

Proposal:
NOC USA/AI1.2/1

ARTICLE 1
Terms and definitions

Reasons: The United States supports NOC to the existing definitions in Article 1. Any changes to the existing definitions would have far-reaching impact, as they would immediately modify all of the related allocations in the Table of Frequency Allocations. The United States is open, however, to considering new definitions as might be required to address new applications.

MOD USA/AI1.2/2

RESOLUTION COMMENDATION 34-XX (WRC-1295)

Principles for the allocation management and use of frequency bands

The World Radiocommunication Conference (Geneva, 2012~~1995~~),

considering

a) that ITU should maintain an international Table of Frequency Allocations covering the usable radio-frequency spectrum;

b) that one of the primary objectives of the Radio Regulations is to provide for and, where necessary, regulate new applications of radiocommunication technology. (see No. 0.10);

~~*b)c)*~~ that it may be desirable, in certain cases, to allocate frequency bands to multiple radio services and/or to adopt appropriate footnotes and regulatory provisions to the most broadly defined services in order to improve flexibility of use of frequencies to permit new radio applications within existing allocations but without detriment to other radio services;

~~*e)d)*~~ that the development of common worldwide allocations is desirable in order to improve and harmonize utilization of the radio-frequency spectrum;

~~*d)e)*~~ that adherence to these principles for the allocation and use of spectrum will allow the Table of Frequency Allocations to focus on matters of regulatory significance while enabling greater flexibility in national and international spectrum use;

f) that many radiocommunication stations and systems today are capable of and provide more than one radiocommunication service and that this convergence of radiocommunication services and applications operating from a single station on the same frequency or different frequencies is expected to grow;

g) that WRC-03 adopted footnotes and regulatory provisions to provide administrations with the flexibility to operate earth stations on board vessels (ESVs) with space stations in the existing fixed-satellite service allocations.

considering further

a) that wireless applications often are the most cost-effective and practicable means of delivering advanced information and communication technologies (ICTs) in many countries;

- b) that bridging the digital divide and bringing the benefits of ICTs to all citizens is fundamental for providing opportunities, for example for education, business development and active participation in the information society;
- c) that deployment of wireless broadband applications can facilitate connectivity to schools, rural communities and healthcare facilities, that is vital to economic development and to making effective use of ICTs;
- d) that there is a need to continually take advantage of technological developments in order to increase the efficient use of spectrum and spectrum access;
- e) that satellite systems and networks can provide wireless broadband applications including meeting the particular needs of developing countries and rural areas;
- f) that satellite-based wireless broadband systems can provide service over a wide geographic area and are particularly suited for emergency and disaster recovery communications and rural communications;
- g) that the convergence of multiple radiocommunication services and applications operating from a single station may warrant the consideration of new service definitions if the existing service definitions do not adequately support this convergence,

recognizing

that previous Conferences have adopted regulatory provisions, including on an interim or provisional basis, to allow implementation of emerging technologies in an expeditious manner taking into account existing users,

resolves recommends that future world radiocommunication conferences

- 1 that allocation of frequency bands and associated footnotes and regulatory provisions should, wherever possible, allocate frequency bands to the most broadly defined services with a view to providing the maximum flexibility to administrations in accommodating emerging radio applications including new technologies spectrum use, taking into account safety, technical, operational, economic and other relevant factors;
- 2 that frequency bands should, wherever possible, be allocated frequency bands on a worldwide basis (aligned radio services, categories of radio service and frequency band limits) taking into account safety, technical, operational, economic and other relevant factors and using appropriate footnotes and regulatory provisions as needed to clarify these factors and to provide for additional radio applications permitted within the context of a specific allocation,;
- 3 should take into account relevant studies by the Radiocommunication Sector and the reports of the relevant Conference Preparatory Meetings (CPM).

recommends invites administrations

to take account of resolves 1 and 2 and considering further a) to f), when making proposals to world radiocommunication conferences, to take account of recommends 1 to 3,

~~instructs the Director of the Radiocommunication Bureau and requests the ITU-R study groups~~

1 ~~when carrying out technical studies relating to a frequency band pursuant to specific WRC agenda items, to examine the compatibility of new applications of a broad definition of radio services with the existing utilizations and the possibility of aligning allocations on a worldwide basis, having regard to *considerings a), b), c), and d) to f), considering further a) to g)* and *resolves commends 1, and 2 and 3* above;~~

2 ~~when carrying out the technical studies referred to in *request the ITU-R study groups 1)*, to also examine the regulatory provisions in the Radio Regulations with respect to the appropriate coordination and notification procedures when multiple radiocommunication services and applications are being provided by one station in the same frequency band;~~

~~3~~ 23 ~~to conduct these studies, where appropriate in cooperation with the International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO);~~

~~3~~ ~~to submit a report to future world radiocommunication conferences containing the results of these studies;~~

~~invites~~

~~the relevant CPM and Radiocommunication Study Groups to identify areas for study and to undertake the studies necessary to determine the impact on existing services of those agenda items of future world radiocommunication conferences which involve broadening the scope of existing service allocations;~~

~~instructs the Secretary-General~~
to communicate this Resolution ~~commendation~~ to ICAO and IMO.

ATTACHMENT 2
to FCC Public Notice DA 10-2060

**Draft Proposals formulated and approved within the National
Telecommunications and Information Administration:**

Document WAC/088(26.10.10)

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 1.10 (Resolution 357) and 1.14.

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 August 10, 2010)

Karl B. Nebbia
Associate Administrator
Office of Spectrum Management

UNITED STATES OF AMERICA

DRAFT PROPOSALS FOR THE WORK OF THE CONFERENCE

Agenda Item 1.10: *to examine the frequency allocation requirements with regard to operation of safety systems for ships and ports and associated regulatory provisions, in accordance with Resolution 357 (WRC-07)*

Background Information: The ITU-R intends to address several essential maritime issues at WRC-12 under agenda item 1.10. The technical, operational, procedural work and studies, for certain maritime issues proved to be too complex to reach a satisfactory stage for any conclusive action by WRC-12.

These issues include:

1. the next generation of the Global Maritime Distress and Safety System (GMDSS);
2. implementation of E-Navigation (eNAV), which is the harmonized creation, collection, integration, exchange, and presentation of maritime information onboard and ashore by electronic means to enhance berth to berth navigation and related services, for safety and security at sea and protection of the marine environment;
3. mesh networking for improved safety communications in the maritime environment; and
4. container and cargo identification systems to support global commerce and enhanced port security

These remaining topics in the global maritime community require continued study within the ITU-R in an effort to reach a resolution at a future WRC. Modification at WRC-12 to Resolution 357 (WRC-07) is necessary to continue studies within the ITU-R and reach conclusion on the subjects noted above.

Proposal:

MOD

USA/1.10/1

RESOLUTION 357 (WRC-12)

Consideration of regulatory provisions and spectrum allocations for use by enhanced maritime safety systems for ships and ports

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

considering

- a) that there is increasing need, on a global basis, to enhance ship and cargo identification, tracking, and surveillance as well as ship and port security and safety;
- b) that the International Maritime Organization (IMO) adoption of the International Ship and Port Facility Security (ISPS) Code, specifically Safety of Life at Sea (SOLAS) Convention, Chapter XI-2, on special measures to enhance maritime security, requires long-range spectrum dependent systems;
- c) that the introduction of the shipborne universal automatic identification system (AIS) supports maritime safety and offers potential enhancements to ship and port security and maritime safety;
- d) that the IMO will propose modernization of Global Maritime Distress and Safety System (GMDSS)~~that studies within ITU-R indicate that additional AIS channels in the mobile satellite service may be required to enhance and accommodate global ship tracking capabilities;~~
- e) that new systems will harmonize creation, collection, integration, exchange and presentation of maritime information onboard and ashore by electronic means to enhance berth to berth navigation and related services, for safety and security at sea and protection of the marine environment~~that advanced maritime HF data systems may be used to deliver security alerts and safety information to, and to receive similar information and long range identification and tracking (LRIT) information from, ships in global regions not under satellite coverage;~~
- f) that use of existing maritime mobile allocations, where practicable, for ship and port security and enhanced maritime safety would be preferable, particularly where international interoperability is required;
- g) that additional studies within ITU-R on spectrum efficient radio technologies may be required to resolve these multifaceted spectrum requirements;
- h) ~~that requirements for ITU Service Publications and specific revisions of content, format and structure of those publications may be required to support maritime security and safety systems;~~

noting

- a) ~~a)~~ — Resolution 342 (Rev.WRC-2000): “New technologies to provide improved efficiency in the use of the band 156-174 MHz by stations in the maritime mobile service”;
- b) IMO Maritime Safety Committee Circular 1056: Guidelines for Ships Operating in Arctic Ice-Covered Waters,

~~b) Resolution 351 (Rev. WRC-07): "Review of the frequency and channel arrangements in the HF bands allocated to the maritime mobile service contained in Appendix 17 with a view to improving efficiency through the use of new digital technology by the maritime mobile service";~~

recognizing

a) that there is a global requirement to enhance maritime safety, ship and port security via spectrum dependent systems;

~~b) that existing and future technologies for Ship Security and Alerting Systems (SSAS), introduced as a result of the ISPS Code referred to in *considering b)*, will require long range communication links and networks between mobile ships and shore based stations;~~

~~be) that due to the importance of these radio links in ensuring the safe and secure operation of international shipping and commerce, they must be resilient to interference;~~

~~cd) that studies will be required to provide a basis for considering regulatory changes, including additional allocations and recommendations, designed to accommodate spectrum requirements of ship and port security, consistent with the protection of incumbent services;~~

~~de) that the ITU and international standards organizations have initiated related studies on spectrum efficient technology;~~

~~e) that IMO has established new NAVAREAs in the Arctic regions and there is a need for improved GMDSS communications in the Arctic.;~~

resolves

1 that WRC-16~~1~~ consider amendments to provisions of the Radio Regulations necessary to provide for the operation of ship and port security and maritime safety systems;

2 that WRC-16~~1~~ consider additional allocations to the maritime mobile service below 1 GHz to support the requirements identified in *resolves 1*;

~~3 that WRC-11 consider additional allocations to the maritime mobile satellite service in frequency bands allocated to the maritime mobile service between 156 and 162.025 MHz to support the requirements identified in *resolves 1*;~~

invites ITU-R

1 to conduct, as a matter of urgency, studies to determine the spectrum requirements and potential frequency bands suitable to support ship and port security and enhanced maritime safety systems;

2 that the studies referred to in *invites ITU-R 1* should include the applicability of spectrum efficient technologies, and sharing and compatibility studies with services already having allocations in potential spectrum for ship safety and port security systems,

invites

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

instructs the Secretary-General

to bring this Resolution to the attention of IMO, ISO, IEC, IALA and other international and regional organizations concerned.

Reasons: It is necessary to modify Resolution 357 (WRC-07) to continue the technical, operational and procedural work and studies to address several essential maritime issues under WRC-12 agenda item 1.10.

UNITED STATES OF AMERICA

DRAFT PROPOSALS FOR THE WORK OF THE CONFERENCE

Agenda Item 1.14: *to consider requirements for new applications in the radiolocation service and review allocations or regulatory provisions for implementation of the radiolocation service in the range 30-300 MHz, in accordance with Resolution 611 (WRC-07)*

Background Information: Resolution 611 (WRC-07) resolves to consider a new primary allocation to the radiolocation service for new applications in a portion of 30-300 MHz, with bandwidths no larger than 2 MHz. The results of ITU-R studies should confirm compatibility with existing services and applications in the bands where the new radiolocation service plans to operate. The ITU-R studied technical characteristics, protection criteria, and other factors to determine whether radiolocation systems could operate compatibly with systems operating in accordance with Article 5 of the Radio Regulations.

The 30-300 MHz band is allocated to and used by a wide variety of services, including the fixed, mobile, aeronautical mobile (R), aeronautical radionavigation, broadcasting, and amateur services, as well as a range of space services. For example, the maritime mobile service utilizes safety channels for aircraft Search and Rescue (SAR) operating on channels 16 (156.800 MHz \pm 37.5 kHz) and 70 (156.525 MHz \pm 12.5 kHz) and the aircraft SAR and satellites operating on Automatic Identification System (AIS) channels AIS 1 (161.975 MHz \pm 12.5 kHz) and AIS 2 (162.025 MHz \pm 12.5 kHz), and there are space research and satellite service allocations in the 137-138 MHz, 148-149.9 MHz and 149.9-150.05 MHz bands.

Based on contributions to ITU-R meetings and other regional groups, the primary frequency band of interest within the ITU-R is 154-156 MHz. The new allocation would support applications in the radiolocation service for aerospace surveillance, tracking and maneuvering spacecrafts. Contributions to the ITU-R have not effectively demonstrated compatibility with primary services in or adjacent to the 154-156 MHz range (particularly in the adjacent bands that effect safety and distress applications). ITU-R studies have not shown compatibility with existing services. Also, additional compatibility studies may be necessary to ensure that the primary services for amateur broadcasting and amateur satellites operating globally will not encounter unacceptable interference.

Within Region 2, several primary radiolocation allocations exist within the 30-300 MHz range and any additional allocation may create unacceptable interference with existing services and hinder future technological development and efficient spectrum use.

The proposed "no change" to Article 5 of the Radio Regulations covers Region 2 only and will ensure protection to services and systems within Region 2. Conversely, it may be appropriate for WRC-12 to consider a country specific footnote within the 154-156 MHz range in order to accommodate future radiolocation services without changing the Table of Frequency Allocations of the Radio Regulations.

Proposal:

NOC

USA/AI1.14/1

ARTICLE 5

Frequency Allocations

Section IV – Table of Frequency Allocations

Reasons: No change to the Radio Regulations in Region 2 is necessary, as there are several existing primary radiolocation allocations within the 30-300 MHz range. Compatibility studies regarding existing primary services, particularly the safety and distress services, mobile-satellite service, fixed-satellite service, and the amateur service, need further inquiry to be confident that unacceptable interference will not occur.

SUP USA/AI1.14/2

RESOLUTION 611 (WRC-07)

Use of a portion of the VHF band by the radiolocation service

Reasons: Consequential to completion of agenda item 1.14 at WRC-12.

Document WAC/089(26.10.10)

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 for WRC-12 agenda item 1.7 (aeronautical mobile-satellite and mobile-satellite services). NTIA proposes modification Resolution 222 (Rev. WRC-07).

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 August 12, 2010)

Karl B. Nebbia
Associate Administrator
Office of Spectrum Management

UNITED STATES OF AMERICA

DRAFT PROPOSALS FOR THE WORK OF THE CONFERENCE

Agenda Item 1.7: *to consider the results of ITU-R studies in accordance with Resolution 222 (Rev.WRC-07) in order to ensure long-term spectrum availability and access to spectrum necessary to meet requirements for the aeronautical mobile-satellite (R) service, and to take appropriate action on this subject, while retaining unchanged the generic allocation to the mobile-satellite service in the bands 1 525-1 559 MHz and 1 626.5-1 660.5 MHz*

Background Information: Prior to the 1997 World Radiocommunication Conference (WRC-97), the Radio Regulations contained an exclusive allocation to the aeronautical mobile-satellite (R) service (AMS(R)S) for the bands 1 545-1 555 MHz (space-to-Earth) and 1 646.5-1 656.5 MHz (Earth-to-space). To allow flexibility in frequency coordination and to achieve spectrum efficiency, WRC-97 changed this into a generic mobile-satellite service (MSS) allocation subject to the provision RR No. 5.357A. With this footnote, WRC-97 intended to provide priority access to the spectrum by the AMS(R)S.¹

WRC-2000 adopted Resolution 222 (WRC-2000) resolving that, in frequency coordination of MSS systems in the bands 1 525-1 559 MHz and 1 626.5-1 660.5 MHz, administrations shall ensure that the spectrum needed for AMS(R)S communications within priority categories 1 to 6 of Article 44 is accommodated. WRC-07 revised Resolution 222 inviting ITU-R to carry out a number of additional studies towards ensuring long term spectrum availability for AMS(R)S.

In coordinating MSS systems under the procedure of Article 9, the notifying administrations for MSS systems in the above bands have adopted two multilateral Memoranda of Understanding (MoU) to facilitate the coordination process: one MoU involves the administrations providing MSS over North America and a second MoU involves administrations providing MSS over ITU Regions 1 and 3. Usually on an annual basis under these MoUs, Operator Review Meetings (ORM) coordinate and review assignments across the bands 1 525-1 559/1 626.5-1 660.5 MHz so as to ensure fair and efficient use of the radio spectrum.

In the CPM Report, one administration stated that in the framework of one multilateral meeting (MLM)/operator's review meeting (ORM) group (Regions 1 and 3) no more than 76 % of the spectrum requested by that operator was made available and, when then considering the additional constraints on spectrum reuse due to the other operators in Region 2, the overall resulting spectrum freely accessible for that AMS(R)S network was less than 50 % of the requested amount. Therefore, the CPM report indicates that some administrations believe that the current provisions of Resolution 222 (Rev.WRC-07) have not achieved the objectives of No. 5.357A.

To ensure long-term availability of AMS(R)S, this proposal puts forth "no change" to Article 5; however, it modifies Resolution 222 (WRC-07). The proposed modifications to the resolution include inviting ITU-R to study and develop a recommendation on a method to determine spectrum requirements for AMS(R)S related to the categories 1 to 6 of Article 44 for use during coordination discussions. The modifications also include an annex to the resolution to describe the procedures that administrations can

¹ For AMS(R)S priority access to the sub-bands 1 555-1 559 MHz and 1 656.5-1 660.5 MHz, see also RR No. 5.362A.

utilize during coordination discussions to accommodate priority access to AMS(R)S spectrum in the bands that are under the provisions of No. 5.357A.

Proposal:

ARTICLE 5

Frequency allocations

Section IV – Table of Frequency Allocations

(See No. 2.1)

NOC

USA/AI 1.7/1

1 525-1 610 MHz

Allocation to services		
Region 1	Region 2	Region 3
1 525-1 530 SPACE OPERATION (space-to-Earth) FIXED MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A Earth exploration-satellite Mobile except aeronautical mobile 5.349 5.341 5.342 5.350 5.351 5.352A 5.354	1 525-1 530 SPACE OPERATION (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A Earth exploration-satellite Fixed Mobile 5.343 5.341 5.351 5.354	1 525-1 530 SPACE OPERATION (space-to-Earth) FIXED MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A Earth exploration-satellite Mobile 5.349 5.341 5.351 5.352A 5.354
1 530-1 535 SPACE OPERATION (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A 5.353A Earth exploration-satellite Fixed Mobile except aeronautical mobile 5.341 5.342 5.351 5.354	1 530-1 535 SPACE OPERATION (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A 5.353A Earth exploration-satellite Fixed Mobile 5.343 5.341 5.351 5.354	
1 535-1 559	MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A 5.341 5.351 5.353A 5.354 5.355 5.356 5.357 5.357A 5.359 5.362A	
1 559-1 610	AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.208B 5.328B 5.329A 5.341 5.362B 5.362C	

Reasons: The MSS allocations continue to be necessary to satisfy future requirements. No modifications are required to satisfy AMS(R)S requirements.

1 610-1 660 MHz

Allocation to services		
Region 1	Region 2	Region 3
<p>1 610-1 610.6 MOBILE-SATELLITE (Earth-to-space) 5.351A AERONAUTICAL RADIONAVIGATION</p> <p>5.341 5.355 5.359 5.364 5.366 5.367 5.368 5.369 5.371 5.372</p>	<p>1 610-1 610.6 MOBILE-SATELLITE (Earth-to-space) 5.351A AERONAUTICAL RADIONAVIGATION RADIODETERMINATION- SATELLITE (Earth-to-space)</p> <p>5.341 5.364 5.366 5.367 5.368 5.370 5.372</p>	<p>1 610-1 610.6 MOBILE-SATELLITE (Earth-to-space) 5.351A AERONAUTICAL RADIONAVIGATION Radiodetermination-satellite (Earth-to-space)</p> <p>5.341 5.355 5.359 5.364 5.366 5.367 5.368 5.369 5.372</p>
<p>1 610.6-1 613.8 MOBILE-SATELLITE (Earth-to-space) 5.351A RADIO ASTRONOMY AERONAUTICAL RADIONAVIGATION</p> <p>5.149 5.341 5.355 5.359 5.364 5.366 5.367 5.368 5.369 5.371 5.372</p>	<p>1 610.6-1 613.8 MOBILE-SATELLITE (Earth-to-space) 5.351A RADIO ASTRONOMY AERONAUTICAL RADIONAVIGATION RADIODETERMINATION- SATELLITE (Earth-to-space)</p> <p>5.149 5.341 5.364 5.366 5.367 5.368 5.370 5.372</p>	<p>1 610.6-1 613.8 MOBILE-SATELLITE (Earth-to-space) 5.351A RADIO ASTRONOMY AERONAUTICAL RADIONAVIGATION Radiodetermination-satellite (Earth-to-space)</p> <p>5.149 5.341 5.355 5.359 5.364 5.366 5.367 5.368 5.369 5.372</p>
<p>1 613.8-1 626.5 MOBILE-SATELLITE (Earth-to-space) 5.351A AERONAUTICAL RADIONAVIGATION Mobile-satellite (space-to-Earth) 5.208B</p> <p>5.341 5.355 5.359 5.364 5.365 5.366 5.367 5.368 5.369 5.371 5.372</p>	<p>1 613.8-1 626.5 MOBILE-SATELLITE (Earth-to-space) 5.351A AERONAUTICAL RADIONAVIGATION RADIODETERMINATION- SATELLITE (Earth-to-space) Mobile-satellite (space-to-Earth) 5.208B</p> <p>5.341 5.364 5.365 5.366 5.367 5.368 5.370 5.372</p>	<p>1 613.8-1 626.5 MOBILE-SATELLITE (Earth-to-space) 5.351A AERONAUTICAL RADIONAVIGATION Mobile-satellite (space-to-Earth) 5.208B Radiodetermination-satellite (Earth-to-space)</p> <p>5.341 5.355 5.359 5.364 5.365 5.366 5.367 5.368 5.369 5.372</p>
<p>1 626.5-1 660 MOBILE-SATELLITE (Earth-to-space) 5.351A 5.341 5.351 5.353A 5.354 5.355 5.357A 5.359 5.362A 5.374 5.375 5.376</p>		

Reasons: The MSS allocations continue to be necessary to satisfy future requirements. No modifications are required to satisfy AMS(R)S requirements.

NOC

USA/AI 1.7/3

1 660-1 710 MHz

Allocation to services		
Region 1	Region 2	Region 3
1 660-1 660.5	MOBILE-SATELLITE (Earth-to-space) 5.351A RADIO ASTRONOMY 5.149 5.341 5.351 5.354 5.362A 5.376A	
1 660.5-1 668	RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile 5.149 5.341 5.379 5.379A	
1 668-1 668.4	MOBILE-SATELLITE (Earth-to-space) 5.351A 5.379B 5.379C RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile 5.149 5.341 5.379 5.379A	
1 668.4-1 670	METEOROLOGICAL AIDS FIXED MOBILE except aeronautical mobile MOBILE-SATELLITE (Earth-to-space) 5.351A 5.379B 5.379C RADIO ASTRONOMY 5.149 5.341 5.379D 5.379E	
1 670-1 675	METEOROLOGICAL AIDS FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (Earth-to-space) 5.351A 5.379B 5.341 5.379D 5.379E 5.380A	
1 675-1 690	METEOROLOGICAL AIDS FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.341	
1 690-1 700 METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) Fixed Mobile except aeronautical mobile 5.289 5.341 5.382	1 690-1 700 METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) 5.289 5.341 5.381	

1 700-1 710 FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.289 5.341	1 700-1 710 FIXED METEOROLOGICAL- SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.289 5.341 5.384
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Reasons: The MSS allocations continue to be necessary to satisfy future requirements. No modifications are required to satisfy AMS(R)S requirements.

MOD USA/AI 1.7/4

5.357A In applying the procedures of Section II of Article 9 to the mobile-satellite service in the bands 1 545-1 555 MHz and 1 646.5-1 656.5 MHz, priority shall be given to accommodating the spectrum requirements of the aeronautical mobile-satellite (R) service providing transmission of messages with priority 1 to 6 in Article 44. Aeronautical mobile-satellite (R) service communications with priority 1 to 6 in Article 44 shall have priority access and immediate availability, by pre-emption if necessary, over all other mobile-satellite communications operating within a network. Mobile-satellite systems shall not cause unacceptable interference to, or claim protection from, aeronautical mobile-satellite (R) service communications with priority 1 to 6 in Article 44. Account shall be taken of the priority of safety-related communications in the other mobile-satellite services. (The provisions of Resolution 222 (WRC-201200)* shall apply.) (WRC-201200)

* ~~Note by the Secretariat: This Resolution was revised by WRC-07.~~

Reasons: Additional provisions are necessary in Resolution 222 to ensure priority access by the AMS(R)S to spectrum under the provisions of No. 5.357A.

NOC USA/AI 1.7/5

5.362A

Reasons: For the bands covered by agenda item 1.7, the 1 555-1 559 MHz and 1 656.5-1 660.5 MHz bands with the 2 x 10 MHz in No. 5.357A are sufficient to accommodate AMS(R)S operations inside the United States. No additional spectrum is required to satisfy this agenda item.

MOD USA/AI 1.7/6

MOD

RESOLUTION 222 (Rev.WRC-0712)

**Use of the bands 1 525-1 559 MHz and 1 626.5-1 660.5 MHz
by the mobile-satellite service, and studies-procedures to ensure long-term
spectrum availability access for the aeronautical mobile-satellite (R) service**

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

considering

- a) that prior to WRC-97, the bands 1 530-1 544 MHz (space-to-Earth) and 1 626.5-1 645.5 MHz (Earth-to-space) were allocated to the maritime mobile-satellite service and the bands 1 545-1 555 MHz (space-to-Earth) and 1 646.5-1 656.5 MHz (Earth-to-space) were allocated on an exclusive basis to the aeronautical mobile-satellite (R) service (AMS(R)S) in most countries;
- b) that WRC-97 allocated the bands 1 525-1 559 MHz (space-to-Earth) and 1 626.5-1 660.5 MHz (Earth-to-space) to the mobile-satellite service (MSS) to facilitate the assignment of spectrum to multiple MSS systems in a flexible and efficient manner;
- c) that WRC-97 adopted No. 5.353A giving priority to accommodating spectrum requirements for and protecting from unacceptable interference distress, urgency and safety communications of the Global Maritime Distress and Safety System (GMDSS) in the bands 1 530-1 544 MHz and 1 626.5-1 645.5 MHz and No. 5.357A giving priority to accommodating spectrum requirements for and protecting from unacceptable interference the AMS(R)S providing transmission of messages with priority categories 1 to 6 in Article 44 in the bands 1 545-1 555 MHz and 1 646.5-1 656.5 MHz;
- d) that AMS(R)S is an essential element of ICAO CNS/ATM to provide safety and regularity of flight in the civil air transportation,

further considering

- a) that coordination between satellite networks is required on a bilateral basis in accordance with the Radio Regulations, and, in the bands 1 525-1 559 MHz (space-to-Earth) and 1 626.5-1 660.5 MHz (Earth-to-space), coordination is partially assisted by regional multilateral meetings;
- b) that, in these bands, geostationary mobile-satellite system operators currently use a capacity-planning approach at multilateral coordination meetings, with the guidance and support of their administrations, to periodically coordinate access to the spectrum needed to accommodate their requirements;
- c) that spectrum requirements for MSS networks, including the GMDSS and AMS(R)S, are currently accommodated through the capacity-planning approach and that, in the bands to which Nos. 5.353A or 5.357A apply, this approach, and other methods may assist in accommodating the expected increase of spectrum requirements for GMDSS and AMS(R)S;
- d) that Report ITU-R M.2073 has concluded that prioritization and inter-system pre-emption between different mobile-satellite systems is not practical and, without a significant advance in technology, is unlikely to be feasible for technical, operational and economical reasons. ~~It summarized that prioritization and intersystem real-time pre-emption would not necessarily increase the efficiency of spectrum use compared to the current situation, but it would certainly complicate substantially the coordination process and network structure;~~
- e) that there is existing and increasing demand for spectrum for AMS(R)S and non-AMS(R)S by several mobile satellite systems in the bands 1 525-1 559 MHz and 1 626.5-1 660.5 MHz, ~~and that the application of this Resolution may impact the provision of services by non-AMS(R)S systems in the mobile satellite service;~~
- f) that future requirements for AMS(R)S and GMDSS spectrum may require additional allocations,

recognizing

- a) that absolute priority to all telecommunications concerning safety of life at sea, on land, in air or in outer space is given by No. 191 of the ITU Constitution;
- b) that the International Civil Aviation Organization (ICAO) has adopted Standards and Recommended Practices (SARPs) addressing satellite communications with aircraft in accordance with the Convention on International Civil Aviation;
- c) that all air traffic communications as defined in Annex 10 to the Convention on International Civil Aviation fall within priority categories 1 to 6 of Article 44;
- d) that Table 15-2 of Appendix 15 identifies the bands 1 530-1 544 MHz (space-to-Earth) and 1 626.5-1 645.5 MHz (Earth-to-space) for distress and safety purposes in the maritime mobile-satellite service as well as for routine non-safety purposes;
- e) that any administration having difficulty in applying the procedures of Articles 9 and 11 with respect to No. 5.357A and this Resolution may at any time request assistance of the Radiocommunication Bureau and the Board under the relevant provisions of the Radio Regulations, including Article 7, the relevant provisions of Articles 9 and 11, as well as Articles 13 and 14,

noting

that there is a need to use spectrum in the most efficient manner within and among MSS systems,

resolves

- 1 that, in frequency coordination of MSS in the bands 1 525-1 559 MHz and 1 626.5-1 660.5 MHz, the notifying administrations of mobile-satellite networks shall ensure that the spectrum needed for distress, urgency and safety communications of GMDSS, as elaborated in Articles 32 and 33, in the bands where No. 5.353A applies, and for AMS(R)S communications within priority categories 1 to 6 of Article 44 in the bands where No. 5.357A applies, is accommodated met;
- 2 that the notifying administrations of mobile-satellite networks shall ensure the use of the latest technical advances in mobile-satellite systems, in order to achieve the most flexible, efficient and practical use of the generic MSS allocations;
- 3 that the notifying administrations of mobile-satellite networks shall ensure that, if spectrum requirements of an MSS, including AMS(R)S, network decrease relative to the requirements presented at the previous coordination meeting, the corresponding unused spectrum resources shall be released to facilitate efficient use of spectrum;
- 34 that the notifying administrations of mobile-satellite networks shall ensure that MSS operators carrying non-safety-related traffic yield capacity, as and when necessary, to accommodate the spectrum requirements for distress, urgency and safety communication of GMDSS communications, as elaborated in Articles 32 and 33, and for AMS(R)S communications within priority categories 1 to 6 of Article 44; this could be achieved in advance through the coordination process in resolves 1 and the procedures contained in the Annex to this Resolution shall apply and, when necessary, through other means if such means are identified as a result of studies in invites ITU-R,

invites ITU-R

1. to conduct studies on and develop in one or more ITU-R Recommendations a methodology to compute spectrum requirements for AMS(R)S related to the categories 1 to 6 of Article 44 by 2016 to support discussions between notifying administrations;
2. to take into account further considering c in conducting the studies of invites ITU-R 1; to conduct, in time for consideration by WRC-11, the appropriate technical, operational and regulatory studies to ensure long term spectrum availability for the aeronautical mobile-satellite (R) service (AMS(R)S) including:
 - i) ~~to study, as a matter of urgency, the existing and future spectrum requirements of the aeronautical mobile-satellite (R) service;~~

- ~~ii) to assess whether the long term requirements of the AMS(R)S can be met within the existing allocations with respect to No. 5.357A while retaining unchanged the generic allocation for the mobile satellite service in the bands 1 525-1 559 MHz and 1 626.5-1 660.5 MHz, and without placing undue constraints on the existing systems operating in accordance with the Radio Regulations;~~
- ~~iii) to complete studies to determine the feasibility and practicality of technical or regulatory means, other than the coordination process referred to in *resolves 1* or the means considered in Report ITU R-M.2073, in order to ensure adequate access to spectrum to accommodate the AMS(R)S requirements as referenced in *resolves 3* above, while taking into account the latest technical advances in order to maximize spectral efficiency;~~
- ~~iv) if the assessment identified in *invites ITU R i)* and *ii)* indicates that these requirements cannot be met, to study existing MSS allocations or possible new allocations only for satisfying the requirements of the aeronautical mobile satellite (R) service for communications with priority categories 1 to 6 of Article 44, for global and seamless operation of civil aviation taking into account the need to avoid undue constraints on existing systems and other services,~~

invites WRC-11

~~to consider the results of the above ITU R studies and to take appropriate action on this subject, while retaining unchanged the generic allocation to the mobile satellite service in the bands 1 525-1 559 MHz and 1 626.5-1 660.5 MHz.~~

invites

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

ANNEX TO RESOLUTION 222 (Rev.WRC-12)

Procedures to implement No. 5.357A and Resolution 222 (Rev. WRC-12) within the Coordination Process

- 1) The notifying administrations of planned MSS, including AMS(R)S networks, submit the required technical characteristics and other relevant information of their MSS networks in accordance with Appendix 4. Coordination of these MSS systems with other affected satellite systems operating in the bands 1 525-1 559 MHz and 1 626.5-1 660.5 MHz proceeds in accordance with Articles 9 and 11 and other relevant provisions of the Radio Regulations, as appropriate.
- 2) To further facilitate coordination under Articles 9 and 11, the notifying administrations of MSS, including AMS(R)S, networks may authorize their respective MSS satellite operators, including AMS(R)S satellite operators, to enter into bilateral and multilateral coordination processes to secure operator agreements on access to spectrum for their satellite systems.
- 3) At frequency coordination meetings, including operator meetings referred to in 2), the notifying administration or its respective MSS satellite operator presents the spectrum requirements of each AMS(R)S system according to an agreed method and accompanied with the information justifying such requirements. The other notifying administrations or their respective MSS satellite operators then

validate the requirements under agreed criteria. In accordance with No. 5.357A the notifying administrations ensure that their coordination agreement accommodates all validated AMS(R)S spectrum requirements with priority categories 1 to 6 of Article 44.

4) The notifying administrations of MSS systems, including AMS(R)S, have responsibility to ensure that their respective assignments are compatible in the relevant bilateral or multilateral frequency coordination meetings (in particular when those systems span over various geographic area(s)). In the event an administration notifying an AMS(R)S system experiences difficulty in accommodating its validated AMS(R)S spectrum requirements at these meetings, it may invoke No. 5.357A (as per the procedures described in Items 5, 6 and 7 below).

5) In the event that a notifying AMS(R)S administration invokes No. 5.357A based on the results of a bilateral or multilateral coordination operators' meeting, that administration shall ensure that its designated operator does not accept the spectrum sharing arrangement developed at the operators' meeting as acceptance indicates that the agreement satisfies requirements presented. That AMS(R)S administration informs the other administrations involved in the coordination process of its intention to invoke No. 5.357A, and informs the Radiocommunication Bureau that its AMS(R)S requirements have not been satisfied. The concerned AMS(R)S administration then calls for an administrations' frequency coordination meeting of all affected notifying administrations, to be convened within six months. That notifying AMS(R)S administration may seek the assistance of the Radiocommunication Bureau in accordance with Articles 7 and 13, if any of the affected notifying administrations do not agree to meet to resolve the raised issues.

6) At the administrations' frequency coordination meeting, all affected notifying administrations review and validate the AMS(R)S requirements of the notifying administration referred to in 5) above. All affected notifying administrations work toward accommodating any validated AMS(R)S requirements in accordance with No. 5.357A and Resolution 222 (Rev.WRC-12).

7) If the matter remains unresolved at the administrations' frequency coordination meeting referred to in 6) above, the notifying AMS(R)S administration may seek the assistance of the Radiocommunication Bureau pursuant to Articles 7 and 13 and notify the respective administrations. The Radiocommunication Bureau provides a report and assistance in accordance with No. 13.3.

8) To facilitate the users' long term planning, each MSS operator providing AMS(R)S service or its notifying administration may decide to disclose within the above coordination procedure information regarding its coordinated AMS(R)S spectrum resource (e.g. to AMS(R)S users of such service).

Reasons: Additional provisions are necessary in Resolution 222 to ensure priority access by the AMS(R)S to spectrum under the provisions of No. 5.357A.

Document WAC/091(26.10.10)

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, approve the release of a draft Executive Branch proposal for WRC-12 agenda item 2. NTIA proposes modifications to Resolution 27 to add cross reference data to the table of contents for recommendations incorporated by reference.

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 September 24, 2010)

Karl B. Nebbia
Associate Administrator
Office of Spectrum Management

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

Agenda Item 2: *to examine the revised ITU-R Recommendations incorporated by reference in the Radio Regulations communicated by the Radiocommunication Assembly, in accordance with Resolution 28 (Rev.WRC-03), and to decide whether or not to update the corresponding references in the Radio Regulations, in accordance with principles contained in the Annex 1 to Resolution 27 (Rev.WRC-07)*

Background Information: A number of provisions of the Radio Regulations incorporate by reference specific versions of ITU-R Recommendations. As these referenced ITU-R Recommendations are updated at future ITU-R meetings, it is then necessary for later WRCs to review the corresponding Radio Regulations to see if the references they contain should be revised to reflect the new version of the cited ITU-R Recommendation. Otherwise, the older version of the ITU-R Recommendation remains in effect. As a result, this is a standing item on every WRC agenda, and its main purpose is to examine revised ITU-R Recommendations to determine their suitability for incorporation by reference.

Resolution 27 (Rev.WRC-07) provides principles and procedures for use of incorporation by reference in the Radio Regulations. WRC-07 made improvements to Resolution 27. In particular, WRC-07 updated the Resolution with an additional principle stating that where a mandatory reference to an ITU-R Recommendation is included in the *resolves* of a WRC Resolution, which is itself cited in a provision or footnote using mandatory language, that ITU-R Recommendation shall also be considered as incorporated by reference. Also, the revised resolution provides further clarification for the application of mandatory and non-mandatory references. Resolution 28 (Rev.WRC-03) directs WRCs to review ITU-R Recommendations incorporated by reference in the Radio Regulations that have been revised during the elapsed study period (based on the list to be provided by the Radiocommunication Assembly).

These Resolutions provide clear instructions and guidance for both the Radiocommunication Bureau and administrations to assist them in their preparations for future conferences. To facilitate this task, the Report of the Director of the Radiocommunication Bureau to the Conference Preparatory Meeting (CPM) is to include an initial list of those ITU-R Recommendations containing texts incorporated by reference that have been revised or approved since the previous WRC, or that may be revised in time for the upcoming WRC. The Report will also identify the provisions and footnotes to the Radio Regulations containing references to 1) ITU-R recommendations, and 2) WRC resolutions that contain references to ITU-R recommendations, and propose suggestions on any future action.

WRC-12 could revise the "Table of Contents" in RR Volume 4 to include, for each of the ITU-R recommendations incorporated by reference (or portions thereof), the corresponding mandatory reference(s) in the RR. An example of a revised table of contents, based on the 2008 edition of the RR, can be found in attachment 1 to this document. Note that the Radiocommunication Bureau may wish to review the proposed additions for completeness. A reference table in this manner would be useful for general reference purposes and would also assist administrations in their preparatory work for this agenda item prior to CPM and WRC. Each WRC would need to revise this table and provide appropriate instructions to the Bureau and General Secretariat for its inclusion in Volume 4 of the subsequent edition of the RR. To implement these changes, some revisions to Resolution 27 (Rev. WRC-07) are required.

Proposals:

MOD USA/2/1

RESOLUTION 27 (REV.WRC-0712)

Use of incorporation by reference in the Radio Regulations

The World Radiocommunication Conference (Geneva, 201207),

considering

a) that the principles of incorporation by reference were adopted by WRC-95; and revised by subsequent conferences WRC-97 and further refined by WRC 2000 (see Annexes 1 and 2 to this Resolution);

b) that there are provisions in the Radio Regulations containing references which fail to distinguish adequately whether the status of the referenced text is mandatory or non-mandatory,

noting

that references to Resolutions or Recommendations of a world radiocommunication conference (WRC) require no special procedures, and are acceptable for consideration, since such texts will have been agreed by a WRC,

resolves

1 that for the purposes of the Radio Regulations, the term “incorporation by reference” shall only apply to those references intended to be mandatory;

2 that when considering the introduction of new cases of incorporation by reference, such incorporation shall be kept to a minimum and made by applying the following criteria:

- only texts which are relevant to a specific WRC agenda item may be considered;
- the correct method of reference shall be determined on the basis of the principles set out in Annex 1 to this Resolution;
- the guidance contained in Annex 2 to this Resolution shall be applied in order to ensure that the correct method of reference for the intended purpose is employed;

3 that the procedure described in Annex 3 to this Resolution shall be applied for approving the incorporation by reference of ITU-R Recommendations or parts thereof;

4 that existing references to ITU-R Recommendations shall be reviewed to clarify whether the reference is mandatory or non-mandatory in accordance with Annex 2 to this Resolution;

5 that ITU-R Recommendations, or parts thereof, incorporated by reference at the conclusion of each WRC, and a cross reference list of the corresponding references (e.g. Articles, Resolutions, etc.) to these referenced texts in the Radio Regulations, shall be collated and published in a volume of the Radio Regulations (see Annex 3 to this Resolution),

instructs the Director of the Radiocommunication Bureau

1 to bring this Resolution to the attention of the Radiocommunication Assembly and the ITU-R Study Groups;

2 to identify the provisions and footnotes of the Radio Regulations containing references to ITU-R Recommendations and make suggestions on any further action to the second session of the Conference Preparatory Meeting (CPM) for its consideration, as well as for inclusion in the Director's Report to the next WRC;

3 to identify the provisions and footnotes of the Radio Regulations containing references to WRC Resolutions that contain references to ITU-R Recommendations, and make suggestions on any further action to the second session of the Conference Preparatory Meeting (CPM) for its consideration, as well as for inclusion in the Director's Report to the next WRC,

invites administrations

to submit proposals to future conferences, taking into account the CPM Report, in order to clarify the status of references, where ambiguities remain regarding the mandatory or non-mandatory status of the references in question, with a view to amending those references:

- i) that appear to be of a mandatory nature, identifying such references as being incorporated by reference by using clear linking language in accordance with Annex 2;
- ii) that are of a non-mandatory character, so as to refer to "the most recent version" of the Recommendations.

Reasons: MOD to resolves 5 includes the concept that, for each ITU-R Recommendation incorporated by reference and published in Volume 4 of the Radio Regulations, the corresponding references in the RR are to be included. Also, the MOD to considering a) is intended to capture, yet simplify the concept that this Resolution was revised by WRC-97, WRC-2000, WRC-03 and WRC-07 and may be revised at WRC-12 and future conferences.

NOC

USA/2/2

ANNEX 1 TO RESOLUTION 27 (REV.WRC-07)

Principles of incorporation by reference

Reasons: No change is needed for Annex 1.

NOC

USA/2/3