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| U.S. Radiocommunications Sector  Fact Sheet | | |
| **Working Party:** ITU-R WP 5C | **Document No:** USWP5C-02-final-draft | |
| **Ref:** WRC-27 AI 1.13 | **Date:** March 18, 2024 | |
| **Document Title:** Proposed draft liaison statement to Working Party 4C | | |
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| **Purpose/Objective:** This contribution proposes a draft liaison statement to WP 4C regarding AI 1.13, to allow WP 4C to proceed with its planning for sharing and compatibility studies. | | |
| **Abstract:** Pursuant to Resolution **253 (WRC-23)**, in preparation for Agenda Item 1.13 (**WRC-27**), this contribution proposes a draft reply liaison statement to WP 4C with relevant technical information of fixed systems operating in the frequency bands below 2.7 GHz. | | |

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| **Radiocommunication Study Groups** |  |
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| **English only** |
| United States of America | |
| proposed draft reply liaison statement to Working party 4c  **Relevant technical information for sharing studies under WRC-27 Agenda Item 1.13** | |
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**Introduction**

WRC-27 Agenda Item 1.13 considers possible new allocations to the mobile-satellite service in the frequency range between 694/698 MHz and 2.7 GHz, for direct connectivity between space stations and International Mobile Telecommunications (IMT) user equipment to complement terrestrial IMT network coverage, in accordance with Resolution **253 (WRC-23)**. This contribution proposes a draft reply liaison statement to WP 4C with relevant technical information of fixed systems in the frequency range between 694/698 MHz and 2.7 GHz.

Attachment: 1

ATTACHMENT

# Working Party 5C

PROPOSAL DRAFT REPLY LIAISON STATEMENT TO WORKING PARTY 4C

**Fixed service characteristics for use in sharing  
 studies under WRC-27 agenda item 1.13**

Working Party (WP) 5C thanks WP 4C for its liaison statement (Document 5C/xx), requesting the characteristics and protection criteria of the fixed service (FS) systems operating in the frequency range between 694/698 MHz and 2.7 GHz, for sharing/compatibility studies between the FS and mobile satellite service (MSS) under WRC-27 agenda item 1.13.

WP 5C highlights the following ITU-R recommendations and report that provide relevant technical information of FS systems:

**Recommendation ITU-R F.758-7** System parameters and considerations in the development of criteria for sharing or compatibility between digital fixed wireless systems in the fixed service and systems in other services and other sources of interference (11/2019)

This recommendation contains the principles for the development of sharing criteria of digital systems in the FS. Representative technical characteristics of digital fixed wireless systems (FWS) are in Annex 3 Table 16 for FS below 2.7 GHz. Table 5 of Annex 2 provides guidance in the choice of I/N values for long-term sharing criteria/interference. Recommendations ITU-R F.1494/1495 provide short-term sharing criteria.

WP 5C is currently revising Recommendation ITU-R F.758. WP 5C will keep WP 4C informed on relevant updated information before the 31 December 2024 deadline.

**Report ITU-R F.2108** Fixed service system parameters for different frequency bands.

This report contains additional FS system parameters for FS below 2.7 GHz (see Tables 1-6 for digital P-P FS systems and Tables 7-8 for digital P-MP FS systems).

**Recommendation ITU-R F.699-8** Reference radiation patterns for fixed wireless system antennas for use in coordination studies and interference assessment in the frequency range from 100 MHz to 86 GHz (01/2018)

This recommendation provides reference radiation patterns for, and information on, FWS antennas in the frequency range from 100 MHz to 86 GHz. This information may be used in single-entry analyses and interference assessments when information concerning the FWS antenna is not available.

WP 5C is currently revising Recommendation ITU-R F.699. WP 5C will keep WP 4C informed on relevant updated information before the 31 December 2024 deadline.

**Recommendation ITU-R F.1245-3** Mathematical model of average and related radiation patterns for point-to-point fixed wireless system antennas for use in interference assessment in the frequency range from 1 GHz to 86 GHz (01/2019)

This recommendation provides average sidelobes and related reference radiation patterns for point-to-point FWS antennas in the frequency range from 1 GHz to 86 GHz. This information may be used for aggregate coordination and interference assessments when information concerning the FWS antenna is not available. Recommendation ITU-R F.1245-3 could be used to predict the aggregate interference from many geostationary satellites or from one or more non-geostationary satellites, taking into account *considering c).*

**Recommendation ITU-R F.1336-5**  Reference radiation patterns of omnidirectional, sectoral and other antennas for the fixed and mobile service for use in sharing studies in the frequency range from 400 MHz to about 70 GHz (01/2019)

This Recommendation gives reference models of antennas used in the FS and in the mobile service. It gives peak and average sidelobes of omnidirectional and sectoral antennas in the frequency range 400 MHz to about 70 GHz, as well as of low gain directional antennas in the frequency range 1 GHz to about 3 GHz, to be used in sharing studies in the relevant frequency range.

[Note: Placeholder for FS deployment information which should be developed in WP5C, possibly using F.2086.]

WP 5C requests to be kept informed on the progress of discussions of candidate bands and studies under WRC-27 agenda item 1.13 and will provide to WP 4C any relevant updated information, before 31 December 2024 deadline, for studies under this WRC-27 agenda item.

Status: For action.

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