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WAC Informal Working Group (IWG)-1

United States of America

DRAFT PROPOSALS FOR THE WORK OF THE CONFERENCE

Agenda Item 1.17: *to consider possible spectrum requirements and regulatory actions, including appropriate aeronautical allocations, to support wireless avionics intra-communications (WAIC), in accordance with Resolution* ***423(WRC-12)****;*

ISSUE: The purpose of this agenda item is to identify spectrum requirements and take regulatory actions, including allocations, to support the safe integration of WAIC systems. The ITU-R is studying sharing and compatibility with existing aeronautical mobile, aeronautical mobile (route), and aeronautical radionavigation services below 15.7 GHz, and other frequency bands above 15.7 GHz.

INTRODUCTION:

The aerospace industry is developing new commercial aircraft to provide airlines and the flying public more cost-efficient air transportation while maintaining required levels of safety and reliability. One important way of accomplishing these aims is to reduce aircraft weight while providing multiple and redundant methods to transmit safety-related information within and on an aircraft. The utilization of wireless technologies may accomplish these goals while providing environmental benefits and cost savings to manufacturers and operators.

Installed Wireless Avionics Intra-Communications (WAIC) systems are one way to derive these benefits. WAIC systems consist of radiocommunications between two or more transmitters and receivers on a single aircraft. Both the transmitter and receiver are integrated with or installed on the aircraft. In all cases, communication is part of a closed, exclusive network required for aircraft operation. WAIC systems will not provide air-to-ground or air-to-air communications. WAIC systems will be limited to safety and regularity-of-flight related applications.

New Report ITU-R M. 2197 provides findings on the technical characteristics and operational requirements of WAIC systems for a single aircraft. Current aeronautical services allocations may not be sufficient to permit the introduction of WAIC systems due to the anticipated WAIC bandwidth requirements.

Studies will be necessary to determine the spectrum requirements of WAIC systems and if these requirements can be accommodated in existing aeronautical frequency bands, or if new allocations may be required. Accordingly, recommendations based on the results of studies will be necessary for WRC-15 to take appropriate regulatory action to accommodate WAIC systems.

U.S. VIEW: The United States supports a primary allocation to the AM(R)S for the introduction of Wireless Avionics Intra-Communications (WAIC) systems in the AMS, AM(R)S and/or ARNS allocations below 15.7 GHz and, if necessary, in frequency bands above 15.7 GHz, based on the results of ITU-R studies showing compatibility with existing services, in accordance with **Resolution 423 (WRC-12)**.

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