radiolocation service shall be avoided in the frequency bands 156.4875-156.8375 MHz and 161.9625-162.0375 MHz, which are used by distress and safety applications in maritime mobile service. The ITU-R is studying the technical characteristics, protection criteria, and other factors necessary to ensure that radiolocation systems can operate compatibly with systems operating in accordance with the Table of Frequency Allocations in services in the 30-300 MHz frequency range band.

ITU-R and regional work indicate some interest in the 154-156 MHz band for a new radar allocation for space-object detection purposes and the 138-144 MHz band for new radar allocations.

A wide variety of services have allocations in the 30-300 MHz band including the fixed, mobile, aeronautical mobile (R), aeronautical radionavigation, broadcasting, radio astronomy, mobile-satellite, amateur, and amateur-satellite services. In particular, the fixed and mobile services have allocations in the 138-144 MHz, 150.05-150.8 MHz, and 225-235 MHz bands, and aeronautical mobile applications use these bands in many ways. Commercial entities, local, state or national governments, and other organizations use private land mobile radio systems in portions of these bands to meet a wide range of communication requirements, including coordination of people and materials, important safety and security needs, and quick response in times of emergency. For example, in one Region 2 country, there are over 176,000 active licenses in the frequency band 150-174 MHz, and over 70,000 of these are within the 154-156 MHz band alone.

Various portions of the VHF band are allocated to the radio astronomy service for observations of extremely faint emissions from cosmic sources. Generally, the use of these bands by radars is incompatible with the extremely sensitive receiving systems used in the radio astronomy service. Radio astronomy allocations vary by country, but generally include the following bands (in MHz): 37.5 – 38.25 (primary or secondary depending on country); 73 – 74.6 (generally primary); and 150.05 – 153 (e.g. 5.149).
Further, some administrations have allocated parts of the 30-300 MHz band to the amateur and amateur-satellite services. These bands are heavily populated by a variety of amateur and amateur-satellite stations, including, but not limited to, tens of thousands of voice repeater systems worldwide. VHF repeater systems are a predominant medium for amateur communications over a short range. The amateur services utilizes these bands for simplex, digital, and long-range weak signal communication via terrestrial, satellite, and earth-moon-earth propagation paths.

**U.S. VIEW:** To adopt new allocations that would support radar operations within 30-300 MHz, ITU-R studies must demonstrate compatibility between radar systems and existing services, including mobile-satellite, mobile (including aeronautical mobile), land mobile, fixed, radio astronomy, amateur, and amateur-satellite. *(Ref: RCS – 2184/2)*