

June 10, 1999

Mr. Roderick K. Porter  
Acting Chief of the International Bureau  
Federal Communications Commission  
Washington, D.C. 20554

Dear Mr. Porter:

The National Telecommunications and Information Administration on behalf of the Executive Branch Agencies, has approved the release of additional proposals for WRC-2000. These proposals are being forwarded to your WRC-2000 Advisory Committee for review. Karl Nebbia from my staff will contact Damon Ladson and reconcile any differences. The following is a summary of our proposals:

**WRC-2000 Agenda Item 1.4 - Resolution 134 (WRC-97)** makes the date of the provisional application of the allocation to the FSS in Regions 1 and 3 in the band 40.5-42.5 GHz 1 January 2001, and calls for review of the allocation and provisional application date. The original proposal concerning this issue was drafted by your Advisory Committee and was reviewed and modified by our Radio Conference Subcommittee. Due to the results of the work completed by ITU-R Working Party 4A, a new version of this proposal has been drafted.

**WRC-2000 Agenda Item 1.4** - This proposal looks at WRC-97's realignment of the 50.2-71 GHz spectral region, which placed a primary allocation to the fixed service in the frequency band 55.78-59 GHz. Issues related to sharing between high density fixed systems and the Earth Exploration-Satellite (passive) Service in the 55.78-56.26 GHz band have not been resolved. Our proposal addresses Resolution **726 (WRC-97)** and recommends some changes to this resolution, including the continuation of studies.

**WRC-2000 Agenda Item 1.7** - This agenda item reviews the use of the HF bands by the aeronautical mobile (R) and maritime mobile services with a view to protecting operational, distress and safety communications, taking into account Resolution **346 (WRC-97)**. We previously submitted a proposal that looked at the aeronautical portion of this agenda item. This proposal addresses the maritime HF issues.

**WRC-2000 Agenda Item 1.15.1** - The recommended allocation proposal for the second civil radionavigation satellite allocation consists of modification to an existing footnote, **S5.328**, to allocate the Radionavigation Satellite Service (RNSS) at 1 164-1 188 MHz.

**WRC-2000 Agenda Item 1.18** - Appendix **S18** of the ITU Radio Regulations defines the channels of the maritime mobile service. This proposal modifies Resolution **342** to allow consideration of one or more new interoperable technologies, digital or otherwise, for the maritime mobile service. The document also proposes the ITU-R studies take into account the existing Appendix **S18** channeling plan in order to minimize disruption of and provide for interoperability with current systems.

Sincerely,

*Original Signed*

William T. Hatch  
Acting Associate Administrator  
Office of Spectrum Management

Enclosures:

**United States of America**

**[DRAFT] PROPOSALS FOR THE WORK OF THE CONFERENCE**

**Proposals for Agenda Item 1.4\***

**to consider issues concerning allocations and regulatory aspects related to Resolutions 126 (WRC-97), 128 (WRC-97), 129 (WRC-97), 133 (WRC-97), 134 (WRC-97) and 726 (WRC-97)**

**Background Information: Resolution 134 (WRC-97)** makes the date of the provisional application of the allocation to the FSS in Regions 1 and 3 in the band 40.5-42.5 GHz 1 January 2001, and calls for review of the allocation and provisional application date. On the basis of studies conducted in the ITU-R, it is appropriate to advance the date of the application of the FSS allocation in Regions 1 and 3 to 2 June 2000 (upon the conclusion of WRC-2000) for the 40.5-41.5 GHz band, and to extend ~~the~~ this allocation to all of Region 1 (thereby enabling the removal of RR ~~S5.551C~~, RR ~~S5.551D~~ and RR ~~S5.551E~~, and the suppression of Resolution ~~134 (WRC-97)~~). Based on the ITU-R WP 4A contribution to the WRC-00 CPM that protecting the Radio Astronomy Service to the levels specified in existing ITU-R recommendations would mean a commercially impracticable FSS service, it is also appropriate to delete the allocation to the FSS worldwide in the 41.5-42.5 GHz band and suppress Resolution 128.

On the basis of these conclusions, the following proposals are made:

**Article S5**

**GHz  
40.5-41.5**

USA/1.4/ 1  
MOD

Allocation to Services		
Region 1	Region 2	Region 3
<del>40.5-412.5</del>	<del>40.5-412.5</del>	<del>40.5-412.5</del>
FIXED	FIXED	FIXED
<u>FIXED-SATELLITE</u> <u>(space-to-Earth)</u>	FIXED-SATELLITE (space-to-Earth)	FIXED-SATELLITE (space-to-Earth)
BROADCASTING	<del>S5.551B S5.551E</del>	<del>S5.551B S5.551E</del>
BROADCASTING-SATELLITE	BROADCASTING	BROADCASTING
Mobile	BROADCASTING-SATELLITE	BROADCASTING-SATELLITE
	Mobile	Mobile
<del>S5.551B S5.551D</del>	S5.551C <del>S5.551F</del>	S5.551C <del>S5.551F</del>

**Reasons:** Studies in ITU-R confirm the feasibility of the fixed-satellite service allocation in the bands ~~40.5-42.5~~ 40.5-41.5 GHz, and the need for harmonized global allocations. With the elevation of the allocation to full primary status in all 3 regions, the footnote allocation for countries in Region 1 can be removed. Those

\* The proposals advanced in this paper do not represent the full extent of U.S. proposals to WRC-2000 on Agenda Item 1.4.

countries that are listed or that have territories listed in RR ~~S5.551C~~ should give consideration to whether the alternative allocation in certain countries and territories in Regions 2 and 3 can be suppressed. Acceleration of the effective date allows for removal of the reference to Resolution **134 (WRC-97)**. ~~In advancing this proposal, it must be recognized that fixed satellite service systems in the band 41.5-42.5 GHz may not be implemented until technical and operational measures have been identified and agreed within ITU-R to protect the radio astronomy service in the band 42.5-43.5 GHz from harmful interference.~~

**Article S5**

**GHz  
41.5-42.5**

**USA/1.4/ 2  
MOD**

Allocation to Services		
Region 1	Region 2	Region 3
<del>401.5-42.5</del> FIXED BROADCASTING BROADCASTING- SATELLITE Mobile  <del>S5.551B S5.551D</del>	<del>401.5-42.5</del> FIXED <del>FIXED-SATELLITE</del> <del>-(space-to-Earth)</del> <del>S5.551B S5.551E</del> BROADCASTING BROADCASTING- SATELLITE Mobile  S5.551C S5.551F	<del>401.5-42.5</del> FIXED <del>FIXED-SATELLITE</del> <del>-(space-to-Earth)</del> S5.551B S5.551E BROADCASTING BROADCASTING- SATELLITE Mobile  S5.551C-S5.551F

**Reasons:** At the recently completed meeting of ITU-R Working Party 4A, dealing with FSS matters, submitted text regarding Resolution 128 and protection of the Radio Astronomy Service. This text, for addition to Section 6.1.3.2.3 of the CPM Report, stated that “If the fixed-satellite service is constrained to the levels of attenuation contained in Table 1, it is unlikely to be practicable for the FSS allocation in the frequency band 41.5-42.5 GHz to be used for commercial FSS applications”. As support for this allocation by the US was, at WRC-97, and is contingent on protecting the Radio Astronomy Service from harmful interference, deletion of the allocation to the FSS in this band segment is necessary.

**USA/1.4/ 3  
SUP**

~~S5.551D~~

**Reasons:** Consequential to USA/1.4/01.

**USA/1.4/ 4  
SUP**

~~S5.551E~~

**Reasons:** Consequential to USA/1.4/01.

~~Resolution 134 (WRC 97)~~

USA/1.4/ 5  
SUP

~~Use of the frequency band 40.5-42.5 GHz  
by the fixed-satellite service~~

**Reasons:** Consequential to USA/1.4/01.

USA/1.4/ 6  
SUP

~~RESOLUTION 128 (WRC 97)~~

~~Allocation to the fixed-satellite service (space-to-Earth) in the 41.5-42.5 GHz  
band and protection of the radio astronomy service in the 42.5-43.5 GHz band~~

**Reason:** Consequential to USA/1.4/02. Additionally, WP 4A has indicated protection of the Radio Astronomy Service to the levels indicated in the WP 7D input to the CPM Report on Resolution 128, values derived from existing ITU-R recommendations noted in the WP 7D output report, would mean the FSS allocation in the 41.5-42.5 GHz band would be unlikely to be practicable for use for commercial FSS applications.

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**United States of America**  
**[DRAFT] PROPOSALS FOR THE WORK OF THE CONFERENCE**  
**Proposals for Agenda Item 1.4<sup>1</sup>**

**to consider issues concerning allocations and regulatory aspects related to Resolutions 126 (WRC-97), 128 (WRC-97), 129 (WRC-97), 130 (WRC-97), 134 (WRC-97), and 726 (WRC-97)**

**Background Information:** WRC-97, in its realignment of the 50.2-71 GHz spectral region, placed a primary allocation to the fixed service in the frequency band 55.78-59 GHz. Footnote **S5.547** and Resolution **726 (WRC-97)** indicate that this band (among others) is available for high-density applications in the fixed service.

With respect to 55.78-59 GHz, Resolution **726 (WRC-97)** resolves that administrations should take into account that this band is available for high density application in the fixed service, when considering allocations or other regulatory provisions in relation to this band and requests ITU-R

- ! to undertake studies leading to the identification of system characteristics of high-density systems in the fixed service in 55.78-59 GHz, and
- ! to undertake, as a matter of urgency, studies of technical and operational criteria and of methods to facilitate sharing between high-density systems in the fixed service and other services in 55.78-59 GHz.

Joint Rapporteur Group (JRG) 7D-9D has not resolved issues related to sharing between high density fixed systems and the Earth Exploration-Satellite (passive) Service in the 55.78-56.26 GHz band. Therefore, the band needs to be removed from *consider j* of Resolution **726 (WRC-97)**. Furthermore, the resolution needs to be modified to indicate that *requests 1* and *2* continue to apply only to the 55.78-56.26 GHz band. This would continue the studies in that band.

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<sup>1</sup> \*The proposal advanced in this paper may not represent the full extent of U.S. proposals to WRC-00 on Agenda Item 1.4.

**Proposal:**

**Section IV – Table of Frequency Allocations  
55.78-56.9 GHz**

Allocation to services		
Region 1	Region 2	Region 3
USA/1.4/ 7 MOD	<del>55.78-56.26</del> <sup>9</sup> EARTH EXPLORATION-SATELLITE (passive) FIXED <u>S5.547</u> INTER-SATELLITE S5.556A MOBILE S5.558 SPACE RESEARCH (passive) <del>S5.547</del> –S5.557	
USA/1.4/ 8 MOD	<del>55.78</del> <u>56.26-56.9</u> EARTH EXPLORATION-SATELLITE (passive) FIXED <u>S5.547</u> INTER-SATELLITE S5.556A MOBILE S5.558 SPACE RESEARCH (passive) <del>S5.547</del> –S5.557	

**USA/1.4/ 9  
MOD**

**S5.547** The bands 31.8-33.4 GHz, 51.4-52.6 GHz, ~~55.78~~56.26-59 GHz and 64-66 GHz are available for high-density applications in the fixed service (see Resolution **726 (WRC-97)**).

**Reasons: S5.547** should be associated with the fixed service. Also, ITU-R studies have shown that, without limitations on the power of high-density applications in the fixed service in the band 55.78-56.26 GHz, unacceptable interference may occur to passive sensors onboard Earth Exploration-Satellites. Further study is required to determine whether limits on the fixed service are needed to protect EES passive sensors.

RESOLUTION 726 (WRC-~~97~~2000)

**Frequency bands above 30 GHz available for high-density applications in the fixed service**

USA/1.4/ 10  
MOD

The World Radiocommunication Conference (~~Geneva, 1997~~Istanbul, 2000),

*considering*

- a) that there is a dramatically increasing demand for high-density applications in the fixed service resulting from the deployment of new mobile networks and from the rapid worldwide deregulation in the provision of local broadband services, including multimedia;
- b) that the frequency range from 30 GHz to about 50 GHz is the range preferred to satisfy initial requirements, as indicated in *considering a*), while the bands above about 50 GHz are preferred for similar applications but which take technical advantage of high atmospheric absorption;
- c) that the lower part of the spectrum above 30 GHz has advantages for the fixed service in areas where longer path lengths are necessary;
- d) that the 38 GHz band is already heavily used by many administrations for high-density applications in the fixed service;
- e) that the needs of other services to which the relevant frequency bands are already allocated must be taken into account;
- f) that the band 37-37.5 GHz is being planned for use by the space research service (space-to-Earth) to provide moon-to-Earth and planetary communication links;
- g) that the band 37-38 GHz is being planned for use by the space research service to provide space based very long baseline interferometry;
- h) that the deployment of high-density applications in the fixed service in some bands potentially presents sharing difficulties with other primary services allocated to the same band, e.g. the fixed-satellite service;
- i) that operations in the space services, such as in the fixed-satellite service, in those bands used by high-density applications in the fixed service may lead to sharing difficulties;
- j) that there is a need for global harmonization of new and existing allocations of radio frequency bands to facilitate coordination between administrations and encourage development of competitive products, through economies of scale, and the worldwide introduction of new telecommunication services, including the provision of reliable global information infrastructure access at an affordable cost,

**USA/1.4/ 11  
MOD**

*resolves*

that administrations should take into account that the bands 31.8-33.4 GHz\*, 51.4-52.6 GHz, ~~55.78~~56.26-59 GHz and 64-66 GHz are available for high-density applications in the fixed service, when considering allocations or other regulatory provisions in relation to these bands,

**USA/1.4/ 12  
MOD**

*requests ITU-R*

1 to undertake studies leading to the identification of system characteristics of high-density systems in the fixed service in the 55.78-56.26 bands ~~listed in the~~ *resolves*;

**USA/1.4/ 13  
MOD**

2 to undertake, as a matter of urgency, studies of technical and operational criteria and of methods to facilitate sharing between high-density systems in the fixed service and other services in the 55.78-56.26 bands ~~listed in the~~ *resolves*,

*urges administrations*

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

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\* The date of provisional application of this allocation shall be in conformity with Resolution **126 (WRC-97)**.

**United States of America**  
**PROPOSALS FOR THE WORK OF THE CONFERENCE**

(Part 2 of 2)

**Proposal for Agenda Item 1.7**

**(Review of the use of the HF bands by the aeronautical mobile (R) and maritime mobile services with a view to protecting operational, distress and safety communications, taking into account Resolution 346 (WRC-97))**

**Background Information:** WP8B and the CPM have identified two issues comprising this agenda item;

- 1) HF bands allocated for the distress and safety communications of the maritime and aeronautical mobile (R) services have been subjected to an increase in harmful interference caused by unauthorized use. It is essential for the safety-of-life and property that these distress and safety channels are kept free from unauthorized use and harmful interference.
- 2) Several maritime HF distress and safety frequencies are also used for international routine calling. The routine calling causes interference to distress and safety communications.

[This proposal only addresses maritime issues related to items 1 and 2 above. Another proposal was developed regarding aeronautical issues.]

#### MARITIME ISSUES

The protection of maritime HF distress and safety frequencies, in particular the frequencies 12 290 kHz and 16 420 kHz, is addressed in Resolution **346 (WRC-97)**. A significant source of interference to distress traffic on these frequencies is due to their use as calling frequencies. Resolution **346** calls for administrations to minimize the use of these frequencies for non-safety calling purposes by coast and ship stations.

GMDSS distress and safety frequencies are also used for calling in some of the maritime HF bands. In each maritime HF band one channel is designated as an international calling channel for radiotelephony. In the 4, 6, 12 and 16 MHz bands, the distress and safety frequency is the same as the ships transmitting frequency on the calling channel.

The radio telephony calling channels are used on duplex basis, whilst the distress and safety frequencies are used on simplex. When a ship is calling a coast station, it transmits on the distress frequency. The problem is that at times that the ship has difficulty monitoring whether or not there is ongoing distress traffic, because its receiver is on the corresponding coast station frequency. This problem occurs in the 4, 6, 12 and 16 MHz bands and not in the 8, 18, 22 and 25 MHz bands. The problem is being caused by the transmitting station not adhering to existing regulatory standards which require a station to listen on its transmitting frequency prior to transmitting.

Once initial contact has been established and working frequencies coordinated, traffic handling is accomplished directly on the coordinated working frequencies.

Compliance with existing Radio Regulations, **S52.224** which requires that a station listens before transmitting would alleviate this problem. Further regulations are not required, rather enforcement of the existing regulation.

WP8B considered the modification of Article **S52** and Appendices **S13** and **S17** to exclude routine calling from the HF distress and safety frequencies as a method to satisfy the agenda item. This method may require modification of existing equipment.

The U.S. proposes no change to divide the existing distress and calling channels in two separate frequencies, one exclusive distress and safety frequency and one international radiotelephony calling frequency. The distress frequencies should remain the same as they are at present where calling is allowed and no modifications to the distress procedures are required. Strict compliance and enforcement of existing Radio Regulations, **S52.224**, which requires that a station listen before it transmits would alleviate this problem.

This proposal contains the minimum modifications required in the Radio Regulations and its appendices in order to improve the situation on the HF radiotelephony distress and safety frequencies.

WP8B further encouraged the use of digital selective calling instead of calling by radiotelephony, while recognizing that all vessels may not be fitted with DSC.

This proposal is also encouraging ships and coast stations to use digital selective calling. If voice calling is required, it should in the first instance be done on the coast station working channel and secondarily on the appropriate calling frequency.

**Proposal:**

**ARTICLE S52**

**Special rules relating to the use of frequencies**

**USA/1.7/ 14  
NOC**

**S52.216**

**USA/1.7/ 15  
MOD**

**S52.219** 3) Coast stations employing class J3E or J2D emissions in accordance with No. **S52.217** in the bands between 4 000 and 27 500 kHz shall use the minimum power necessary to cover their service area and shall at no time use a peak envelope power in excess of 10 kW per channel. On the radiotelephony calling frequencies 4 417 kHz and 6 516 kHz coast stations shall limit their peak envelope power to the lowest value to maintain reliable communications, not to exceed 5 kW.

**Reasons:** Due to geographical differences, the higher power of 5 kW is required to provide adequate communications coverage.

**USA/1.7/ 16  
NOC**

**S52.220**

4) Ship stations employing class J3E or J2D emissions in accordance with No. **S52.217** in the bands between 4 000 kHz and 27 500 kHz shall at no time use a peak envelope power in excess of 1.5 kW per channel.

**Reasons:** Higher shipboard power increases the potential for interference and out of band emissions.

USA/1.7/ 17  
ADD S52.220A Administrations should encourage the coast stations and ships under their jurisdiction to utilize the digital selective calling techniques for call and reply.

**Reasons:** Decreases the potential for interference on the distress channels.

USA/1.7/ 18  
ADD S52.220B When calling by radiotelephony is necessary, it should be done (in order of preference):

**Reasons:** Decreases the potential for interference on the distress channels

USA/1.7/ 19  
ADD S52.220C (1) On the working frequencies assigned to the coast station in question or

**Reasons:** Decreases the potential for interference on the distress channels

USA/1.7/ 20  
ADD S52.220D (2) when this is not possible, on the international calling frequencies listed under S52.221.

**Reasons:** Decreases the potential for interference on the distress channels

## C2. Call and Reply

USA/1.7/ 21  
NOC S52.221 § 97. (1) Ship stations may use the following carrier frequencies for calling in radiotelephony:

4 125 kHz<sup>3, 4, 5</sup>  
6 125 kHz<sup>4, 5</sup>  
8 255 kHz  
12 290 kHz<sup>5</sup>  
16 420 kHz<sup>5</sup>  
18 795 kHz  
22 060 kHz  
25 097 kHz

**Reasons:** It is not necessary to convert calling frequencies from duplex to simplex.

USA/1.7/ 22  
NOC <sup>3</sup> S52.221.1 In the United States, the carrier frequency 4 125 kHz is also authorized for common use by coast and ship stations for single-sideband radiotelephony on a simplex basis, provided the peak envelope power of such stations does not exceed 1 kW (see also No. S5.222.2).

**Reasons:** This note supports existing U.S. use of this channel in remote areas of our Search and Rescue areas of responsibility and supports communications in remote areas.

**USA/1.7/ 23**  
**NOC**

<sup>4</sup> **S52.221.2** The carrier frequencies 4 125 kHz and 6 215 kHz are also authorized for common use by coast and ship stations for single-sideband radiotelephony on a simplex basis for call and reply purposes, provided that the peak envelope power of such stations does not exceed 1 kW. The use of these frequencies for working purposes is not permitted (see also Appendix **S13** and No. **S52.221.1**).

**Reasons:** This note supports existing U.S. use of this channel in remote areas of Search and Rescue responsibility and supports communications in remote areas.

**USA/1.7/ 24**  
**NOC**

<sup>5</sup> **S52.221.3** The carrier frequencies 4 125 kHz, 6 215 kHz, 8 291 kHz, 12 290 kHz and 16 420 kHz are also authorized for common use by coast and ship stations for single-sideband radiotelephony on a simplex basis for distress and safety traffic.

**Reasons:** This note supports existing uses and enhances maritime safety in remote geographical areas.

**USA/1.7/ 25**  
**NOC**

**S52.222** (2) Coast stations may use the following carrier frequencies for calling in radiotelephony<sup>6</sup>:

4 417 kHz<sup>7</sup>  
6 516 kHz<sup>7</sup>  
8 779 kHz  
13 137 kHz  
17 302 kHz  
19 770 kHz  
22 756 kHz  
26 172 kHz

**Reasons:** Conversion to simplex operation is not necessary.

**USA/1.7/ 26**  
**NOC**

<sup>6</sup> **S52.222.1** These frequencies may also be used by coast stations with class H2B emission, when using the selective calling system defined in Recommendation ITU-R M.257-3.

**Reasons:** The use of Digital Selective Calling techniques is encouraged.

**USA/1.7/ 27**  
**MOD**

<sup>7</sup> **S52.222.2** The carrier frequencies 4 417 kHz and 6 516 kHz are also authorized for common use by coast and ship stations for single-sideband radiotelephony on a simplex basis, provided that the peak envelope power of such stations ~~does not exceed 1 kW~~ shall be limited to the lowest value to maintain

reliable communications, not to exceed 5 kW. The use of 6 516 kHz for this purpose should be limited to daytime operation (see also No. **S52.221.1**).

**Reasons:** Consequential to **MOD S52.219**.

**USA/1.7/ 28**  
**NOC**

**S52.224** § 99. 1) Before transmitting on the carrier frequencies 4 125 kHz, 6 215 kHz, 8 291 kHz, 12 290 kHz or 16 420 kHz a station shall listen on the frequency for a reasonable period to make sure that no distress traffic is being sent (see Recommendation ITU-R M.1171).

**Reasons:** Conversion to simplex operation is not necessary.

**USA/1.7/ 29**  
**MOD**

**S52.227** 2) The frequencies to be used for the conduct of simplex radiotelephony are shown in Appendix **S17**, Sub-Section B. In these cases, the peak envelope power of the coast station transmitter shall not exceed 1 kW.

**Reasons:** Editorial.

#### APPENDIX S17

### **Frequencies and channelling arrangements in the high-frequency bands for the maritime mobile service**

(See Article **S52**)

**USA/1.7/ 30**  
**NOC**

#### **PART A – Table of subdivided bands**

#### **PART B – Channelling arrangements**

##### **Section I – Radiotelephony**

**USA/1.7/ 31**  
**NOC**

5. The following frequencies in Sub-Section A are allocated for calling purposes:

- (Channel No. 421 in the 4 MHz band);
- (Channel No. 606 in the 6 MHz band);
- (Channel No. 821 in the 8 MHz band);
- (Channel No. 1221 in the 12 MHz band);
- (Channel No. 1621 in the 16 MHz band);
- (Channel No. 1806 in the 18 MHz band);
- (Channel No. 2221 in the 22 MHz band);
- (Channel No. 2510 in the 25 MHz band).

The remaining frequencies in Sub-Sections A, B, C-1 and C-2 are working frequencies.

**Reasons:** Conversion to simplex operation is not necessary.

**USA/1.7/ 32**  
**NOC**

5A For the use of the carrier frequencies:

4 125 kHz (Channel No. 421)

6 215 kHz (Channel No. 606)

8 291 kHz (Channel No. 833)

12 290 kHz (Channel No. 1221)

16 420 kHz (Channel No. 1621)

In Sub-Section A, by coast and ship stations for distress and safety purposes, see Article **S31** and Appendix **S13**.

**Reasons:** Conversion to simplex operation is not necessary.

#### **SUB-SECTION A**

**USA/1.7/ 33**  
**NOC**

#### **Table of single-sideband transmitting frequencies (kHz) for duplex (two-frequency) operation**

**Reasons:** Conversion to simplex operation is not necessary.

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**United States of America**

**(DRAFT) PROPOSAL FOR THE WORK OF THE CONFERENCE**

**Proposals for Agenda Item 1.15.1**

**to consider new allocations to the radionavigation- satellite service in the range from 1 to 6 GHz required to support developments;**

**Background Information:** Additional Radionavigation-Satellite Service (RNSS) signals will greatly enhance the accuracy, reliability and robustness of the civil Global Positioning System (GPS) by enabling more effective corrections to be made for the time delay effects of the ionosphere on the signals from space. The International Civil Aviation Organization (ICAO) has stated the requirement for an additional civil signal on GPS to support Global Navigation Satellite System (GNSS) requirements and for space-based augmentation systems. A requirement for aeronautical users is having the protected signal operate within radio spectrum allocated to the Aeronautical Radionavigation Service (ARNS), which would also include the possibility of terrestrial augmentation systems.

The United States has identified a third signal at 1 176.45 MHz to support GNSS developments. The third signal is proposed to be an international civil aviation safety-of-life service signal with a required bandwidth 24 MHz. Technical studies show compatibility between existing operational ARNS systems and the proposed new signal at 1 176.45 MHz. The power levels and signal structure will allow the operation of a relatively large number of co-frequency satellite and terrestrial stations to be in view of an RNSS receiver.

**Proposal:**

**Section IV – Table of Frequency Allocations**

**960-1 215 MHz**

<b>Allocation to services</b>		
<b>Region 1</b>	<b>Region 2</b>	<b>Region 3</b>
<b>960-1 215</b>	AERONAUTICAL RADIONAVIGATION MOD S5.328	

**USA/1.15.1/ 34  
MOD**

**S5.328** The band 960 - 1 215 MHz is reserved on a worldwide basis for the use and development of airborne electronic aids to air navigation and any directly associated ground-based and satellite-borne facilities. In the 1 164 –1 188 MHz portion of this band, the radionavigation-satellite service (space-to-Earth) is also allocated worldwide on a primary basis. In this band stations of the radionavigation-satellite services, but not in the aeronautical radionavigation-satellite service, shall not cause harmful interference to, or claim protection from, stations of the aeronautical radionavigation and aeronautical radionavigation-satellite services.

**Reasons:** Additional Radionavigation-Satellite Service (RNSS) signals will greatly enhance the accuracy, reliability and robustness of the civil Global Navigation Satellite System (GNSS) by enabling more effective corrections to be made for the time delay effects of the ionosphere on the signals from space.

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**United States of America**

**(DRAFT) PROPOSALS FOR THE WORK OF THE CONFERENCE**

**Proposals for Agenda Item 1.18**

**(To consider the use of new digital technology for the maritime mobile service in the band 156-174 MHz and consequential revision of Appendix S18, taking into account Resolution 342 (WRC-97))**

**Background Information:** Appendix **S18** of the ITU Radio Regulations defines the channels of the maritime mobile service. These channels support a variety of functions including “Distress, Safety and Calling: public correspondence, inter-ship, ship/shore/ship, port operations and ship movement. The maritime mobile frequency band, 156-174 MHz, (effectively 156-162 MHz in the U.S. due to previous domestic regulatory actions), supports maritime communications worldwide.

WP8B and the CPM studied this agenda item and determined that the status of the ITU-R studies indicate that revisions of Appendix **S18** to introduce new digital technologies is not possible at this conference.

With the rapidly increasing use of the VHF maritime mobile band, particularly for data communications, increased congestion and mutual interference is being experienced which, among others, has resulted in unacceptable degradation of the distress and safety related function for which this band is utilized. Unless action is taken this situation will only worsen as usage continue to grow.

The United States proposes to modify Resolution **342** to allow consideration of one or more new interoperable technology, digital or otherwise, for the maritime mobile service. The U.S. also proposes the ITU-R studies take into account the existing Appendix **S18** channeling plan in order to minimize disruption of and provide for interoperability with current systems.

**Proposal:**

USA/1.18/ 35  
MOD

RESOLUTION 342 (WRC-972000)

**Review of new technology to provide improved efficiency in the use of the band 156-174 MHz by stations in the maritime mobile service**

USA/1.18/ 36  
MOD

The World Radiocommunication Conference (~~Geneva, 1997~~Istanbul, 2000),

*considering*

- a) that the agenda of this conference includes the consideration of the use of Appendix **S18** to the Radio Regulations in respect of maritime mobile communications and the use of new technology for maritime radiotelephony channels;
- b) Recommendation **318 (Mob-87)**;
- c) that Appendix **S18** identifies frequencies to be used for distress and safety communications on an international basis;
- d) that the introduction of new technology in the maritime mobile service shall not disrupt distress and safety communications in the VHF band including those established by the International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended;
- e) that ITU-R is conducting studies on improving efficiency in the use of this band, and that these studies are still ongoing;
- f) that changes made in Appendix **S18** should not prejudice the future use of these frequencies or the capabilities of systems or new applications required for use by the maritime mobile service;
- g) that the congestion on Appendix **S18** frequencies calls for the implementation of efficient new technologies;
- h) that the use of new technology on maritime VHF frequencies will make it possible to better respond to the emerging demand for new services,

*noting*

- a) that some administrations are considering adopting some of the above changes to their operations within the Appendix **S18** frequencies;

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- b) that digital systems have been successfully implemented in a portion of the land mobile service,

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- c) that the use of mobile telephones along the coast had led to the reduced use of maritime public correspondence systems,

*resolves*

- a) that a new technology, digital or otherwise should be used by the maritime mobile service in the channels identified in Appendix **S18**;

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b) that there should be one or more than one interoperable worldwide technology or systems implemented in Appendix S18, in order to provide full world-wide interoperability of equipment;

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c) that the ITU-R continue urgent studies on a new technology, taking into account the current channelling arrangements of Appendix S18 in order to minimize the disruption of and provide for interoperability with current systems;

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b) that ~~WRC-99~~ a future WRC should consider the use of new technology in the band 156-174 MHz and consequential revision of Appendix S18 if necessary,

*invites ITU-R*

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to continue studies on the following with a view to providing a report to ~~WRC-99~~ a future WRC:

- a) to identify the future requirements of the maritime mobile service;
- b) to identify suitable technical characteristics of the system or interoperable systems to replace existing technology;
- c) to identify necessary modifications if required, to the frequency plan contained within Appendix S18;
- d) to recommend a timetable for the introduction of new technology and the necessary changes;
- e) to study and recommend how new technology can be introduced without harming the distress and safety requirements,

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*instructs the Secretary-General*

to communicate this Resolution to the International Maritime Organization.

**Reasons:** These modifications do not restrict the new technology to digital or to one technology, all available technologies should be studied, as new technologies are constantly emerging. It is spectrally inefficient to set aside spectrum, which is already extremely congested, for a new technology that has not yet been determined. It is possible to have more than one standard or system that is interoperable. Technologies using the existing channel spacing of 25 kHz, 12.5 kHz, as opposed to 5 kHz spacing, should be studied so as to avoid the replacement of every existing VHF marine band radio.