

WAC Informal Working Group (IWG)-1

United States of America

DRAFT PROPOSALS FOR THE WORK OF THE CONFERENCE

Agenda Item 8.2: *to recommend to the Council items for inclusion in the agenda for the next WRC, and to give its views on the preliminary agenda for the subsequent conference and on possible agenda items for future conferences, taking into account Resolution 806 (WRC 07).*

Introduction

The aerospace industry is developing the future generation of commercial aircraft to provide airlines and the flying public more cost-efficient, safe, and reliable aircraft. One important way of accomplishing these aims is to reduce aircraft weight while providing multiple and redundant methods to transmit information on an aircraft. Wireless technologies can be employed to accomplish these goals while also 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 will be 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, and will only be used for safety-related applications.

ITU-R Working Party 5B has developed a Draft New Report (ITU-R M.[WAIC], Document SG05/212) that provides findings on the technical characteristics and operational requirements of WAIC systems for a single aircraft.

Because WAIC systems may impact the safety and regularity of flight of an aircraft, the International Civil Aviation Organization (ICAO) has indicated that WAIC systems should operate in a safety service allocation, which could include the Aeronautical Mobile (Route) Service or another service with similar regulatory treatment.

Because of the ICAO recommendation and anticipated WAIC bandwidth requirements, the United States believes that current AM(R)S spectrum allocations may not be sufficient to permit the introduction of WAIC systems. Accordingly, a WRC-15 agenda item is sought to conduct studies and take appropriate regulatory action to accommodate WAIC systems.

Therefore, the United States is proposing a new item for the preliminary agenda for the next World Radiocommunication Conference together with a draft resolution as shown in the attachment.

Attachment: 1

ATTACHMENT

ADD USA/5BXX/1

RESOLUTION 806 (WRC-07)

Preliminary agenda for the 2015 World Radiocommunication Conference

2.WAIC to consider spectrum requirements and possible regulatory actions, including allocations, to support wireless avionics intra-communications (WAIC) systems, based on ITU-R studies in accordance with Resolution [WAIC-X] (WRC-12);

Reasons: Agenda item 8.2. WAIC is submitted as an agenda item for WRC-15 to enable the appropriate studies on the spectrum requirements and regulatory actions for wireless avionics intra-communications (WAIC) systems.

ADD USA/XX/2

RESOLUTION [WAIC-X] (WRC-12)

Consideration of regulatory actions, including allocations, for Wireless Avionics Intra-Communications (WAIC)

The World Radiocommunication Conference (Geneva, 2012),

considering

- a) that the future generation of commercial aircraft is being designed to be more cost-efficient, safe, and reliable as well as environmentally friendly;
- b) that WAIC systems are restricted to radiocommunications between two or more points integrated into or installed on a single aircraft;
- c) that WAIC systems will be operated onboard aircraft on the ground and during all phases of flight;
- d) that because WAIC systems may impact the safety and regularity of flight of an aircraft, such systems may need to operate in spectrum allocated for aeronautical mobile (route) services;
- e) the potential bandwidth requirements of WAIC systems, there is a possible need for additional aeronautical mobile (route) service spectrum to support the implementation of WAIC systems;
- f) that in identifying any spectrum for use by WAIC systems, there is a need to protect and not unduly constrain existing services,

recognizing

- a) that WAIC systems are being developed to operate safely and efficiently in one or more non-contiguous radio frequency bands, with emphasis on those currently allocated to the aeronautical mobile service and aeronautical radionavigation service;

- b) that WAIC systems operating inside an aircraft will obtain the benefits of fuselage attenuation and other aircraft surface attenuation in order to facilitate sharing with other services;
- c) that studies will be required to provide a basis for considering regulatory changes, including additional allocations, designed to accommodate justified spectrum requirements of WAIC systems consistent with the protection of incumbent services,

resolves

that WRC-15 consider, based on the results of ITU-R studies, spectrum requirements and possible regulatory provisions to support the implementation of WAIC systems, including the possibility of specific allocations, without placing undue constraints on existing services in the considered bands.

invites ITU-R

- 1 to conduct in time for WRC-15 the necessary studies to determine the spectrum requirements and regulatory actions needed to support WAIC systems,
- 2 in conducting the studies in *invites 1*, to first consider spectrum within existing aeronautical mobile service and aeronautical radionavigation service allocations
- 3 in conducting the studies referred to in *invites 1* and *invites 2*, to include sharing and compatibility studies with services already having allocations in potential frequency bands identified in the *resolves*,

further invites

all members of the Radiocommunication Sector and the International Civil Aviation Organization (ICAO) to contribute to these studies.

Reasons: This resolution details the scope and required studies related to future spectrum requirements of wireless avionics intra-communications systems. This resolution will enable the required analysis to determine the spectrum requirements and potential frequency bands to take place in the appropriate ITU-R Study Group(s).
