

Ms. Mindel De La Torre  
Chief of the International Bureau  
Federal Communications Commission  
445 12<sup>th</sup> 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 draft Executive Branch proposals for WRC-15 agenda items 1.6.1 and 1.6.2. NTIA proposes no change to the table of allocations.

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

Sincerely,

*(Original Signed January 6, 2014)*

Karl B. Nebbia  
Associate Administrator  
Office of Spectrum Management

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

**Agenda Item 1.6.1:** *to consider possible additional primary allocations, to the fixed-satellite service (Earth-to-space and space-to-Earth) of 250 MHz in the range between 10 GHz and 17 GHz in Region 1; and review the regulatory provisions on the current allocations to the fixed-satellite service (FSS) within each range, taking into account the results of ITU-R studies, in accordance with Resolutions 151 (WRC-12)*

**Background Information:** The 14.5-15.35 GHz frequency range has allocations to the fixed and mobile radio services on a primary basis in all three ITU regions. The frequency band 14.5-14.8 GHz also has an allocation to fixed-satellite service (FSS) on a primary basis in all three ITU regions subject to Radio Regulation No. 5.510. No. 5.510 limits FSS use to feeder links for the broadcasting satellite service outside Europe, which are subject to the Appendix 30A Broadcast Satellite Plan and associated procedures. The space research service has an allocation on a secondary basis in the frequency band 14.5-15.35 GHz in all three regions. Aeronautical mobile data links currently operate in the 14.5-15.35 GHz band under the mobile service (MS) allocation, the parent service to aeronautical mobile service (AMS).

The band 15.4 – 17.0 GHz has allocations to the radiolocation service (RLS) on a primary basis in all three Regions and to the aeronautical radionavigation service on a primary basis in all three Regions. Some Administrations will operate airborne synthetic aperture radars worldwide as part of the global RLS allocation in the band 15.4-17 GHz. Some Administrations also operate an airport surface detection system on a co-primary basis with the primary RLS in the band 15.7-16.2 GHz.

ITU-R sharing studies demonstrate that the proposed FSS (Earth-to-space) links in the 10.0-17.0 GHz bands will interfere with existing authorized services in the bands 14.5-15.35 GHz and 15.4-17.0 GHz. The sharing studies' results show that in order to protect the AMS receivers operating in the band 14.5-15.35 GHz band, there is a required separation distance of up to 577 km (not accounting for terrain obstruction). The studies also show that in order to protect radiolocation stations operating in the band 15.4-17.0 GHz, a separation distance of up to 420 km (not accounting for terrain obstruction) is required. Given the large, required separation distances around AMS and RLS receivers' operational area and the mobile nature of AMS/RLS airborne receiver, the ubiquitous deployment of FSS transmitters would make mitigation and coordination approaches to permit sharing with the FSS very difficult or impractical. In addition, FSS space station receivers in the geostationary satellite orbit may be subject to unacceptable levels of interference from existing operations in these bands.

With respect to FSS downlinks from Region 1 FSS satellites, ITU-R studies indicate radiolocation stations in Region 2 may receive unacceptable levels of interference from FSS space stations in the geostationary satellite orbit and FSS downlink earth stations may receive unacceptable levels of interference from airborne stations beyond the radio horizon. Mitigation techniques sufficient to protect the systems operating in the current allocations may impose severe if not impractical restrictions on new FSS systems that might operate in this band.

**Proposal:**

**ARTICLE 5**  
**Frequency allocations**

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

**NOC** USA/AI 1.6.1/1

**14-15.4 GHz**

| <b>Allocation to services</b> |   |                 |
|-------------------------------|---|-----------------|
| <b>Region 1</b>               | <b>Region 2</b>   | <b>Region 3</b> |
| <b>14.5-14.8</b>              | FIXED<br>FIXED-SATELLITE (Earth-to-space) 5.510<br>MOBILE<br>Space research |                 |
| <b>14.8-15.35</b>             | FIXED<br>MOBILE<br>Space research<br>5.339                                  |                 |

**Reasons:** ITU-R studies indicate a potential for interference into existing MS and AMS systems.

**NOC** USA/AI 1.6.1/2

**15.4-18.4 GHz**

| <b>Allocation to services</b> |  |                 |
|-------------------------------|--|-----------------|
| <b>Region 1</b>               | <b>Region 2</b>  | <b>Region 3</b> |
| <b>15.4-15.43</b>             | RADIOLOCATION 5.511E 5.511F<br>AERONAUTICAL RADIONAVIGATION<br>5.511D  |                 |
| <b>15.43-15.63</b>            | FIXED-SATELLITE (Earth-to-space) 5.511A<br>RADIOLOCATION 5.511E 5.511F<br>AERONAUTICAL RADIONAVIGATION<br>5.511C |                 |
| <b>15.63-15.7</b>             | RADIOLOCATION 5.511E 5.511F<br>AERONAUTICAL RADIONAVIGATION<br>5.511D  |                 |
| <b>15.7-16.6</b>              | RADIOLOCATION<br>5.512 5.513   |                 |
| <b>16.6-17.1</b>              | RADIOLOCATION<br>Space research (deep space) (Earth-to-space)<br>5.512 5.513                                     |                 |

**Reasons:** ITU-R studies indicate a potential for interference into existing RLS systems.

**SUP** USA/AI 1.6.1/3

**RESOLUTION 151 (WRC-12)**

**Allocations, to the fixed-satellite service  
(Earth-to-space and space-to-Earth)  
of 250 MHz in the range between 10 GHz and 17 GHz in Region 1**

**Reasons:** Consequential change to completion of the agenda item.

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

**Agenda Item 1.6.2:** *to consider possible additional primary allocations, to the fixed-satellite service (Earth-to-space) of 250 MHz in Region 2 and 300 MHz in Region 3 within the range 13-17 GHz; and review the regulatory provisions on the current allocations to the fixed-satellite service within each range, taking into account the results of ITU-R studies, in accordance with Resolutions 152 (WRC-12)*

**Background Information:** The 14.5-15.35 GHz frequency range has allocations to the fixed and mobile radio services on a primary basis in all three ITU Regions. The 14.5-14.8 GHz frequency band also has an allocation to the fixed-satellite service (FSS) on a primary basis in all three ITU Regions subject to Radio Regulation No. **5.510**. No. **5.510** limits FSS use to feeder links for the broadcasting satellite service outside Europe, which are subject to the Appendix **30A** Broadcast Satellite Plan and associated procedures. The space research service has an allocation on a secondary basis in the frequency band 14.5-15.35 GHz in all three regions. Aeronautical mobile data links currently operate in the 14.5-15.35 GHz band under the mobile service (MS) allocation, the parent service to aeronautical mobile service (AMS).

The 15.4 –17.0 GHz band is allocated to the radiolocation service (RLS) on a primary basis in all three Regions and the 15.4 – 15.7 GHz band is also allocated to the aeronautical radionavigation service on a primary basis in all three Regions. Some Administrations will operate synthetic aperture radars worldwide as part of the global RLS allocation in the band 15.4-17 GHz. Some Administrations also operate an airport surface detection system on a co-primary basis with the primary RLS in the band 15.7-16.2 GHz.

ITU-R sharing studies demonstrate that the proposed FSS (Earth-to-space) links in the 13.0-17.0 GHz bands will interfere with existing services in the bands 14.5-15.35 GHz and 15.4-17.0 GHz. The sharing studies' results show that in order to protect the AMS receivers operating in the band 14.5-15.35 GHz, a separation distance of up to 577 km (not accounting for terrain obstruction) is required. The studies also show that in order to protect radiolocation stations operating in the band 15.4-17.0 GHz, a separation distance of up to 420 km (not accounting for terrain obstruction) is required. Given the large, required separation distances around AMS and RLS receivers' operational areas, and the mobile nature of AMS receiver/RLS airborne receiver, the ubiquitous deployment of FSS transmitters would make mitigation and coordination approaches to permit sharing with the FSS very difficult or impractical. In addition, ITU-R studies have yet to demonstrate how FSS space station receivers in the geostationary satellite orbit could mitigate unacceptable levels of interference from existing operations in these bands.

**Proposal:**

**ARTICLE 5**  
**Frequency allocations**

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

**NOC** USA/AI 1.6.2/1

**14-15.4 GHz**

| <b>Allocation to services</b> |   |                 |
|-------------------------------|---|-----------------|
| <b>Region 1</b>               | <b>Region 2</b>   | <b>Region 3</b> |
| <b>14.5-14.8</b>              | FIXED<br>FIXED-SATELLITE (Earth-to-space) 5.510<br>MOBILE<br>Space research |                 |
| <b>14.8-15.35</b>             | FIXED<br>MOBILE<br>Space research<br>5.339                                  |                 |

**Reasons:** ITU-R studies indicate a potential for interference into existing MS and AMS systems.

**NOC** USA/AI 1.6.1/2

**15.4-18.4 GHz**

| <b>Allocation to services</b> |  |                 |
|-------------------------------|--|-----------------|
| <b>Region 1</b>               | <b>Region 2</b>  | <b>Region 3</b> |
| <b>15.4-15.43</b>             | RADIOLOCATION 5.511E 5.511F<br>AERONAUTICAL RADIONAVIGATION<br>5.511D  |                 |
| <b>15.43-15.63</b>            | FIXED-SATELLITE (Earth-to-space) 5.511A<br>RADIOLOCATION 5.511E 5.511F<br>AERONAUTICAL RADIONAVIGATION<br>5.511C |                 |
| <b>15.63-15.7</b>             | RADIOLOCATION 5.511E 5.511F<br>AERONAUTICAL RADIONAVIGATION<br>5.511D  |                 |
| <b>15.7-16.6</b>              | RADIOLOCATION<br>5.512 5.513   |                 |
| <b>16.6-17.1</b>              | RADIOLOCATION<br>Space research (deep space) (Earth-to-space)<br>5.512 5.513                                     |                 |

**Reasons:** ITU-R studies indicate a potential for interference into existing RLS systems.

**SUP** USA/AI 1.6.2/3

**RESOLUTION 152 (WRC-12)**

**Allocations to the fixed-satellite service (Earth-to-space)  
of 250 MHz in Region 2 and 300 MHz in Region 3  
within the range 13-17 GHz.**

**Reasons:** Consequential change to completing the agenda item.

