



UNITED STATES DEPARTMENT OF COMMERCE
National Telecommunications and
Information Administration
INTERDEPARTMENT RADIO ADVISORY COMMITTEE
Washington, D.C. 20230

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

MAY 20 2015

Dear Ms. De La Torre:

The National Telecommunications and Information Administration (NTIA), on behalf of the Executive Branch agencies, approves the release of the draft Executive Branch proposal for the 2015 World Radiocommunication Conference (WRC-15) which addresses the agenda item for Global Flight Tracking and a WRC-15 agenda item 10 proposal for a future conference agenda item to be added to the WRC-19 agenda. The WRC-15 Global Flight Tracking proposal adds a primary allocation to the aeronautical mobile-satellite (R) service. The WRC-15 agenda item 10 proposal seeks to address the evolving needs of Global Flight Tracking and the Global Aeronautical Distress and Safety System through continued International Telecommunication Union-Radiocommunication Sector studies as an agenda item for WRC-19.

NTIA considered the federal agencies' input toward the development of U.S. proposals for WRC-15. NTIA forwards this package for your consideration and review by your WRC-15 Advisory Committee. Mr. Charles Glass is the primary contact from my staff.

Sincerely,

Paige R. Atkins
Associate Administrator
Office of Spectrum Management

UNITED STATES OF AMERICA
DRAFT PROPOSALS FOR THE WORK OF THE CONFERENCE

Agenda Item GFT: *“to instruct WRC-15, pursuant to No. 119 of the ITU Convention, and to include in its agenda, as a matter of urgency, the consideration of global flight tracking, including, if appropriate, and consistent with ITU practices, various aspects of the matter, taking into account ITU-R studies”*

Background Information: The International Telecommunications Union (ITU) 2014 Plenipotentiary Conference (PP-14) adopted Resolution 185 (Busan, 2014) on global flight tracking (GFT) for civil aviation. The Resolution resolved: “to instruct WRC-15, pursuant to No. 119 of the ITU Convention, and to include in its agenda, as a matter of urgency, the consideration of global flight tracking, including, if appropriate, and consistent with ITU practices, various aspects of the matter, taking into account ITU-R studies”. PP-14 further instructed the Director of the Radiocommunication Bureau to complete a Report on GFT for consideration by WRC-15.

The International Civil Aviation Organization (ICAO) Member States and the international air transport industry sector have reached consensus on the near-term priority to track airline flights, no matter their global location or destination. They concluded that global flight tracking should be pursued as a matter of urgency and two groups were formed: an ICAO ad hoc Working Group to develop a concept of operations to support future development of a Global Aeronautical Distress and Safety System (GADSS), and an industry led group under the ICAO framework called the Aircraft Tracking Task Force (ATTF) to identify near term capabilities for normal flight tracking using existing technologies. The ATTF has provided a report containing a set of performance-based criteria that could be used to establish a baseline level of aircraft tracking capability. The Report also identified future technologies that could support flight tracking in oceanic and remote airspace such as satellite-based reception of Automatic Dependent Surveillance – broadcasts (ADS-B) from aircraft.

The United States believes that ultimately the characteristics of GFT are the responsibility of ICAO. Furthermore the United States concurs with the ATTF Report that GFT will likely be a performance-based requirement that is not system specific, and in the end, may be addressed through integration of a number of different aviation systems. Given the complexity of the issue, the United States also believes that full understanding of the GFT requirements will not be available in order to be completely addressed at WRC-15. The United States therefore proposes to address the new WRC-15 agenda item on GFT with a two-pronged approach: (1) the addition of a primary aeronautical mobile-satellite (R) service (AMS(R)S) allocation in the frequency range 1 087.7-1 092.3 MHz to facilitate satellite reception of ADS-B; and (2) the addition of an item to the 2019 WRC agenda to address other requirements which may come out of the ongoing ITU-R studies and consultations with ICAO. The former is addressed in this proposal, the latter will be included in a proposal addressed to WRC-15 agenda item 10.

The proposed AMS(R)S allocation would allow reception at the satellite of already transmitted messages. Since there would be no new emissions, it would be impossible for systems operating under the new allocation to interfere with incumbent systems. There is concern however, that the emissions from current systems operating in other services, which are compatible today with terrestrial incumbents, may cause interference to the satellites due to their increased field of view. ITU-R studies have shown that this is not the case. However, to ensure the operations of the existing systems are not constrained – and in particular the non-ICAO systems – this proposal stipulates that satellites operating under the AMS(R)S allocation “shall not claim

protection from systems operating in the aeronautical radionavigation service”. While there are also aeronautical mobile (R) service systems operating in the band, those are limited to ICAO-standard systems, so compatibility will be ensured in the ICAO standardization process.

Proposals:

MOD USA/AI GFT/1

ARTICLE 5
Frequency allocations
Section IV – Table of Frequency Allocations
(See No. 2.1)

890-1 300 MHz

Allocation to services		
Region 1	Region 2	Region 3
...		
960-1 164	AERONAUTICAL MOBILE (R) 5.327A AERONAUTICAL RADIONAVIGATION 5.328 <u>5.XXX</u>	
...		

Reasons: Add a primary allocation to the aeronautical mobile-satellite (R) service in the frequency range 1 087.7-1 092.3 MHz to enable satellite reception of automatic dependent surveillance-broadcast (ADS-B) messages transmitted in accordance with ICAO standards.

ADD USA/AI GFT/2

5.XXX: The frequency range 1 087.7-1 092.3 MHz is also allocated to the aeronautical mobile-satellite (R) service (Earth-to-space) on a primary basis limited to space station reception of aeronautical mobile (R) service emissions from aircraft stations in support of aircraft surveillance in accordance with recognised international aeronautical standards. Space stations performing such reception shall not claim protection from systems operating in the aeronautical radionavigation service in that frequency range.

Reasons: Add a primary allocation to the aeronautical mobile-satellite (R) service in the frequency range 1 087.7-1 092.3 MHz to enable satellite reception of automatic dependent surveillance-broadcast (ADS-B) messages transmitted in accordance with ICAO standards. In addition, consistent with study results indicating compatibility, space stations would need to be able to accommodate continuing use of that frequency range by the aeronautical radionavigation service.

UNITED STATES OF AMERICA
PROPOSAL FOR THE WORK OF THE CONFERENCE

Agenda Item 10: *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 International Civil Aviation Organization (ICAO) held a Special Meeting on Global Flight Tracking of Aircraft in Montreal May 2014, and formed two groups to address the near-term priority to track airline flights, no matter their global location or destination. Those groups were an ICAO ad hoc Working Group to develop a concept of operations to support future development of a Global Aeronautical Distress and Safety System (GADSS) and an industry led group under the ICAO framework called the Aircraft Tracking Task Force (ATTF) to identify near term capabilities for normal flight tracking using existing technologies. In combination, those efforts will address issues such as:

- Aircraft tracking under normal and abnormal conditions
- Autonomous distress tracking
- Automatic deployable flight recorder
- Procedures and information management

The collective urgency of the situation is highlighted by the decision of the ITU Plenipotentiary Conference, through Resolution 185, to instruct WRC-15, pursuant to No. 119 of the ITU Convention, to include in its agenda, as a matter of urgency, the consideration of global flight tracking, including, if appropriate, and consistent with ITU practices, various aspects of the matter, taking into account ITU-R studies. The United States believes that ultimately the characteristics of global flight tracking (GFT) are the responsibility of ICAO. Given the complexity of the issue, the United States also believes that full understanding of the GFT requirements will not be available in order to be completely addressed at WRC-15. The United States therefore proposes to address the new WRC-15 agenda item on GFT with a two-pronged approach: (1) the addition of a primary aeronautical mobile-satellite (R) service (AMS(R)S) allocation in the frequency range 1 087.7-1 092.3 MHz to facilitate satellite reception of ADS-B; and (2) the addition of an item to the 2019 WRC agenda to address other requirements which may come out of the ongoing ITU-R studies and consultations with ICAO. The former is addressed in a separate proposal to WRC-15.

With respect to the latter, while the systems needed have yet to be fully defined it is anticipated that there may be a need to change the Radio Regulations in order to facilitate those efforts. It is therefore proposed that an agenda item be established for WRC-19 that is flexible enough to address any required changes to the Radio Regulations necessary to allow the implementation of the GADSS, as well as full implementation of the to-be-defined GFT.

Proposal:

MOD USA/10/1

RESOLUTION 806 (WRC-15)

Agenda for the 2019 World Radiocommunication Conference

The World Radiocommunication Conference (Geneva, 2015),

ADD USA/10/2

X.X to consider regulatory actions, including spectrum allocations, to address evolving needs of Global Flight Tracking and the Global Aeronautical Distress and Safety System in accordance with Resolution **AIR (WRC-15)**.

Reasons: To support International Civil Aviation Organization activities to improve aircraft tracking, and to facilitate aircraft communications in the event of emergencies.

ADD USA/10/3

RESOLUTION AIR (WRC-15)

Aircraft Tracking and Distress Communications

The World Radiocommunication Conference (Geneva, 2015),

considering

- a) that there is a growing desire to track airline flights, no matter their global location or destination;
- b) that new technologies, including satellite technologies, are being developed to support communications and air navigation, including surveillance applications;
- c) that in the event of aircraft distress situations, additional communications may be required,

recognizing

- a) that the International Civil Aviation Organization (ICAO) is developing a concept of operations to support future development of a Global Aeronautical Distress and Safety System (GADSS), and identifying near term capabilities for normal flight tracking using existing technologies;
- b) that the constituent elements of the systems discussed in *recognizing a)* are not yet defined by ICAO,

resolves to invite WRC-19

taking into account the results of ITU-R studies, to consider any necessary regulatory actions, including spectrum allocations, to address requirements for the functions discussed in *considering a)* and *recognizing a)*,

resolves to invite the ITU-R

to conduct in time for WRC-19, necessary sharing and compatibility studies to ensure protection of existing services within the frequency bands that may be identified for the functions discussed in *considering a)* and *recognizing a)* ,

invites administrations

to participate actively in the studies and provide the technical and operational characteristics of the systems involved by submitting contributions to the ITU-R,

further invites

the International Civil Aviation Organization (ICAO), the International Air Transport Association, administrations and other organizations concerned to participate in the studies identified in *invites ITU-R* above,

instructs the Secretary General

to bring this resolution to the attention of the International Civil Aviation Organization.

Reasons: A resolution will support the ITU-R studies needed under the relevant WRC-19 agenda item.

ATTACHMENT

**PROPOSAL FOR ADDITIONAL AGENDA ITEM STUDYING THE SPECTRUM
REQUIREMENTS FOR THE GLOBAL AERONAUTICAL DISTRESS AND SAFETY
SYSTEM AND AIRCRAFT FLIGHT TRACKING**

Subject: Proposed Future WRC Agenda Item for WRC-19 to support ongoing International Civil Aviation Organization activities to improve aircraft tracking, and to facilitate aircraft communications in the event of emergencies.

Origin: United States of America

Proposal: to address evolving needs of Global Flight Tracking and the Global Aeronautical Distress and Safety System.

Background/reason:

The International Civil Aviation Organization (ICAO) held a Special Meeting on Global Flight Tracking of Aircraft in Montreal May 2014, and formed two groups to address the near-term priority to track airline flights, no matter their global location or destination. Those groups were an ICAO ad hoc Working Group to develop a concept of operations to support future development of a Global Aeronautical Distress and Safety System (GADSS) and an industry led group under the ICAO framework called the Aircraft Tracking Task Force (ATTF) to identify near term capabilities for normal flight tracking using existing technologies. Given the complexity of the issues, full understanding of the requirements will not be available in order to be completely addressed at WRC-15.

Radiocommunication services concerned: Fixed-Satellite Service, Mobile-Satellite Service, Mobile Service

Indication of possible difficulties: None foreseen

Previous/ongoing studies on the issue: None to date

Studies to be carried out by: SG5	with the participation of: SG4
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ITU-R Study Groups concerned: SG4, SG5

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

Common regional proposal: Yes/No	Multicountry proposal: Yes/No
<i>Number of countries:</i>	

Remarks