

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

Dear Ms. De La Torre:

The National Telecommunications and Information Administration (NTIA), on behalf of the Executive Branch agencies, approves the release of the attached Executive Branch proposal for WRC-12 agenda item 8.2. NTIA proposes a future conference agenda item on the feasibility of sharing between Earth exploration-satellite service (EESS) uplinks and existing services operating in the 7190-7235 MHz band.

NTIA considered the Federal agencies' input toward the development of U.S. proposals for WRC-12. NTIA forwards this package for your consideration, and for review by your WRC-12 Advisory Committee. Dr. Darlene Drazenovich is the primary contact from my staff.

Sincerely,

(Original Signed December 2, 2010)

Karl B. Nebbia
Associate Administrator
Office of Spectrum Management

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

Agenda Item 8.2: *to recommend to the Council items for inclusion in the agenda for the next WRC, and to give its views on the preliminary agenda for the subsequent conference and on possible agenda items for future conferences, taking into account Resolution 806 (WRC-07)*

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

Currently, no suitable Earth-to-space allocations are available for tracking, telemetry and control (TT&C) of EESS satellites at frequencies higher than the 2 025 – 2 110 MHz global allocation. Additionally, the band 2 200 – 2 290 MHz can support payload data downlinks for only a few EESS satellites. These factors require current EESS satellites to be equipped with two transponders: one operating near 2 GHz for TT&C and the other operating at the higher frequencies required for medium- and high-rate payload data downlinks, typically in the band 8 025 – 8 400 MHz. With a suitable EESS Earth-to-space allocation near 8 025 – 8 400 MHz, a single transponder could accommodate both satellite control and payload data downlink requirements.

The band 7 145 – 7 235 MHz is currently allocated to the fixed, mobile and space research (Earth-to-space) services on a primary basis, in accordance with No. 5.460. EESS satellites normally operate in low-Earth orbit. The number of EESS ground stations receivers in the 8 025 – 8 400 MHz band is small and they are usually located at high latitudes. EESS telecommand uplinks and EESS downlink receivers typically share the same ground station locations.

Proposals:

MOD USA/8.2 /1

RESOLUTION 806 (WRC-~~12~~)

Deleted: 07

~~Agenda for the 2015 World Radiocommunication Conference~~

Deleted: Preliminary

The World Radiocommunication Conference (Geneva, 20~~12~~),

Deleted: 07

ADD USA/8.2 /2

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

Reasons: To provide a primary allocation to the EESS (Earth-to-space) in the 7 190 – 7 235 MHz band which, when used in conjunction with EESS (space-to-Earth) allocations near 8 GHz, would accommodate both uplinks and high data rate downlinks on the same EESS satellite transponder.

ADD USA/8.2/3

RESOLUTION YYY (WRC-12)

Use of the 7 190 – 7 235 MHz band by the Earth exploration-satellite service (Earth-to-space)

The World Radiocommunication Conference (Geneva, 2012),

considering

- a) that the band 7 145 – 7 235 MHz is allocated to the fixed, mobile and space research (Earth-to-space) services on a primary basis, subject to No. **5.460**;
- b) that the bands 8 025 – 8 175 MHz, 8 175 – 8 215 MHz, and 8 215 – 8 400 MHz are allocated to the Earth exploration-satellite service (EESS) (space-to-Earth) worldwide;
- c) that an EESS (Earth-to-space) allocation in the band 7 190 – 7 235 MHz would provide for uplinks and downlinks on the same transponder, increasing efficiency and reducing costs;
- d) that limited bandwidth is available in the bands 2 025 – 2 110 MHz and 2 200 – 2 290 MHz for EESS operations;
- e) that requirements for environmental and climate change data from EESS satellites are increasing,

recognizing

- a) that simplifying satellite design and reducing design and launch costs by incorporating a single transponder on EESS satellites would be beneficial to EESS operators;
- b) that congestion in the 2 025 – 2 110 MHz and 2 220 – 2 290 MHz bands increases the probability of harmful interference, which could contribute to deleterious effects on critical environmental data available only through EESS satellite resources,

further recognizing

- a) that the number of EESS ground stations receivers in the band 8 025 – 8 400 MHz is small and that they are usually located at high latitudes;
- b) that EESS telecommand uplinks and corresponding EESS ground station receivers typically share the same ground station locations,

resolves to invite ITU-R

- 1 to conduct sharing studies between EESS (Earth-to-space) systems and existing services in the band 7 190 – 7 235 MHz;
- 2 to complete the studies as a matter of urgency, taking into account the present use of the allocated band, with a view to presenting, at the appropriate time, the technical basis for the work of WRC-15,

resolves to invite WRC-15

- 1 to consider a primary allocation to the EESS (Earth-to-space) in the band 7 190 – 7 235 MHz, taking into account the results of ITU-R studies;
- 2 to consider appropriate modifications to the Table of Frequency Allocations, based on proposals from administrations,

invites administrations

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

instructs the Secretary-General

to bring this Resolution to the attention of the World Meteorological Organization (WMO) and other international and regional organizations concerned.

Reasons: To support ITU-R studies toward a potential new EESS (Earth-to-space) allocation in the band 7 190 – 7 235 MHz.

ATTACHMENT

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

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

Origin: United States of America

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

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

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

Indication of possible difficulties: none foreseen

Previous/ongoing studies on the issue: TBD

Studies to be carried out by: WP 7B	with the participation of: WPs 5A, 5C
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ITU-R Study Groups concerned: SG7

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

Common regional proposal: Yes/No	Multicountry proposal: Yes/No
Number of countries:	

Remarks