



UNITED STATES DEPARTMENT OF COMMERCE
National Telecommunications and
Information Administration
INTERDEPARTMENT RADIO ADVISORY COMMITTEE
Washington, D.C. 20230

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

FEB 14 2013

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 7 (No. 11.49) and 1.13. For agenda item 7, NTIA proposes to add regulatory procedures when administrations notify the Bureau of suspension beyond the initial six-month period. For agenda item 1.13, NTIA proposes to modify No. 5.268 by removing both the 5 km distance limitation and the restriction to EVA operation.

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,

Karl B. Nebbia
Associate Administrator
Office of Spectrum Management

UNITED STATES OF AMERICA

DRAFT PROPOSALS FOR THE WORK OF THE CONFERENCE

Agenda Item 7: *to consider possible changes, and other options, in response to Resolution 86 (rev. Marrakesh, 2002) of the Plenipotentiary Conference, an advance publication, coordination, notification and recording procedures for frequency assignments pertaining to satellite networks, in accordance with Resolution 86 (Rev. WRC-07) to facilitate rational efficient, and economical use of radio frequencies and any associated orbits, including the geostationary – satellite orbit*

Background Information: WRC-12 modified No. 11.49 to expand the time an administration is allowed to suspend the assignment to a space station from a two-year time period to three years. In addition, the administration does not need to notify the Bureau of the suspension during the first six months of the date the assignment was suspended as long as the assignment is brought back into use before the end of the six-month period. However, if the suspension lasts longer than six months, the administration must notify the Bureau of the suspension and then follow the procedures for bringing the assignment back into use within the three-year suspension period. Because of time constraints at WRC-12, the conference did not include regulatory procedures for the mechanics of when an administration notifies the Bureau of a suspension extending beyond the initial six-month period. Because of this omission, the Bureau proposed a Rule of Procedure (RoP) that would have cancelled the assignment if the Bureau did not receive a notification of the suspension before or at the end of the six-month period. On the other hand, the Bureau cancelling a frequency assignment due to late notification beyond six months may be inconsistent with the WRC-12 decision for administrations to have a maximum of three years from the suspension date to resume use of their frequency assignments. As a result, the Radio Regulations Board did not include cancellation of an assignment for a late suspended use notification in the adopted Rules of Procedure.

This proposal supports administrations notifying the Bureau if a suspension is greater than six months but provides an incentive to administrations to notify the Bureau as soon as it can before the six-month period to avoid any possible reduction in the three-year suspension time. If an administration notifies the Bureau of a suspension beyond the initial six-month period, then the Bureau will reduce the amount of time over the six-month period from the three-year period. As an example, notifying the Bureau of a suspension at the seven-month point (notification date of suspension) will reduce the suspension period from the date the assignment was suspended (assignment suspension date) to 2 years and ten months (three years minus a penalty of two times one month for the one month late notification). As a result, an administration will only have a maximum of 2 years and four months to bring the assignment back into use from the notification date of suspension.

Proposal:

MOD USA/AI 7/1

11.49 Wherever the use of a recorded frequency assignment to a space station is suspended for a period exceeding six months, the notifying administration shall, as soon as possible, ~~but preferably not~~ later than six months from the date on which the use was suspended, inform the Bureau of the date on which such use was suspended. When the recorded assignment is brought back into use, the notifying administration shall, subject to the provisions of No. **11.49.1** when applicable, so inform the Bureau, as soon as possible. The date on which the recorded assignment is brought back into use²² shall be not later than three years from the date on which the use of the assignment was suspended. If the notifying administration informs the Bureau of the suspension more than six months after the date on which the use of the assignment was suspended, this three-year time period shall be reduced by double the time period beyond six months the notifying administration informed the Bureau ~~from the date~~ of the suspension. (WRC-~~1215~~)

Reasons: To add regulatory procedures when an administration notifies the Bureau of a suspension beyond the initial six-month period.

UNITED STATES OF AMERICA

DRAFT PROPOSALS FOR THE WORK OF THE CONFERENCE

Agenda Item 1.13: *to review No. 5.268 with a view to examining the possibility for increasing the 5 km distance limitation and allowing space research service (space-to-space) use for proximity operations by space vehicles communicating with an orbiting manned space vehicle, in accordance with Resolution 652 (WRC 12)*

Background Information: WARC-92 allocated the band 410-420 MHz to the space research service (SRS) on a secondary basis for extra-vehicular activity (EVA) communications in the immediate vicinity of low earth orbit (LEO) manned space vehicles, and limited the use of the band by the SRS to EVA operation within 5 kilometers (km) of orbiting manned space vehicles. WRC-97 upgraded the allocation to the SRS in the band 410-420 MHz to primary status and No. 5.268 specified a set of power flux-density (pfd) limits to ensure protection of the fixed and mobile services while retaining the 5 km distance limitation for EVA operation.

Resolution 652 (WRC-12), recognizing c, states that “power flux-density (pfd) limits contained in No. 5.268 ensure the protection of terrestrial stations operating in the fixed and mobile services independent of the distance from, or the source of, space-to-space communications in the SRS.” Also, long-term space exploration objectives require new activities around a manned space station other than EVA, such as visiting vehicles for crew transportation/cargo re-supply and free-fly proximity vehicles for inspection and maintenance. These vehicles need to initiate communication over distances greater than 5 km to ensure proper vehicle positioning, data exchange and system monitoring. ITU-R sharing studies within Working Party 7B demonstrate that communication links for a variety of space vehicles other than EVA can meet the pfd limits in No. 5.268 for distances beyond 5 km by using different modulation, spreading technologies, and power control schemes (7B/88 Annex 1, Preliminary Draft New Report ITU-R SA.[Proximity operations] - “Sharing conditions between space research service proximity operations links and fixed and mobile service links in the 410-420 MHz band).

Therefore, it is necessary to modify No. 5.268 to remove both the 5 km distance limitation and restriction to EVA operation while maintaining the pfd limits. Removal of these two restrictions will allow for greater flexibility in using the band 410-420 MHz for space research activities while maintaining protection of the terrestrial services.

Proposal:

MOD USA/AI 1.13/1

5.268 Use of the band 410-420 MHz by the space research service is limited to space-to-space communications with within 5 km of an orbiting, manned space vehicle. The power flux-density at the surface of the Earth produced by emissions from stations of extra-vehicular

~~activities the space research service (space-to-space) in the band 410-420 MHz~~ shall not exceed $-153 \text{ dB(W/m}^2\text{)}$ for $0^\circ \leq \delta \leq 5^\circ$, $-153 + 0.077 (\delta - 5) \text{ dB(W/m}^2\text{)}$ for $5^\circ \leq \delta \leq 70^\circ$ and $-148 \text{ dB(W/m}^2\text{)}$ for $70^\circ \leq \delta \leq 90^\circ$, where δ is the angle of arrival of the radio-frequency wave and the reference bandwidth is 4 kHz. ~~No. 4.10 does not apply to extra-vehicular activities.~~ In this frequency band the space research (space-to-space) service shall not claim protection from, nor constrain the use and development of, stations of the fixed and mobile services. No. 4.10 does not apply. (WRC-9715)

Reasons: Modify No. 5.268 to remove both the 5 km distance limitation and restriction to EVA operation while maintaining the pfd limits to protect the terrestrial services.

SUP USA/AI 1.13/2

RESOLUTION 652 (WRC-12)

Use of the band 410-420 MHz by the space research service (space-to-space)

Reasons: ITU-R Working Party 7B completed required studies and this resolution is no longer needed.