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| U.S. Radiocommunications Sector  Fact Sheet | | |
| **Working Party:** ITU-R WP 5C | **Document No:** USWP5C-02-FAA | |
| **Ref:** WRC-27 AI 1.13 | **Date:** March 6, 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 used for the provision of air navigation services operating in the frequency bands below 2.7 GHz. In the United States, fixed systems used for the provision of air navigation services operate in the frequency bands 932-935 MHz, 941-944 MHz, and 1 780-1 850 MHz. | | |

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| **Radiocommunication Study Groups** |  |
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| **14 May 2024** |
| **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 below 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 revised recommendations 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)

**Document 5C/384 Annex 7** Preliminary Draft Revision of Recommendation (PDRR) ITU-R F.758-7 where technical characteristics of FS systems in Tables 6 to 11 are updated/added. Amendments were made throughout the document to improve the clarity of the text.

This recommendation and its proposed revision contain 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 17 of Document 5C/384 Annex 7 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.

**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)

**Document 5C/384 Annex 2** Preliminary Draft Revision of Recommendation (PDRR) ITU-R F.699-8 provides updated antenna patterns and extends the upper frequency from 86 to 174.8 GHz.

This recommendation and its proposed revision provide reference radiation patterns for, and information on, FWS antennas in the frequency range from 100 MHz to 174.8 GHz. This information may be used in coordination studies and interference assessments when particular information concerning the FWS antenna is not available.

**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 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 in interference assessments when particular 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).*

WP 5C requests to be kept informed on the progress of the 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 information and action, as appropriate

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