

ATTACHMENT

PROPOSAL FOR AN AGENDA ITEM STUDYING THE EARTH EXPLORATION-SATELLITE SERVICE (EARTH-TO-SPACE) SHARING WITH SERVICES IN THE BAND 7 190 – 7 235 MHz

Subject: Proposed Agenda Item for WRC-15 studying an Earth exploration-satellite service (Earth-to-space) allocation in the band 7 190 – 7 235 MHz and sharing between the fixed, mobile and space research services.

Origin: United States of America

Proposal: to review ITU-R studies on sharing between potential Earth exploration-satellite service (EESS) uplinks and existing services in the band 7 190 – 7 235 MHz, with the view to providing a primary allocation for the EESS (Earth-to-space) in the 7 190 – 7 235 MHz band, in accordance with Resolution [USA-YYY] (WRC-12).

Background/reason: The Earth exploration-satellite service (EESS) requires an additional Earth-to-space allocation in the frequency band 7 190 – 7 235 MHz because of congestion in the bands 2 025 – 2 110 MHz and 2 200 – 2 290 MHz, which support several hundred satellites, making coordination extremely difficult. This allocation, along with existing space-to-Earth allocations near 8 GHz, would also allow EESS satellites to employ a single transponder for both uplinks and downlinks, reducing design and launch costs.

Radiocommunication services concerned: fixed, mobile, space research (Earth-to-space)

Indication of possible difficulties: none foreseen

Previous/ongoing studies on the issue: TBD

Studies to be carried out by: WP 7B

with the participation of: **WPs 5A, 5C**

ITU-R Study Groups concerned: SG7

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

Common regional proposal: Yes/No

Multicountry proposal: Yes/No

Number of countries:

Remarks

Document WAC/112(08.03.11)

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 draft Executive Branch proposals for WRC-12 agenda items 1.4 Res.417, 1.5, 1.16, 7 No. 11.41A, 8.1.1 (Issue C), and 8.2 Global Maritime Distress & Safety System (GMDSS). NTIA proposes to modify Resolution 417 (WRC-07) under agenda item 1.4. NTIA proposes to suppress Resolution 954 (WRC-07) to supplement the existing U.S. proposal on agenda item 1.5. For agenda item 1.16, NTIA proposes to extend the Table of Frequency Allocations down to 8.3 kHz and add a meteorological aids allocation to 8.3-11.3 kHz for the purpose of lightning detection. For agenda item 7, NTIA proposes to modify No. 11.41A on the recording of satellite frequency assignments. Regarding agenda item 8.1.1 Issue C, NTIA proposes to modify Resolution 673 (WRC-07) for recognition and importance of Earth observation radiocommunications. For agenda item 8.2, NTIA proposes a future conference agenda item for GMDSS and e-Navigation.

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 12, 2011)

Karl B. Nebbia
Associate Administrator
Office of Spectrum Management

UNITED STATES OF AMERICA

DRAFT PROPOSALS FOR THE WORK AT THE CONFERENCE

Agenda Item 1.4: *to consider, based on the results of ITU-R studies, any further regulatory measures to facilitate introduction of new aeronautical mobile (R) service (AM(R)S) systems in the bands 112-117.975 MHz, 960-1 164 MHz, and 5 000-5 030 MHz in accordance with Resolutions 413 (Rev. WRC-07), 417 (WRC-07) and 420 (WRC-07)*

Background Information: ITU-R studies indicate the need to modify Resolution 417 (WRC-07) on the use of the band 960-1 164 MHz by the aeronautical mobile (R) service to ensure coexistence with the incumbent safety of life systems. Aeronautical mobile (route) service (AM(R)S) systems are critical for various air traffic and flight safety communications. Some of the communications systems and services in the 960-1 164 MHz band include traffic information, automatic dependent surveillance-broadcast, and flight information. These systems provide easily accessible air traffic information to multiple air traffic managers at the same time, thus allowing for more efficient airspace use by allowing more planes to fly in closer routes.

International Civil Aviation Organization (ICAO) aeronautical radionavigation service (ARNS) systems, as well as ARNS systems that are not standardized by ICAO, operate in this band and are critical to safety of life operations. These systems allow for aircraft to fly safely by accurately determining flight paths during all phases of flight including take off and landing, and increase the pilot's awareness of close aircraft by scanning the area surrounding the plane. Radionavigation-satellite service (RNSS) systems, which operate in the adjacent band 1 164-1 215 MHz, must also operate in an environment free of harmful interference from emissions in the 960-1 164 MHz band.

Given the importance of both AM(R)S and ARNS systems for safety of life operations in the 960-1 164 MHz band and the need to safeguard the RNSS systems in the adjacent 1 164-1 215 MHz band, this proposal advocates placing equivalent isotropically radiated power (e.i.r.p) limits on AM(R)S systems below 1 164 MHz to ensure compatibility and protection from harmful interference among the various safety of life systems. This proposal supports Method B1 of the draft CPM Report.

Proposal:

MOD USA/AI 1.4/1

RESOLUTION 417 (Rev. WRC-0712)

Use of the band 960-1 164 MHz by the aeronautical mobile (R) service

The World Radiocommunication Conference (Geneva, 200712),

considering

- a) that ~~WRC-07~~this Conference has allocated the band 960 to 1 164 MHz to the aeronautical mobile (R) service (AM(R)S) in order to make available this frequency band for new AM(R)S systems, and in doing so enabled further technical developments, investments and deployment;
- b) the current allocation of the frequency band 960-1 164 MHz to the aeronautical radionavigation service (ARNS);
- c) the use of the band 960-1 215 MHz by the ARNS is reserved on a worldwide basis for the operation and development of airborne electronic aids to air navigation and any directly associated ground-based facilities per No. 5.328;
- d) that new technologies are being developed to support communications and air navigation, including airborne and ground surveillance applications;
- e) that ~~the this new~~allocation of the frequency band 960-1 164 MHz to the aeronautical mobile (R) service is intended to support the introduction of applications and concepts in air traffic management which are data intensive and which could support data links that carry safety critical aeronautical data;
- f) that in countries listed in No. 5.312 the frequency band 960-1 164 MHz is also used by systems in the ARNS for which standards and recommended practices (SARPs) have not been developed nor published by the International Civil Aviation Organization (ICAO);
- g) that, furthermore, the frequency band 960-1 164 MHz is also used by a non-ICAO system operating in the ARNS that has characteristics similar to those of ICAO standard distance measuring equipment;
- ~~h) that this allocation was made knowing that studies are ongoing with respect to the technical characteristics, sharing criteria and sharing capabilities;~~
- ~~i) that the frequency band 117.975-137 MHz currently allocated to the AM(R)S is reaching saturation within certain areas of the world, therefore that band would not be available to support additional medium- and long-range data communications;~~
- ~~j) that, additional information is needed on the new technologies which will be used, other than the AM(R)S system identified in recognizing e), the amount of spectrum required, and the characteristics and sharing capabilities/conditions. Therefore, studies are urgently required on which AM(R)S systems will be used, the amount of spectrum required and the characteristics and conditions for sharing with ARNS systems;~~

recognizing

- ~~a) that precedence must be given to the ARNS operating in the frequency band 960-1 164 MHz;~~
- ~~ba) that Annex 10 of the Convention of the ICAO on International Civil Aviation contains SARPs for aeronautical radionavigation and radiocommunication systems used by international civil aviation;~~
- ~~eb) that all compatibility issues between the ICAO Standard Universal Access Transceiver (UAT) operating under an AM(R)S allocation and other systems which operate in the same frequency range excluding the system identified in considering f), have been addressed;~~

*d*c) that in the frequency band 1 024-1 164 MHz the sharing conditions are more complex than in the band 960-1 024 MHz,

noting

that, ~~excluding the system identified in recognizing e), no compatibility criteria currently exist between AM(R)S systems proposed for operations in the frequency band 960-1 164 MHz and ICAO-standardized the existing aeronautical systems in the band will be developed in ICAO.~~

resolves

- 1 that any AM(R)S system operating in the frequency band 960-1 164 MHz shall meet SARPs requirements published in Annex 10 of the ICAO Convention on International Civil Aviation;
- 2 that any AM(R)S systems operating in the band 960-1 164 MHz with aircraft station operating within 934 km or/and ground stations operating within 465 km from the border of the territory of [Armenia, Azerbaijan, Belarus, Bulgaria, Russian Federation, Georgia, Hungary, Kazakhstan, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Slovakia, Czech Rep., Romania, Tajikistan, Turkmenistan and Ukraine] shall not cause harmful interference to, nor claim protection from, and shall not impose constraints on the operation and planned development of aeronautical radionavigation systems (*see considering f*) in the same band of these countries unless otherwise agreed;
- ~~3 that compatibility studies between AM(R)S systems operating in the band 960-1 164 MHz and ARNS systems in considering f) and g) need to be conducted to develop sharing conditions to ensure that the conditions of resolves 2 are satisfied, and that ITU-R Recommendations are developed as appropriate;~~
- 3 that administrations authorizing AM(R)S systems in the band 960-1 164 MHz are urged to take into account the sharing conditions as concluded in Report ITU-R M.[AM(R)S 1GHZ_SHARING] on the coexistence with system indicated under *considering g*);
- ~~4 that the result of the studies pursuant to resolves 3 shall be reported to WRC 11 and the decision should be taken by WRC 11 to review, if appropriate, regulatory provisions in resolves 2 taking into account protection requirements of ARNS systems identified in considering f) and g) and the need for global facilitation of AM(R)S operating in accordance with ICAO standards;~~
- 4 that administrations intending to implement AM(R)S in the band 960-1 164 MHz, in order not to cause harmful interference to the radionavigation-satellite service in the band 1 164-1 215 MHz, shall utilize the criteria set forth below:
 - any ground station operating under the AM(R)S allocation in the band 960-1 164 MHz, shall limit its equivalent isotropically radiated power (e.i.r.p.) to the values presented in the following table:

<u>Emissions in the band 960-1 164 MHz</u> <u>(Total e.i.r.p. in the band 960-1 164 MHz as a function of the carrier central frequency)</u>	<u>Emissions in the band 1 164-1 215 MHz</u>	
AM(R)S centre frequency 1 146.45-1 164 MHz	1 164-1 197.6 MHz	1 197.6-1 215 MHz
Linearly decreasing from 34 to -62.9 dBW	-90.8 dBW in any 1 MHz of the band 1 164-1 197.6 MHz	-90.8 dBW in any 1 MHz of the band 1 197.6-1 215 MHz

- any aircraft station operating under the AM(R)S allocation in the band 960-1 164 MHz shall limit its equivalent isotropically radiated power (e.i.r.p.) to the values presented in the following table:

<u>Emissions in the band 960-1 164 MHz</u> <u>(Total e.i.r.p. in the band 960-1 164 MHz as</u>	<u>Emissions in the band 1 164-1 215 MHz</u>
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<u>a function of the carrier central frequency</u>		
<u>AM(R)S centre frequency</u> <u>1 146.45-1 164 MHz</u>	<u>1 164-1 197.6 MHz</u>	<u>1 197.6-1 215 MHz</u>
<u>Linearly decreasing from 37.75 to -59.2 dBW</u>	<u>-84 dBW in any 1 MHz of the band 1 164-1 197.6 MHz</u>	<u>-92.4 dBW in any 1 MHz of the band 1 197.6-1 215 MHz</u>

5 ~~that frequencies in the band 960-1 164 MHz shall not be used by an AM(R)S system, except for the AM(R)S system identified in *recognizing c*), until all potential compatibility issues with the ARNS and, as necessary, the radionavigation satellite service (RNSS) in the adjacent band have been resolved, also taking into account *recognizing d*),~~

5 ~~that compatibility between any AM(R)S systems in the band 960-1 164 MHz and systems in *considering g*) is a matter to be dealt with by ICAO;~~

invites

~~administrations and ICAO, for the purposes of conducting the ITU-R studies mentioned in *resolves 3 and 5*, to provide to ITU-R the technical and operational characteristics of systems involved;~~

invites ITU-R

1 ~~to conduct studies in accordance with *resolves 3 and 5* on operational and technical means to facilitate sharing between AM(R)S systems operating in the band 960-1 164 MHz and ARNS systems identified in *considering f*) and *g*);~~

2 ~~to conduct studies in accordance with *resolves 5* on operational and technical means to facilitate sharing between AM(R)S systems operating in the band 960-1 164 MHz and the RNSS operating in the band 1 164-1 215 MHz;~~

3 ~~to report the results of the studies to WRC-11;~~

instructs the Secretary-General

to bring this Resolution to the attention of ICAO.

Reasons: This proposal enables AM(R)S and ARNS systems, critical to flight safety and human life, to operate compatibly in the 960-1 164 MHz band. Finally, requiring e.i.r.p limits protects RNSS in bands above 1 164 MHz from potential harmful interference from AM(R)S in bands below 1 164 MHz.

UNITED STATES OF AMERICA

DRAFT PROPOSALS FOR THE WORK OF THE CONFERENCE

Agenda Item 1.5: *to consider worldwide/regional harmonization of spectrum for electronic news gathering (ENG), taking into account the results of ITU-R studies, in accordance with Resolution 954 (WRC-07)*

Background Information: This proposal supplements the existing U.S. proposal for agenda item 1.5.

Proposal:

SUP USA/AI 1.5/1

RESOLUTION 954 (WRC-07)

Harmonization of spectrum for use by terrestrial electronic news gathering systems

Reasons: The ITU-R completed work on this agenda item for WRC-12.

UNITED STATES OF AMERICA

DRAFT PROPOSALS FOR THE WORK OF THE CONFERENCE

Agenda Item 1.16: *to consider the needs of passive systems for lightning detection in the meteorological aids service, including the possibility of an allocation in the frequency range below 20 kHz, and to take appropriate action, in accordance with Resolution 671 (WRC-07)*

Background Information: Resolution 671 (WRC-07) resolves to invite the ITU-R to conduct and complete studies related to lightning detection to enable a decision on an appropriate method for providing recognition, including the possibility of making an allocation, to the meteorological aids service in the frequency range below 20 kHz.

The automated Arrival Time Difference (ATD) system uses the time differences of signal received to derive lightning strike locations. Meteorological organizations analyze the data from the ATD system and provide forecasts to assist safety of life, public safety and aviation operations. Recent ITU-R studies show the optimal frequency for ATD measurements is around 9.76 kHz.

Recommendation ITU-R RS.[20 kHz ATD PROTECTION] determined lightning detection systems are optimized with a 3 kHz bandwidth signal from 8.3 - 11.3 kHz. Any interference in the lower portion, i.e. 8.3 - 9 kHz, would impact the whole system. Therefore, it is important to protect the full range of the signal to ensure that the systems will be able to use their allocated band without interference.

Proposal:

ARTICLE 5

Frequency allocations

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

MOD USA/1.16/1

98.3-110 kHz

Allocation to services		
Region 1	Region 2	Region 3
<u>Below 98.3</u>	(Not allocated) <u>MOD 5.53 MOD 5.54</u>	
<u>8.3-9</u>	<u>METEOROLOGICAL AIDS</u> <u>ADD 5.C116</u>	
<u>9-1411.3</u>	<u>METEOROLOGICAL AIDS</u> RADIONAVIGATION <u>ADD 5.C116</u>	
<u>911.3-14</u>	RADIONAVIGATION	
....		

Reasons: A primary allocation to the meteorological aids service in 8.3-11.3 kHz will protect the lightning detection systems from users operating under No. 4.4. Interference in the lower portion, i.e. 8.3-9 kHz, is expected to impact the whole system.

MOD USA/1.16/2

5.53 Administrations authorizing the use of frequencies below 9-8.3 kHz shall ensure that no harmful interference is caused thereby to the services to which the bands above 98.3 kHz are allocated.

Reasons: Consequential to the meteorological aids service primary allocation in the 8.3-9 kHz frequency band.

MOD USA/1.16/3

5.54 Administrations conducting scientific research using frequencies below 9-8.3 kHz are urged to advise other administrations that may be concerned in order that such research may be afforded all practicable protection from harmful interference.

Reasons: Consequential to the meteorological aids service primary allocation in the 8.3-9 kHz frequency band.

ADD USA/1.16/4

5.C116 Use of the band 8.3-11.3 kHz by the meteorological aids service is limited to passive use. In the 9-11.3 kHz band, meteorological aids service stations shall not claim protection from stations of the radionavigation service submitted for notification to the Bureau prior to the [date of entry into force of WRC-12 Final Acts]. For sharing between stations of the meteorological aids service and stations in the radionavigation service submitted after this date the most recent version of Recommendation ITU-R RS.[20 kHz ATD PROTECTION] should be applied.

Reasons: To protect passive lightning detection systems below 20 kHz and support a meteorological aids service allocation, limited to passive use, under the condition that no undue constraints are placed on existing services.

SUP USA/1.16/5

RESOLUTION 671 (WRC-07)

Recognition of systems in the meteorological aids service in the frequency range below 20 kHz

Reasons: The ITU-R completed the required studies for this agenda item.

UNITED STATES OF AMERICA

DRAFT PROPOSALS FOR THE WORK OF THE CONFERENCE

Agenda Item 7: *to consider possible changes in response to Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference: "Advance publication, coordination, notification and recording procedures for frequency assignments pertaining to satellite networks", in accordance with Resolution 86 (Rev. WRC-07)*

Issue: The status of frequency assignments initially recorded under No. 11.41 in cases where the required coordinations are completed with the networks which were the basis for the unfavorable findings after the assignments are recorded in the Master International Frequency Register (MIFR).

Background Information: The Radiocommunication Bureau (BR) considered issues concerning definitive and provisional recordings of frequency assignments and related articles of the Radio Regulations.¹ The BR considers an assignment receiving an unfavorable finding for not completing coordination and filing under No. 11.41 as "provisional." If no interference has occurred between the provisional assignment and any assignment, which was the basis for the unfavorable finding during the four month period of simultaneous operation, then the BR changes the provisional recording to "definitive." The BR considers an assignment recorded under No. 11.41, even if the status changes from provisional to definitive, as having a lower status to the assignment for which the BR based the unfavorable finding on No. 11.32A.² The BR should record an assignment as definitive if the BR initially recorded it under No. 11.41 and the assignment subsequently completes all of the requirements for coordination and successfully operates simultaneously for the four-month period with the assignment which was the basis for the initial unfavorable finding. This assignment should also receive the same status as the existing assignment. Therefore, the BR should consider an assignment that it initially recorded under No. 11.41 equally with respect to an existing assignment which was the basis for the unfavorable findings under No. 11.32A if coordination with the latter is completed and should not be seen as "always lower." Continuing to consider the provisional assignment as having a lower status could be a disincentive to complete coordination.

This proposal modifies No. 11.41A to ensure that the BR consider the status of an assignment initially recorded under No. 11.41 as equal to the status of the existing assignment, which was the basis for the unfavorable findings under No. 11.32A if coordination is completed with respect to that existing assignment after the BR initially recorded the assignment in the MIFR.

¹ BR Report to the 2007 World Radiocommunication Conference (Document 4, Addendum 2, Section 3.1.3.3).

² BR Report to the 2007 World Radiocommunication Conference (Document 4, Addendum 2, Section 3.1.3.3.4).

Proposal:

ARTICLE 11

Notification and recording of frequency assignments^{1, 2, 3, 4, 5, 6, 7} (WRC-07)

Section II – Examination of notices and recording of frequency assignments in the Master Register

MOD USA/7/1

11.41A Should the assignments that were the basis of the unfavourable finding under Nos. **11.32A** or **11.33** not be brought into use within the period specified in Nos. **11.24**, **11.25** or **11.44** as appropriate, then the finding of the assignments resubmitted under No. **11.41** shall be reviewed accordingly. Should the coordination procedures specified in No. **11.32** be completed with administration(s) with respect to assignments recorded under No. **11.41**, any conditions related to the initial recording under No. **11.41** shall be removed.

Reasons: The proposed modification to No. **11.41A** will ensure that the BR consider the status of an assignment initially recorded under No. **11.41** as equal to the status of the existing assignment, which was the basis for the unfavorable findings under No. **11.32A** if coordination is completed with respect to that existing assignment after the BR initially recorded the assignment in the MIFR.

UNITED STATES OF AMERICA

DRAFT PROPOSALS FOR THE WORK OF THE CONFERENCE

Agenda item 8.1.1: *on activities of the Radiocommunication Sector since WRC-07*

Background Information: This proposal addresses Issue C and Resolution 673 (WRC-07) on radiocommunications use for Earth observation applications. Resolution 673 (WRC-07) called for studies by the ITU-R on possible means to improve the recognition of the essential role and global importance of Earth observation radiocommunications applications and the knowledge and understanding of administrations regarding the utilization and benefits of these applications. This resolution also instructed the Director of the Radiocommunication Bureau to include the results of these studies in his report to WRC-12 for the purposes of considering adequate actions in response to these ITU-R studies. The objectives of these studies do not include new allocations or additional protection.

The ITU-R completed several studies resulting in Recommendation ITU-R RS.1859 on the use of remote sensing systems for data collection for guidance in the event of natural disasters and similar emergencies and Recommendation ITU-R RS.[CLIMATE] on the use of remote sensing systems in the study of climate change and the effects thereof. The ITU-R also completed Report ITU-R RS.2178 on the essential role and global importance of radio spectrum use for Earth observations and for related applications.

In order to improve the recognition of the importance of Earth observation systems within the Radio Regulations, this proposal seeks to modify Resolution 673 (WRC-07) to reflect the conclusions of the ITU-R studies.

Proposal:

ARTICLE 4
Assignment and use of frequencies

NOC USA/8.1.1.C/1

Reasons: Resolution 673 (WRC-07) notes that the ITU-R studies under this resolution should not result in additional protection or regulatory status of Earth observation systems and applications.

ARTICLE 5
Frequency allocations

NOC USA/8.1.1.C/2

Reasons: Resolution 673 (WRC-07) notes that the ITU-R studies under this resolution should not result in new allocations or additional protection of Earth observation systems and applications.

RESOLUTION 673 (Rev. WRC-0712)

Radiocommunications The use of the radio spectrum for Earth observation applications

The World Radiocommunication Conference (Geneva, ~~2007~~2012),

considering

- a) that *in situ* and remote Earth observation capabilities depend on the availability of radio frequencies under a number of radio services, allowing for a wide range of passive and active applications on satellite- or ground-based platforms;
- b) that the collection and exchange of Earth observation data are essential for maintaining and improving the accuracy of weather forecasts that contribute to the protection of life, preservation of property and sustainable development throughout the world;
- c) that Earth observation data are also essential for monitoring and predicting climate changes, for disaster prediction, monitoring and mitigation, for increasing the understanding, modelling and verification of all aspects of climate change, and for related policy-making;
- d) that Earth observations are also used to obtain pertinent data regarding natural resources, this being particularly crucial for the benefit of developing countries;
- e) that Earth observations are performed for the benefit of the whole international community and all mankind, are shared among all countries and are generally available at no cost,

recognizing

- a) that § 20 c) of the Plan of Action of the World Summit on Information Society (Geneva, 2003), on e-environment, calls for the establishment of monitoring systems, using information and communication technologies (ICT), to forecast and monitor the impact of natural and man-made disasters, particularly in developing countries, least developed countries and small economies;
- b) Resolution 34 (Rev. Doha, 2006) of the World Telecommunication Development Conference, on the role of telecommunications/ICT in early warning and mitigation of disasters and humanitarian assistance;
- c) that ITU-D Question 22/2 “Utilization of ICT for disaster management, resources and active and passive space-based sensing systems as they apply to disaster and emergency relief situations” studies resulted in ITU-D Report “Utilization of ICT for disaster management, resources and active and passive space-based sensing systems as they apply to disaster and emergency relief situations.”;
- d) that ITU-R studies resulted in Report ITU-R RS.2178 “The essential role and global importance of radio spectrum use for Earth observations and for related applications”;

noting

- a) that Earth observation applications are conducted under the Earth exploration-satellite (active and passive), meteorological satellite, meteorological aids and radiolocation services;
- b) that some essential passive frequency bands are covered by No. 5.340;
- c) that certain frequency bands used by Earth observation applications have specific physical characteristics (e.g., spectral lines, propagation) that do not allow a migration to a different frequency.

noting further

- a) that the importance of Earth observation radiocommunications applications has been stressed by a number of international bodies such as the Group on Earth Observation (GEO), the World Meteorological Organization (WMO) and the Intergovernmental Panel on Climate Change (IPCC) and that collaboration of ITU-R with these bodies ~~could be~~ is important;
- b) that, in particular, GEO is leading a worldwide effort to build a Global Earth Observation System of Systems (GEOSS) to provide comprehensive and coordinated Earth observations from thousands of instruments worldwide, transforming the collected data into vital information for society and mankind;
- ~~e) that GEOSS provides a broad range of societal benefits, including disaster management and aspects related to human health, energy, climate, water, weather, ecosystems, agriculture and biodiversity;~~
- ~~d~~c) that more than 90 per cent of natural disasters are climate- or weather-related;
- ~~e~~d) that some essential passive Earth observation operations currently suffer radio interference resulting in erroneous data or even complete loss of data;
- ~~f~~e) that, although meteorological and Earth observation satellites are currently only operated by a limited number of countries, the data and/or related analyses resulting from their operation are distributed and used globally, in particular by national weather services in developed and developing countries and by climate-change-related organizations,

resolves to invite ITU-R

1 to recognize that Earth observation applications have economic and societal benefits as most of the data retrieved by these observations are used for applications to meteorology, climatology, environmental monitoring, agriculture, civil security and the protection of life and property;

2 to encourage Member States to take into account the radio-frequency requirements of Earth observation systems and, in particular, the protection and long-term availability of related frequency bands;

3 to urge Member States to consider the use of certain frequency bands by Earth observation applications prior to any decision potentially affecting these applications;

4 to remind Member States of their obligations under No. 5.340 of the Radio Regulations, which prohibits all emissions in the frequency bands listed in No. 5.340.

~~to carry out studies on possible means to improve the recognition of the essential role and global~~

~~importance of Earth observation radiocommunications applications and the knowledge and understanding of administrations regarding the utilization and benefits of these applications;~~

~~instructs the Director of the Radiocommunication Bureau~~

~~to include the results of these studies in his Report to WRC 11 for the purposes of considering adequate actions in response to *resolves to invite ITU-R* above, noting that neither new allocations nor additional protection would be objectives of such studies;~~

~~invites administrations~~

~~to participate actively in the studies by submitting contributions to ITU-R.~~

Reasons: Noting the results of the ITU-R studies and related work completed in ITU-D, which led to approval of relevant recommendations and reports, the modifications proposed to this resolution complete the goal of increasing the recognition of the importance of radio spectrum use by Earth observation applications.

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 of 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: There is a global requirement for modernization of the Global Maritime Distress and Safety System (GMDSS), as noted by the International Maritime Organization (IMO). IMO COMSAR 14 has initiated scoping exercises, and a work plan to define the requirements for GMDSS modernization. This GMDSS modernization has the endorsement of the IMO Maritime Safety Committee 88.

The International Telecommunication Union Radio Regulations contain many provisions, articles, appendices, and recommendations, associated with the GMDSS. Changes to the Radio Regulations will be necessary to support GMDSS modernization.

IMO is also developing an e-Navigation strategy and implementation plan as endorsed by IMO NAV 56. Initial analysis shows that e-Navigation would require global harmonization of data communications systems. IMO technical bodies have identified that countries could not deploy e-Navigation without an ITU review of the Radio Regulations, to accommodate advanced maritime communication systems.

Proposal:

MOD USA/8.2 /1

RESOLUTION 806 (REV. WRC-07~~12~~)

~~Preliminary~~ Agenda for the 2015 World Radiocommunication Conference

The World Radiocommunication Conference (Geneva, ~~2007~~2012),

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

ADD USA/8.2/2

2.XYZ to consider regulatory changes to support implementation of e-Navigation within the maritime mobile service and any possible regulatory action, as necessary, to support GMDSS modernization in accordance with Resolution ~~USXYZ~~ (WRC-12).

Reasons: Meet international maritime shipping need and IMO requirements for GMDSS modernization and IMO implementation of e-Navigation.

ADD USA/8.2/3

RESOLUTION XYZ (WRC-12)

Consideration of implementing regulatory provisions from the Global Maritime Distress Safety System modernization and studies related to e- Navigation

The World Radiocommunication Conference (Geneva, 2012),

considering

- a) that there is an increasing need, on a global basis, for modern Global Maritime Distress Safety System (GMDSS) communication capabilities, for enhanced maritime safety;
- b) that the International Maritime Organization (IMO) has initiated work plans for GMDSS modernization;
- c) that the establishment of the maritime Automatic Identification Systems (AIS) offers potential enhancements to VHF maritime safety communications;
- d) that advanced maritime MF/HF/VHF data systems may be used to deliver Maritime Safety Information (MSI), and GMDSS communications;
- e) that additional global and regional GMDSS satellite providers are being considered by IMO;
- f) that IMO is developing an e-Navigation strategy and implementation plan;
- g) that GMDSS modernization may be influenced by the development of e-Navigation,

recognizing

- a) that advanced maritime communication systems may support the implementation of GMDSS modernization and e-Navigation;
- b) that due to the importance of these radio links in ensuring the safe operation of international shipping and commerce, they must be resilient to interference,

resolves to invite WRC-15

- 1 to consider appropriate modifications to the Radio Regulations, as necessary, but excluding new allocations, to support GMDSS modernization;
- 2 to consider appropriate modifications to the Radio Regulations, based on ITU R studies and excluding new allocations, for maritime communication systems supporting e-Navigation within the maritime mobile service,

invites ITU-R

- 1 to conduct, as a matter of urgency, studies to determine the spectrum requirements and potential frequency bands within the existing maritime mobile service allocations suitable to support e-Navigation;
- 2 to conduct, as a matter of urgency, studies that identify potential regulatory actions required by WRC-15 to accommodate GMDSS modernization,

further invites

all members of the Radiocommunication Sector and the International Maritime Organization (IMO), the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA), the International Electrotechnical Commission (IEC) and the World Meteorological Organization (WMO) to contribute to these studies,

instructs the Secretary-General

to bring this Resolution to the attention of the International Maritime Organization (IMO), and other international and regional organizations concerned.

Reasons: Meet advanced maritime communication systems needs from IMO requirements for GMDSS modernization and IMO implementation of e-Navigation.

Annex

Subject: 2012 World Radiocommunication Conference Agenda Item 8.2 Proposal to support Global Maritime Distress Safety System modernization and e-Navigation studies.

Origin: United States of America

Proposal: to consider regulatory changes to support implementation of e-Navigation within the maritime mobile service and any possible regulatory action, as necessary, to support GMDSS modernization in accordance with Resolution **USXYZ (WRC-12)**

Background/reason:

The International Telecommunication Union Radio Regulations contain many provisions, articles, appendices, and recommendations, associated with the GMDSS. Changes to the Radio Regulations will be necessary to support GMDSS modernization.

Initial analysis shows that e-Navigation would require global harmonization of data communications systems. International Maritime Organization technical bodies have identified that countries could not deploy e-Navigation without an ITU review of the Radio Regulations, to accommodate advanced maritime communication systems.

Radiocommunication services concerned: maritime mobile service, mobile satellite service.

Indication of possible difficulties: None

Previous/ongoing studies on the issue: None

Studies to be carried out by: ITU-R Study Group 5, Working Party 5B.

with the participation of: Working Party 4C, IMO, IALA, IMSO

ITU-R Study Groups concerned: Study Groups 4 and 5.

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

Common regional proposal: No

Multicountry proposal: No

Number of countries:

Remarks

Document WAC/113(08.03.11)

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 the attached Executive Branch proposals for WRC-12 agenda items 7 No. 11.49 and 7 No. 13.6.

For agenda item 7, NTIA proposes to modify No. 11.49 to shorten the timelines for notifying the Bureau when an assignment is suspended and specify a timeline when an assignment is brought back into use. NTIA also proposes to modify No. 13.6 to clarify timelines associated with Bureau's actions and associated effective dates in maintaining the Master Register.

NTIA considered the Federal agencies' input toward the development of U.S. proposals for WRC-12. NTIA forwards this package for your 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 OF THE CONFERENCE

Agenda Item 7: *to consider possible changes in response to Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference: "Advance publication, coordination, notification and recording procedures for frequency assignments pertaining to satellite networks", in accordance with Resolution 86 (Rev. WRC-07)*

Issue: Modifications to No. 11.49 to clarify when an administration must inform the Bureau of a suspended network.

Background Information: No. 11.49 of the Radio Regulations allows for the use of a recorded assignment to a space station to be suspended for a finite period of time. The Rule of Procedure for No. 11.49 clarifies the time limit (two years) and states that suspensions may be effected by the administration either at its own initiative or in response to an inquiry by the BR under No. 13.6. During the BR's recent review of the Master Register for the C, Ku and Ka bands, almost half of the recent inquiries made under No. 13.6 resulted in suspensions under No. 11.49. In some cases, the operation was actually suspended many months before the BR inquiry under No. 13.6, but the BR was not informed until after the inquiry.

This document modifies No. 11.49 to quantify "as soon as possible" and proposes a period of "six months" to minimize delays or situations where the suspension is announced and the two year period begins after operation was actually suspended. This proposal modifies No. 11.49 to separate the declaration of suspension from the declaration of resumption to improve clarity in the formulation of this regulatory provision and provide certainty on the actual date of bringing the assignment back into regular operation.

Proposal:

ARTICLE 11

Notification and recording of frequency assignments^{1, 2, 3, 4, 5, 6, 7} (WRC-07)

Section II – Examination of notices and recording of frequency assignments in the Master Register

MOD USA/7/1

11.49 ~~Where~~ Whenever the use of a recorded assignment to a space station is suspended for a period not exceeding eighteen months, the notifying administration shall, as soon as possible, but no later than six months from the date on which the use was suspended, inform the Bureau of the date on which such use was suspended. The notifying administration shall also inform the Bureau ~~and of~~ of the date on which the assignment is to be brought back into regular use within 30 days of the assignment being brought back into use. ~~This latter date of the assignment being brought back into use shall not exceed two years from the date of suspension.~~

Reasons: Establishes a six-month period for the administration to notify the Bureau of the network's suspension and clarifies when an administration needs to inform the Bureau that the network has been brought back into use.

UNITED STATES OF AMERICA

DRAFT PROPOSALS FOR THE WORK OF THE CONFERENCE

Agenda Item 7: *to consider possible changes in response to Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference: "Advance publication, coordination, notification and recording procedures for frequency assignments pertaining to satellite networks", in accordance with Resolution 86 (Rev. WRC-07)*

Issue: Modifications to No. 13.6 to clarify the Radiocommunications Bureau's (BR) actions before cancelling a network and the subsequent confirmation of the cancellation by the Radiocommunication Regulations Board (RRB).

Background Information: Under No. 13.4, the BR is solely responsible for maintenance of the Master Register in accordance with the Rules of Procedure. One of the BR's duties, under No. 13.6, is to consult with the notifying administration in the case where reliable information has been brought to the BR's attention that a recorded assignment has not been brought into regular operation in accordance with the filed characteristics. The first sentence of No. 13.6 states "... the Bureau shall consult the notifying administration and, subject to its agreement or in the event of non-response after the dispatch of two consecutive reminders, each within a three-month period, shall either cancel, or suitably modify, or retain the basic characteristics of the entry." A reminder is only necessary in the case of non-response, which includes the situation where the administration replies but does not respond to the inquiry.

The time period during which the BR dispatches the two consecutive reminders is not completely clear. There is no timeframe specified by which the administration must respond. This proposal clarifies the time period of the reminders and limits the administration response time. This proposal adopts the 30-day response time for clarifications concerning notices. This proposal modifies No. 13.6 to specify a one-month period between the initial inquiry and the first reminder, a one-month period between the first reminder and the second reminder, and a one-month period after the second reminder by which the notifying administration must respond. This retains the spirit of the three month period currently provided for in No. 13.6 and clarifies its application.

The last sentence of No. 13.6 states that "A decision of the Bureau to cancel the entry in the event of non-response shall be confirmed by the Board." There are two ways of understanding this wording:

- That the Bureau's decision was in force from the time that it was taken by the Bureau and subject to confirmation by the Board, or
- That the Bureau's decision did not come into force until it was confirmed by the Board.

The practice followed by the Bureau, as confirmed by the Board, is to implement the decision immediately, subject to later confirmation by the Board. Notwithstanding the situation that the Bureau would have to restore the assignments and inform all affected administrations should the Board not

confirm the Bureau's decision, the primary advantage to this approach is that the cancelled assignments no longer have to be taken into account by the Bureau or other administrations with respect to coordination. This proposal modifies No. 13.6 to specify that the Bureau's decision to cancel an assignment takes effect immediately, but is subject to confirmation by the Board.

Proposal:

ARTICLE 13

Instruction to the Bureau

Section II – Maintenance of the Master Register and World Plans by the Bureau

MOD USA/7/1

13.6 b) whenever it appears from reliable information available that a recorded assignment has not been brought into regular operation in accordance with the notified required characteristics as specified in Appendix 4, or is not being used in accordance with those characteristics, the Bureau shall consult the notifying administration and request clarification as to whether the assignment was brought into use in accordance with the notified characteristics and continues to be in regular operation. If the notifying administration does not provide clarification within one month, the Bureau shall issue a reminder. and, In the event the notifying administration does not respond within one month of the first reminder, the Bureau shall issue a second reminder. Subject to its the agreement of the notifying administration or in the event of the notifying administration does not respond within non-response one month after the dispatch of two consecutive the second reminders, each within a three month period, the Bureau shall either cancel, or suitably modify, or retain the basic characteristics of the entry. A decision of the Bureau to cancel the entry in the event of non-response shall take effect immediately, but is subject to be confirmed confirmation by the Board.

Reasons: To clarify the BR's actions with respect to No. 13.6 for requesting clarification from administrations before network cancellation and to clarify the RRB's role in confirming any network cancellations.

Document WAC/114(08.03.11)

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.