



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

(excerpt)

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 preliminary views for WRC-15. The enclosed draft preliminary views address agenda items 1.10 (mobile-satellite service uplink/downlink in the 22-26 GHz range), 1.11 (Earth exploration-satellite service uplink in the 7-8 GHz range), 1.12 (Earth exploration-satellite service (active) additional 600 MHz allocation in the 8-10 GHz range), and 1.13 (space research service (space-to-space) at 410-420 MHz).

These draft preliminary views consider the federal agency inputs 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 August 15, 2012)

Karl B. Nebbia
Associate Administrator
Office of Spectrum Management

Enclosures

UNITED STATES OF AMERICA

DRAFT PRELIMINARY VIEWS FOR WRC-15

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: WARC-92 allocated the band 410-420 MHz to the space research service (SRS) on a secondary basis to allow for extra-vehicular activity (EVA) communications in the immediate vicinity of low earth orbit (LEO) manned space vehicles. EVA refers to manned activities outside a spacecraft (e.g., spacewalk). No. **651A (WARC-92)** 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.” ITU-R preliminary analyses using a spread spectrum signal in the 410-420 MHz band by a LEO vehicle suggest that these vehicle links can meet the pfd limits in No. **5.268** for distances beyond 5 km. 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. Therefore, it is necessary to modify No. **5.268** to remove the 5 km distance restriction and EVA limitation while maintaining the pfd limits.

U.S. VIEW: The United States supports the removal of both the 5 km distance limitation and restriction to EVA operation if the studies, in accordance with Resolution **652 (WRC-12)**, demonstrate space vehicle links operating around a manned vehicle beyond 5 km can meet the pfd limits in No. **5.268**. 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.