

Ms. Mindel De La Torre
Chief of the International Bureau
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Dear Ms. De La Torre:

The National Telecommunications and Information Administration (NTIA), on behalf of the Executive Branch agencies, approves the release of a draft Executive Branch proposal in response to the FCC proposal on WRC-12 agenda item 8.2 Wireless Avionics Intra-Communications (WAIC). NTIA supports the FCC proposal with modifications for a future conference agenda item on WAIC.

NTIA considered the Federal agencies' input toward the development of U.S. proposals for WRC-12. NTIA forwards this package for consideration and review by your WRC-12 Advisory Committee. Dr. Darlene Drazenovich is the primary contact from my staff.

Sincerely,

(Original Signed January 24, 2011)

Karl B. Nebbia
Associate Administrator
Office of Spectrum Management

UNITED STATES OF AMERICA
DRAFT PROPOSALS FOR THE WORK AT 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)*

Background Information: 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. Employment of wireless technologies can 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 include safety-related applications among their operations.

Draft New Report ITU-R M.[WAIC] 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. Therefore, this document proposes a WRC-15 agenda item with an associated draft resolution to conduct studies and take appropriate regulatory action to accommodate WAIC systems.

Proposal:

MOD USA/8.2/1

RESOLUTION 806 (~~REV.~~ WRC-12)

Deleted: 07

Agenda for the 2015 World Radiocommunication Conference

Deleted: Preliminary a

Reasons: To modify the agenda for WRC-15 to add a new item.

ADD USA/8.2/2

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: 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/8.2/3

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 WAIC systems are expected to be used for safety-related aircraft applications;
- e) 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, as described in *considering b)*, are being developed to operate safely and efficiently in one or more non-contiguous radio frequency bands, with emphasis on those currently allocated to aeronautical services;
- b) that WAIC systems operating inside an aircraft will obtain some benefits of fuselage attenuation and other aircraft surface attenuation in order to facilitate sharing with other services;
- c) that ITU-R Report M.2197 identifies the need for up to 200 MHz of spectrum in the 1-10 GHz range for low data rate applications and up to 2 GHz of spectrum in the range 10-66 GHz for high data rate applications;
- d) that studies will be required to provide the basis for considering regulatory changes, including additional allocation, to accommodate justified spectrum requirements of WAIC systems taking into account protection of incumbent services,

resolves

- 1 that ITU-R conduct, in time for WRC-15, more detailed studies than contained in ITU-R Report M.2197 to determine the specific spectrum requirements needed to support WAIC systems as described in *considering b)*;
- 2 that ITU-R, based on the results of *resolves 1*, conduct sharing and compatibility studies;
- 3 that in conducting the sharing and compatibility studies in *resolves 2*:
- for bands below 15.7 GHz, to only consider spectrum within existing aeronautical service allocations;
 - if spectrum requirements cannot be met below 15.7 GHz, to consider frequency bands above 15.7 GHz for new AMS allocation(s) limited to WAIC use;
- 4 that, if compatibility with existing services is confirmed under *resolves 2* and *3* and based on the results of ITU-R studies, recommend that WRC-15 consider possible regulatory provisions to support the implementation of WAIC systems, including the possibility of new AMS allocation(s), taking into account protection of incumbent services and without placing undue constraints on existing services in the considered bands,

invites

all members of the Radiocommunication Sector and the International Civil Aviation Organization (ICAO) to participate in 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).

Annex

Subject: 2012 World Radiocommunication Conference Agenda Item 8.2 Proposal to support the introduction of new allocations in the Aeronautical Mobile Service.

Origin: United States of America

Proposal: 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)

Background/reason: The commercial aviation industry is developing the next generation of aircraft to provide airlines and the flying public more cost-efficient, safer, and more reliable aircraft. It is believed that wireless technologies can reduce the weight of systems on an aircraft, thereby reducing the amount of fuel required to fly and providing significant cost savings. Installed wireless avionics intra-communications (WAIC) systems are one way to derive these benefits.

Radiocommunication services concerned: All services.

Indication of possible difficulties: None

Previous/ongoing studies on the issue: Report ITU-R M. [WAIC] as approved at November 2010 Study Group 5 meeting.

<i>Studies to be carried out by:</i> ITU-R Study Group 5, Working Party 5B.	<i>with the participation of:</i> ICAO
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ITU-R Study Groups concerned: Study Groups 4, 5, 6, and 7.

ITU resource implications, including financial implications (refer to CV126): -- Minimal.

Common regional proposal: No

Multicountry proposal: No

Number of countries:

Remarks