UNITED STATES OF AMERICA

PRELIMINARY VIEWS ON WRC-11

AGENDA ITEM 1.21: to consider a primary allocation to the radiolocation service in the band 15.4-15.7 GHz, taking into account the results of ITU-R studies, in accordance with Resolution 614 (WRC-07)

ISSUE: Under WRC-11 Agenda Item 1.21, administrations will consider a primary radiolocation service allocation in the band 15.4-15.7 GHz. Allocating a primary radiolocation service in the band 15.4-15.7 GHz will provide additional spectrum for new advanced radar systems with increased image resolution and increased range accuracy that require wider emission bandwidths than currently available. Operation of radiolocation radars in this band must not adversely affect other co-primary services in the band or the radio astronomy service in the adjacent band 15.35-15.40 GHz.

BACKGROUND: The band 15.4-15.7 GHz is allocated on a primary basis to the aeronautical radionavigation service (ARNS). There are no ICAO-standard ARNS systems currently operating in this band. While the ARNS is a safety service as delineated in No. 4.10 of the Radio Regulations, radiolocation services have demonstrated compatible operations with radionavigation radars in other frequency bands over many years. The radars achieved compatibility through similar system characteristics such as low-duty cycle emissions and scanning beams, as well as interference reduction techniques. Studies within the ITU-R addressing compatibility between radiolocation and radionavigation radars in other frequency bands provide evidence that sharing in the band 15.4-15.7 GHz between these types of systems may be feasible. Recommendation ITU-R M.1730 contains the technical characteristics and protection criteria for radiolocation radars in the band 15.7-17.3 GHz. Recommendation ITU-R M.1372 identifies interference mitigation techniques that ensure compatibility among radar systems operating in different radiodetermination services. Additionally, ITU-R Report M.2076 contains further mitigation techniques for interference from radiolocation radars into radionavigation radars operating in the 9 GHz band. These techniques may apply to the band 15.4-15.7 GHz. Potential wideband radiolocation radars operating across the entire 15.4-17.3 GHz band must ensure compatibility with systems in the existing 15.7-17.3 GHz radiolocation band. A portion of the 15.4-15.7 GHz band is allocated to the fixed-satellite service (FSS), limited to feeder links for non-geostationary orbit (NGSO) mobile-satellite service (MSS) in both space-Earth and Earth-space directions. Currently, there are no FSS systems operating in the 15.4-15.7 GHz band.

In some administrations, there is limited use of the 15.4-15.7 GHz band for non-ICAO aircraft landing systems. One administration is considering expansion of an existing airport surface detection system, currently operating in the 15.7-16.2 GHz band, to operate in the 15.4-15.7 GHz band.

U.S. VIEW: If the studies identified in Resolution **614 (WRC-07)** demonstrate that the incumbent services and systems can be protected from the potential use of the 15.4-15.7 GHz band by radiolocation systems, the United States supports a new primary allocation to the radiolocation service in the band 15.4-15.7 GHz. (August 27, 2008)