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| **Radiocommunication Study Groups** |  |
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|  | **Document 5A/359-E** |
| **31 May 2021** |
| **English only** |
| Chairman, Working Party 5A | |
| report on the TWENTY-FIFTH meeting of working party 5a | |
| (Geneva e-Meeting, 28 April – 11 May 2021) | |

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Annexes

[1](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N01!MSW-E.docx) Working Party 5A Management

[2](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N02!MSW-E.docx) Consolidation of texts approved by Working Party 5A

[3](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N03!MSW-E.docx) Consolidation of reports from the Working Groups of Working Party 5A  
(Source: Docs. 5A/TEMP/119, 122, 142, 147, 148; *Attachments:* 96R1, 102R1, 117, 133R1, 136R1, 137R2, 146R1)

[4](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N04!MSW-E.docx) Working document towards draft CPM text for WRC-23 agenda item 1.3   
(Source: Doc. 5A/221, Annex 4)

[5](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N05!MSW-E.docx) Work plan for WRC-23 agenda item 1.3 (Source: Doc. 5A/221, Annex 5)

[6](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N06!MSW-E.docx) Working document towards draft CPM text for WRC-23 agenda item 9.1 topic b)  
(Source: Doc. 5A/TEMP/124)

[7](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N07!MSW-E.docx) Work plan for WRC-23 agenda item 9.1 topic b) (Source: Doc. 5A/TEMP/125R1)

[8](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N08!MSW-E.docx) Working document towards draft CPM text for WRC-23 agenda item 9.1 topic c) (Source: Doc. 5A/221, Annex 8)

[9](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N09!MSW-E.docx) Work plan for WRC-23 agenda item 9.1 topic c) (Source: Doc. 5A/TEMP/144)

[10](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N10!MSW-E.docx) Preliminary draft new Report ITU-R M.[AMATEUR.CHARACTERISTICS] (Source: Doc. 5A/TEMP/127)

[11](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N11!MSW-E.docx) Preliminary draft revision of Recommendation ITU-R M.1732-2 - Characteristics of systems operating in the amateur and amateur-satellite services for use in sharing studies (Source: Doc. 5A/TEMP/123R1)

[12](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N12!MSW-E.docx) Working document towards a preliminary draft revision of Recommendation ITU-R M.1450-5 – “Characteristics of broadband radio local area networks”   
(Source: Doc. 5A/TEMP/131)

[13](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N13!MSW-E.docx) Working document towards a preliminary draft revision of Recommendation ITU-R M.1801-2 – “Radio interface standards for broadband wireless access systems, including mobile and nomadic applications, in the mobile service”   
(Source: Doc. 5A/TEMP/134)

[14](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N14!MSW-E.docx) Working document towards a preliminary draft revision of Report ITU-R M.2442-0 – “Current and future usage of railway radiocommunication systems between train and trackside” (Source: Doc. 5A/TEMP/120)

[15](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N15!MSW-E.docx) Working document towards a preliminary draft new Recommendation ITU-R M.[RSTT\_FRQ] – “Spectrum Harmonization for Railway Radiocommunication Systems between Train and Trackside (RSTT)” (Source: Doc. 5A/TEMP/121)

[16](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N16!MSW-E.docx) Working document towards a preliminary draft new Report ITU-R M.[UCS] – “Utility Communication Systems” (Source: Doc. 5A/TEMP/105R2)

[17](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N17!MSW-E.docx) Working document towards a preliminary draft revision of Report ITU-R M.2282-0 – “Systems for public mobile communications with aircraft”   
(Source: Doc. 5A/TEMP/104)

[18](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N18!MSW-E.docx) Technical characteristics and operational parameters of the land mobile service for sharing and compatibility studies under WRC-23 agenda item 1.3   
(Source: Doc. 5A/TEMP/110R1)

[19](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N19!MSW-E.docx) Working document towards a preliminary draft revised Report ITU-R M.2116 – “Characteristics of broadband wireless access systems operating in the land mobile service for use in sharing studies” (Source: Doc. 5A/TEMP/143)

[20](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N20!MSW-E.docx) Preliminary draft revision of Recommendation ITU-R M.1824-1 – “System characteristics of television outside broadcast, electronic news gathering and electronic field production in the mobile service for use in sharing studies”  
(Source: Doc. 5A/TEMP/114)

[21](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N21!MSW-E.docx) Preliminary draft new Report ITU-R M.[100-GHZ.RSTT.EESS.COEXIST] - Coexistence between high-speed railway radiocommunication system between train and trackside operating in the frequency bands 92-94 GHz,94.1-100 GHz and 102-109.5 GHz, and radio astronomy service and Earth exploration- satellite service (EESS) (active) and EESS (passive) services (Source: Doc. 5A/TEMP/115R1)

[22](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N22!MSW-E.docx) Preliminary draft new Report ITU-R M.[252-296 GHZ.LMS.FS.COEXIST] – “Coexistence between land-mobile and fixed service applications operating in the frequency range 252‑296 GHz” (Source: Doc. 5A/TEMP/113R1)

[23](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N23!MSW-E.docx) Working document towards a preliminary draft new Report ITU-R M.[LMS.CONDITIONS>275GHZ] - Assessment of mitigation techniques and specific conditions to be applied to the land mobile service applications in the frequency bands 296-306 GHz, 313-318 GHz and 333-356 GHz, to ensure the protection of earth exploration-satellite service (passive) applications in accordance with RR No. **5.564A** (Source: Doc. 5A/TEMP/111)

[24](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N24!MSW-E.docx) Working document towards a preliminary draft new Report ITU-R M.[CAV] – “Connected Automated Vehicles (CAV)” (Source: Doc. 5A/TEMP/106)

[25](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N25!MSW-E.docx) Working document towards a preliminary draft revision of Recommendation ITU-R M.2121-0 – “Harmonization of frequency bands for Intelligent Transport Systems in the mobile service” (Source: Doc. 5A/TEMP/100R1)

[26](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N26!MSW-E.docx) Working document towards a preliminary draft revision of Report ITU-R M.2444-0 – “Examples of arrangements for Intelligent Transport Systems deployments under the mobile service” (Source: Doc. 5A/TEMP/101R1)

[27](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N27!MSW-E.docx) Working document towards a preliminary draft revision of Report ITU-R M.2417-0 – “Technical and operational characteristics of land-mobile service applications in the frequency range 275-450 GHz” (Source: Doc. 5A/TEMP/93)

[28](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N28!MSW-E.docx) List of output documents

Annexes from previous WP5A Chairman’s Reports that are being carried forward:

[Annex 11](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0221!N11!MSW-E.docx) to [Doc. 5A/221](https://www.itu.int/md/R19-WP5A-C-0221/en): Working document towards preliminary draft revision of Recommendation ITU-R M.2134-0 – “[Receiver / Technical and operational] characteristics and protection criteria for systems in the mobile service in the frequency range 27.5-29.5 GHz for use in sharing and compatibility studies.”

[Annex 18](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0221!N18!MSW-E.docx) to [Doc. 5A/221](https://www.itu.int/md/R19-WP5A-C-0221/en): Elements for a working document towards a preliminary draft new [Report/Recommendation] ITU-R F.[IMT-FWB] – “Use of International Mobile Telecommunication system for fixed wireless broadband in the frequency bands allocated to the fixed service on a primary basis.”

Management documents referred to in the Report:

List of input documents: [Doc. 5A/347(Rev.2)](https://www.itu.int/md/R19-WP5A-C-0347/en)

Final list of participants: [Doc. 5A/358](https://www.itu.int/md/R19-WP5A-C-0358/en)

# 1 Introduction

Working Party 5A (WP5A) held its twenty-fifth (25th) meeting and third e-meeting from 28 April to 11 May 2021. The meeting participants (see list in [Doc. 5A/358](https://www.itu.int/md/R19-WP5A-C-0358/en)) included up to 438 participants (note that the actual number was less because some participants represented more than one organization), from 55 countries representing 55 Member States, 18 recognized operating agencies, 23 scientific or industrial organizations, 1 other entity dealing with telecommunication matters, 12 regional and other international organizations, 2 Intergovernmental Organizations Operating Satellite Systems, 1 United Nations and its specialized agencies, 2 associates, 2 academia, and the ITU staff. WP5A held its opening plenary in one session on 28 April (draft agenda in [Doc. 5A/ADM/15](https://www.itu.int/md/R19-WP5A-ADM-0015/en)), a second plenary on 7 May (draft agenda in [Doc. 5A/ADM/37](https://www.itu.int/md/R19-WP5A-ADM-0037/en)), and the closing plenary in a continuous session without a break that lasted more than 4 hours on 11 May (draft agenda in [Doc. 5A/ADM/40](https://www.itu.int/md/R19-WP5A-ADM-0040/en)).

The meeting dealt with 137 input documents, 130 listed in [Doc. 5A/347(Rev.2)](https://www.itu.int/md/R19-WP5A-C-0347/en), 41 carried over from previous meetings and the following 7 documents that arrived during the meeting:

|  |  |  |  |
| --- | --- | --- | --- |
| **Doc. 5A/** | **Title** | **Source** | **Date** |
| [**[ 357 ]**](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R19-WP5A-C-0357) | Report on the relevant activities in certain countries in Region 3 | [Liaison R3 Rapporteur](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R19-WP5A-C&source=Liaison%20R3%20Rapporteur) | 2021-05-10 |
| [**[ 356 ]**](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R19-WP5A-C-0356) | Characteristics of terrestrial frequency assignments which may be used in sharing and compatibility studies under WRC-23 agenda items 1.8 | [Director, BR](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R19-WP5A-C&source=Director%2C%20BR) | 2021-05-07 |
| [**[ 355 ]**](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R19-WP5A-C-0355) | Characteristics of terrestrial frequency assignments which may be used in sharing and compatibility studies under WRC-23 agenda items 1.2, 1.4, 1.5, 1.10, 1.12 - 1.18 and 9.1 topic d) | [Director, BR](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R19-WP5A-C&source=Director%2C%20BR) | 2021-05-07 |
| [**[ 354 ]**](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R19-WP5A-C-0354) | Liaison statement to Working Parties 3J, 3K and 3M (copy for information to Working Parties 1A, 1C, 4A, 4C, 5A, 5B, 5C and 7D) - Propagation information related to studies under Resolution 731 (Rev.WRC-19) and other issues above 71 GHz | [WP7C](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R19-WP5A-C&source=WP%207C) | 2021-05-07 |
| [**[ 353 ]**](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R19-WP5A-C-0353) | Liaison statement on the new version of the Home Network Transport (HNT) standards overview and work plan | [ITU-T SG 15](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R19-WP5A-C&source=ITU-T%20SG%2015) | 2021-05-07 |
| [**[ 352 ]**](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R19-WP5A-C-0352) | Liaison statement on the new version of the Access Network Transport (ANT) standards overview and work plan | [ITU-T SG 15](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R19-WP5A-C&source=ITU-T%20SG%2015) | 2021-05-06 |
| [**[ 351 ]**](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R19-WP5A-C-0351) | Liaison statement on the new version of the Access Network Transport (ANT) standards overview and work plan | [ITU-T SG 9](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R19-WP5A-C&source=ITU-T%20SG%209) | 2021-05-06 |

Upon consideration of the input documents the meeting prepared 57 output temporary documents (see list in [Annex 28](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N28!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)).

The opening plenary meeting agenda in [Doc. 5A/ADM/15](https://www.itu.int/md/R19-WP5A-ADM-0015/en) was adopted. The delegate of Iran formally requested that the BR provides to WP5A an extract and summary of the characteristics of the frequency assignments in the plans recorded in the MIFR and in the process of being recorded for all incumbent services in the frequency bands studied under WRC-23 agenda items for which WP5A is a responsible or contributing group[[1]](#footnote-1).

The Chairman’s Report of the twenty-fourth meeting of WP5A ([Doc. 5A/221](https://www.itu.int/md/R19-WP5A-C-0221/en)) was adopted, including the objectives for the 25th meeting as presented in section 4 of [Doc. 5A/221](https://www.itu.int/md/R19-WP5A-C-0221/en).

The structure of WP5A for this meeting was also adopted as presented in section 2.2 of [Doc. 5A/221](https://www.itu.int/md/R19-WP5A-C-0221/en), which is reproduced in [Annex 1](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N01!MSW-E) to [Doc. 5A/359](http://www.itu.int/md/R19-WP5A-C-0359/en).

[Annex 1](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N01!MSW-E) contains the management aspects of WP5A, including a summary of the status of the texts that are the responsibility of WP5A, the WP5A contacts in external organizations, and the use of electronic facilities.

The chairman informed the meeting on the results of related ITU meetings of interest to WP5A. The summary record of the Study Group 5 meeting, 23 November 2020, is contained in [Doc. 5/34](https://www.itu.int/md/R19-SG05-C-0034) and the executive report from WP5A to SG5 in [Doc. 5/28](https://www.itu.int/md/R19-SG05-C-0028). The summary of the 17th CVC meeting, 20 January 2021, is contained in [Doc. CVC/4](https://www.itu.int/md/R19-CVC-C-0004/en) and the chairman encouraged the delegates to read the useful guidance from the Director contained therein for effective e-meetings. The CPM-23 Steering Committee issued Corrigendum 1 to Addendum 1 of [CA/251](https://www.itu.int/md/R00-CA-CIR-0251/en) and the amendments have been reflected in [Annex 1](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N01!MSW-E) to [Doc. 5A/359](http://www.itu.int/md/R19-WP5A-C-0359/en). The Summary of conclusions of the 28th RAG meeting, 29 March – 1 April 2021 in [CA/256](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R00-CA-CIR-0256) were noted, including continuing with the existing guidelines with respect to the approval of liaison statements by Working Parties and encouraging the posting of agendas of Working Group meetings as ADM documents, to the extent practicable.

The Chairman drew the attention of the meeting to the WP5A texts that are listed in section 1 of [Annex 1](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0221!N01!MSW-E) to [Doc. 5A/221](https://www.itu.int/md/R19-WP5A-C-0221/en), the [Guide to the use of ITU-R texts related to the land mobile service](http://www.itu.int/oth/R0A06000001/en), and the [Guide to the use of ITU-R texts relating to the amateur and amateur-satellite services](http://www.itu.int/oth/R0A06000067) asking each Working Group to review the texts assigned to them, noting that he had uploaded a draft revision with track changes in the WP5A share folder.

The work program for the WP5A meeting was adopted as presented in [Doc. 5A/ADM/13(Rev.1)](http://www.itu.int/md/R19-WP5A-ADM-0013/en), and additions as shown in [Table 1](#t1) below. In consultation with the Chairman of WP5C, the work on WRC‑23 topic 9.1 c) was assigned to Ad Hoc Working Group 5A/5C and no joint plenary of WPs 5A and 5C would be necessary because the expected outcome(s) would be attached to the chairmen’s reports. The initial schedule was adopted as per [Doc. 5A/ADM/14](http://www.itu.int/md/R19-WP5A-ADM-0014/en) and as the meeting progressed adjustments to the schedule were made.

At the opening plenary of WP5A the SG5 Counsellor presented draft working methods for offline email discussions during WP5A/5C meetings. For details of these offline email activities refer to the [WP5A SharePoint folder](https://extranet.itu.int/rsg-meetings/sg5/wp5a/Share/Forms/Column%20view.aspx?RootFolder=%2Frsg%2Dmeetings%2Fsg5%2Fwp5a%2FShare%2FOffline%20Email%20Discussions&FolderCTID=0x012000FB880722B4622243913B1114C70648D5&View=%7B627C3C95%2DCC37%2D49E0%2D8D8A%2D33AC93C6F497%7D).

[Doc. 5A/241](https://www.itu.int/md/R19-WP5A-C-0241/en) was noted since the RAG already provided guidance with respect to the approval of liaison statements by Working Parties.

The Chairman asked the meeting participants to review the list of contacts that appears in section 4 of [Annex 1](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0221!N01!MSW-E) to [Doc. 5A/221](https://www.itu.int/md/R19-WP5A-C-0221/en) and inform him of any necessary changes (the updated list appears in section 4 of [Annex 1](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N01!MSW-E) to [Doc. 5A/359](http://www.itu.int/md/R19-WP5A-C-0359/en) and updates between meetings are maintained by the BR and the Chairman of WP5A). The Chairman indicated this list showing the contacts by topics is used for all liaison statements to external organizations on those topics and the e-mail distribution lists are generated automatically from it.

The Chairman also pointed out the guidelines for the preparation of WP5A texts in section 2.3 of [Annex 1](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0221!N01!MSW-E), including the [Format of ITU-R Recommendations](http://www.itu.int/dms_pub/itu-r/oth/0a/0E/R0A0E0000970001MSWE.docx) and the [ITU English Style Guide](http://www.itu.int/SG-CP/docs/styleguide.doc).

At the opening Plenary of WP5A three Liaison Rapporteur reports were presented, on [Disaster Relief](http://www.itu.int/ITU-R/index.asp?category=information&link=emergency&lang=en) by Amy Sanders, USA, in [Doc. 5A/[275](https://www.itu.int/md/R19-WP5A-C-0275/en)](https://www.itu.int/md/R19-WP5A-C-0275/en), on certain countries in Region 1 by Gabrielle Owen, The Netherlands, in [Doc. 5A/337](https://www.itu.int/md/R19-WP5A-C-0337/en), and on certain countries in Region 2 by Jonathan Siverling, USA, in [Doc. 5A/346](https://www.itu.int/md/R19-WP5A-C-0346/en); and, at the closing Plenary of WP5A the liaison rapporteur report on certain countries in Region 3 by Hitoshi Yoshino, Japan, in [Doc. 5A/357](https://www.itu.int/md/R19-WP5A-C-0357/en), was noted as there was no time for a presentation. The chairman thanked the liaison rapporteurs for the valuable information presented in these reports and he asked that, due to lack of time, any questions be addressed by email directly to the respective liaison rapporteurs.

# 2 Objectives and work programme for the meeting

The objectives for the meeting were adopted as set forth in the Chairman’s Report of the twenty-fourth meeting of WP5A (section 4 of [Doc. 5A/221](https://www.itu.int/md/R19-WP5A-C-0221/en)) noting that need to consider also the proposals in the input contributions for the twenty-fifth meeting, in particular those related to the WRC-23 agenda items and topics under the responsibility of WP5A. WRC-23 topic 9.1 c) was addressed in an ad hoc working group 5A/5C co-chaired by the Chairmen of WP5A and WP5C (cf. [section 3.10](#s310)). Actions regarding future updates of documents that have a joint responsibility will be considered on a case-by-case basis depending on the input contributions and the nature of the proposed update.

The work was carried out within five Working Groups and the ad hoc Working Group 5A/5C. The responsibilities for input contributions were assigned based on [Doc. 5A/ADM/13(Rev.1)](https://www.itu.int/md/R19-WP5A-ADM-0013/en) as shown in [Table 1](#t1), including the organization of the work for the meeting (the documents in the rows “Reports” and “General” were assigned to all the Working Groups).

TABLE 1

Assignment of input contributions and organization of the work for the meeting

The carried forward documents are highlighted in green (41 documents).  
New documents: 221-357 (137 contributions)

|  |  |
| --- | --- |
| **Working Party 5A (Chairman:** [**José Costa**](mailto:jose.costa@ericsson.com?subject=WP5A-meeting)**, Canada)** | |
| **Reports** | [221](https://www.itu.int/md/R19-WP5A-C-0221/en) (Chairman, WP5A); [275](https://www.itu.int/md/R19-WP5A-C-0275/en) (Disaster Relief L.R.); [337](https://www.itu.int/md/R19-WP5A-C-0337/en) (L.R. #1); [346](https://www.itu.int/md/R19-WP5A-C-0346/en) (L.R. #2) |
| **General** | [241](https://www.itu.int/md/R19-WP5A-C-0241/en) (ATDI); [347R2](https://www.itu.int/md/R19-WP5A-C-0347/en) (List of documents) |
| **WRC-23 Topic 9.1 c)**  ***(Ad Hoc WG5A/5C)*** | [221](https://www.itu.int/md/R19-WP5A-C-0221/en) [Annex 8](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0221!N08!MSW-E.docx) (WP5A); [221](https://www.itu.int/md/R19-WP5A-C-0221/en) [Annex 9](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0221!N09!MSW-E.docx) (WP5A); [221](https://www.itu.int/md/R19-WP5A-C-0221/en) [Annex 18](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0221!N18!MSW-E.docx) (WP5A); [251](https://www.itu.int/md/R19-WP5A-C-0251/en) §3.17 (WMO); [271](https://www.itu.int/md/R19-WP5A-C-0271/en) (USA); [273](https://www.itu.int/md/R19-WP5A-C-0273/en) (IAFI); [307](https://www.itu.int/md/R19-WP5A-C-0307/en) (China); [321](https://www.itu.int/md/R19-WP5A-C-0321/en) (CEPT CPG PTA); [329](https://www.itu.int/md/R19-WP5A-C-0329/en) (Egypt); [336](https://www.itu.int/md/R19-WP5A-C-0336/en) (UAE) |

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| **Working Group 1: Amateur Services (Chairman:** [**Dale Hughes**](mailto:dalevk1dsh@gmail.com?subject=WP5A-meeting)**, Australia)** | |
| **WRC-23 AI 9.1 b)** [**Res. 774**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0023PDFE.pdf) | [221](https://www.itu.int/md/R19-WP5A-C-0221/en) [Annex 6](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0221!N06!MSW-E.docx) (WP5A); [221](https://www.itu.int/md/R19-WP5A-C-0221/en) [Annex 7](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0221!N07!MSW-E.docx) (WP5A); [221](https://www.itu.int/md/R19-WP5A-C-0221/en) [Annex 10](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0221!N10!MSW-E.docx) (WP5A); [247](https://www.itu.int/md/R19-WP5A-C-0247/en) (WP4C);  [251](https://www.itu.int/md/R19-WP5A-C-0251/en) §3.16 (WMO); [261](https://www.itu.int/md/R19-WP5A-C-0261/en) §9.1b (IARU); [276](https://www.itu.int/md/R19-WP5A-C-0276/en) (IARU); [293](https://www.itu.int/md/R19-WP5A-C-0293/en) (Canada); [348](https://www.itu.int/md/R19-WP5A-C-0348/en) (WP3M) |
| **Sharing studies** | *Rec. ITU-R M.1732:* [277](https://www.itu.int/md/R19-WP5A-C-0277/en) (IARU)  *10 MHz to 15.5 GHz:* [278](https://www.itu.int/md/R19-WP5A-C-0278/en) (IARU) towards WG5A-4 |

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| **Working Group 2: Systems and standards (Chairman:** [**Lang Baozhen**](mailto:langbaozhen@sina.com?subject=WP5A-meeting)**, China)** | |
| **Railways**  **(incl.** [**Res. 240 (WRC-19)**](https://www.itu.int/oth/R0A060000A0/en)**)** | *RSTT:* [70](https://www.itu.int/md/R19-WP5A-C-0070/en) (Motorola Solutions); [85](https://www.itu.int/md/R19-WP5A-C-0085/en) [Annex 12](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0085!N12!MSW-E.docx) (WP5A); [156](https://www.itu.int/md/R19-WP5A-C-0156/en)-Res.240 (3GPP);  [257](https://www.itu.int/md/R19-WP5A-C-0257/en) (CEPT FM56); [269](https://www.itu.int/md/R19-WP5A-C-0269/en) (USA); [272](https://www.itu.int/md/R19-WP5A-C-0272/en) (IAFI); [286](https://www.itu.int/md/R19-WP5A-C-0286/en) (Japan); [291](https://www.itu.int/md/R19-WP5A-C-0291/en) (Korea);  [318](https://www.itu.int/md/R19-WP5A-C-0318/en) Annex (France)  *Rep. M.2442:* [85](https://www.itu.int/md/R19-WP5A-C-0085/en) [Annex 13](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0085!N13!MSW-E.docx) (WP5A)  *Rec. RSTT Frequencies:* [85](https://www.itu.int/md/R19-WP5A-C-0085/en) [Annex 11](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0085!N11!MSW-E.docx) (WP5A); [287](https://www.itu.int/md/R19-WP5A-C-0287/en) (Japan); [304](https://www.itu.int/md/R19-WP5A-C-0304/en) (China);  [318](https://www.itu.int/md/R19-WP5A-C-0318/en) Attachment (France) |
| **Broadband Wireless Access** | *Rec. M.2134:* [221](https://www.itu.int/md/R19-WP5A-C-0221/en) [Annex 11](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0221!N11!MSW-E.docx) (WP5A); [292](https://www.itu.int/md/R19-WP5A-C-0292/en) (Russian Federation); [317](https://www.itu.int/md/R19-WP5A-C-0317/en) (France)  *Rec. M.1801:* [80](https://www.itu.int/md/R19-WP5A-C-0080/en) (Chairman, WP5A); [246](https://www.itu.int/md/R19-WP5A-C-0246/en) (IEEE); [252](https://www.itu.int/md/R19-WP5A-C-0252/en) (WP5D); [296](https://www.itu.int/md/R19-WP5A-C-0296/en) (Canada);  [306](https://www.itu.int/md/R19-WP5A-C-0306/en) (China)  *UAVs:* [228](https://www.itu.int/md/R19-WP5A-C-0228/en) (ITU-T SG20)  *Broadband for rural and remote areas:* [258](https://www.itu.int/md/R19-WP5A-C-0258/en) (ITU-D SG1) |
| **Land mobile systems** | *Utilities:* [221](https://www.itu.int/md/R19-WP5A-C-0221/en) [Annex 12](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0221!N12!MSW-E.docx) (WP5A); [274](https://www.itu.int/md/R19-WP5A-C-0274/en) (IAFI)  *Characteristics of IoT devices:*  [235](https://www.itu.int/md/R19-WP5A-C-0235/en) (ITU-T SG 11)  *PSME:* [242](https://www.itu.int/md/R19-WP5A-C-0242/en) (UK/CEPT WGFM) |
| **Air to Ground** | *Update of Rep. ITU-R M.2282:* [1065](http://www.itu.int/md/R15-WP5A-C-1065/en) [Annex 6](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-1065!N06!MSW-E) (WP5A); [281](https://www.itu.int/md/R19-WP5A-C-0281/en) (Germany);  [310](https://www.itu.int/md/R19-WP5A-C-0310/en) (Saudi Arabia)  *New Report:* [1065](http://www.itu.int/md/R15-WP5A-C-1065/en) [Annex 7](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-1065!N07!MSW-E) (WP5A) |
| **RLAN characteristics** | *Rec. M.1450:* [844](http://www.itu.int/md/R15-WP5A-C-0844/en) [Annex 17](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0844!N17!MSW-E) (WP5A); [79](https://www.itu.int/md/R19-WP5A-C-0079/en) (Chairman, WP5A); [245](https://www.itu.int/md/R19-WP5A-C-0245/en) (IEEE); [254](https://www.itu.int/md/R19-WP5A-C-0254/en) (ATIS);  [305](https://www.itu.int/md/R19-WP5A-C-0305/en) (China); [319](https://www.itu.int/md/R19-WP5A-C-0319/en) (France)  *Support WG4 with characteristics for sharing & coexistence studies* |
| **ANTs, HNTs** | [351](https://www.itu.int/md/R19-WP5A-C-0351/en) (ITU-T SG9); [352](https://www.itu.int/md/R19-WP5A-C-0352/en) (ITU-T SG15); [353](https://www.itu.int/md/R19-WP5A-C-0353/en) (ITU-T SG15) |

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| **Working Group 3: PPDR (Chairman:** [**Amy Sanders**](mailto:asanders@ntia.gov?subject=WP5A-meeting)**, USA)** | |
| **Update of Compendium** | [270](https://www.itu.int/md/R19-WP5A-C-0270/en) (USA) |
| **Updates of ITU-R Reports** | *M.2377:* [891](http://www.itu.int/md/R15-WP5A-C-0891/en) (WP5D) |
| **Liaison statements** | [227](https://www.itu.int/md/R19-WP5A-C-0227/en) (WP5B); [230](https://www.itu.int/md/R19-WP5A-C-0230/en) (ITU-T SG11); [239](https://www.itu.int/md/R19-WP5A-C-0239/en) (ITU-T SG2); [255](https://www.itu.int/md/R19-WP5A-C-0255/en) (FG-AI4NDM);  [265](https://www.itu.int/md/R19-WP5A-C-0265/en) (ITU-D SG2) |

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| **Working Group 4: Interference and sharing (Chairman:** [**Michael Kraemer**](mailto:michael.kraemer@intel.com?subject=WP5A-meeting)**, Germany)** | |
| **Sharing studies (general)** | *General:* [231](https://www.itu.int/md/R19-WP5A-C-0231/en) (Iran); [355](https://www.itu.int/md/R19-WP5A-C-0355/en) (Director, BR)  *Antennas:* [236](https://www.itu.int/md/R19-WP5A-C-0236/en) (WP1C)  *Rec. M.1824 (ENG):* [221](https://www.itu.int/md/R19-WP5A-C-0221/en) [Annex 13](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0221!N13!MSW-E.docx) (WP5A)  *Rep. M.2116:* [300](https://www.itu.int/md/R19-WP5A-C-0300/en) (China)  *CISPR radio services database (6-40 GHz):* [237R1](https://www.itu.int/md/R19-WP5A-C-0237/en) (WP1A); [345](https://www.itu.int/md/R19-WP5A-C-0345/en) (WP7A)  *IMT:* [47](https://www.itu.int/md/R19-WP5A-C-0047/en) (France)  *Range 92-109.5 GHz:* [85](https://www.itu.int/md/R19-WP5A-C-0085/en) [Annex 15](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0085!N15!MSW-E.docx) (WP5A); [137](https://www.itu.int/md/R19-WP5A-C-0137/en) (WP7C); [285](https://www.itu.int/md/R19-WP5A-C-0285/en) (Japan)  *Range 252-296 GHz:* [221](https://www.itu.int/md/R19-WP5A-C-0221/en) [Annex 15](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0221!N15!MSW-E.docx) (WP5A); [244](https://www.itu.int/md/R19-WP5A-C-0244/en) (TIA TR-45); [260](https://www.itu.int/md/R19-WP5A-C-0260/en) (IEEE);  [288](https://www.itu.int/md/R19-WP5A-C-0288/en) (Japan); [289](https://www.itu.int/md/R19-WP5A-C-0289/en) (Japan) |
| **Dynamic Access – sharing** | *Support WG5 on sharing & coexistence studies* |
| **Sharing by zones** | [976](http://www.itu.int/md/R15-WP5A-C-0976/en) [Annex 14](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0976!N14!MSW-E) (WP5A) |
| **EMF** | [222](https://www.itu.int/md/R19-WP5A-C-0222/en) (ITU-T SG5); [253](https://www.itu.int/md/R19-WP5A-C-0253/en) (ITU-D SG2); [263](https://www.itu.int/md/R19-WP5A-C-0263/en) (ATDI) |
| **RLAN sharing**  **(incl.** [**Res. 229 (Rev.WRC-19)**](https://www.itu.int/oth/R0A0600009D/en)**)** | *REQ-PAR:* [1065](http://www.itu.int/md/R15-WP5A-C-1065/en) [Annex 9](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-1065!N09!MSW-E) (WP5A)  *Aggregate Measurements:* [976](http://www.itu.int/md/R15-WP5A-C-0976/en) [Annex 17](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0976!N17!MSW-E) (WP5A)  *Sharing 5150-5250 MHz:* [1065](http://www.itu.int/md/R15-WP5A-C-1065/en) [Annex 10](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-1065!N10!MSW-E) (WP5A)  *Sharing 5750-5250 MHz:* [1065](http://www.itu.int/md/R15-WP5A-C-1065/en) [Annex 11](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-1065!N11!MSW-E) (WP5A)  *Sharing 5725-5850 MHz:* [1065](http://www.itu.int/md/R15-WP5A-C-1065/en) [Annex 12](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-1065!N12!MSW-E) (WP5A) |
| **AI 1.2: IMT** [**Res. 245**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0002PDFE.pdf) | [15](https://www.itu.int/md/R19-WP5A-C-0015/en) (WP5D); [206](https://www.itu.int/md/R19-WP5A-C-0206/en) (UAE); [251](https://www.itu.int/md/R19-WP5A-C-0251/en) §3.1 (WMO); [266](https://www.itu.int/md/R19-WP5A-C-0266/en) (WP7B); [341](https://www.itu.int/md/R19-WP5A-C-0341/en) (WP7C) |
| **AI 1.3: 3.6-3.8 R1** [**Res. 246**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0003PDFE.pdf) | [74](https://www.itu.int/md/R19-WP5A-C-0074/en) (ESOA); [88](https://www.itu.int/md/R19-WP5A-C-0088/en) (WP5B); [190](https://www.itu.int/md/R19-WP5A-C-0190/en) (China); [192](https://www.itu.int/md/R19-WP5A-C-0192/en) (China); [203](https://www.itu.int/md/R19-WP5A-C-0203/en), [204](https://www.itu.int/md/R19-WP5A-C-0204/en) (Ericsson, Huawei, Intel, Nokia, Samsung); [221](https://www.itu.int/md/R19-WP5A-C-0221/en) [Annex 4](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0221!N04!MSW-E.docx) (WP5A); [221](https://www.itu.int/md/R19-WP5A-C-0221/en) [Annex 5](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0221!N05!MSW-E.docx) (WP5A); [233](https://www.itu.int/md/R19-WP5A-C-0233/en) (WP5C);  [251](https://www.itu.int/md/R19-WP5A-C-0251/en) §3.2 (WMO); [298](https://www.itu.int/md/R19-WP5A-C-0298/en) (Sweden, Finland); [299](https://www.itu.int/md/R19-WP5A-C-0299/en) (China); [301](https://www.itu.int/md/R19-WP5A-C-0301/en) (China); [308](https://www.itu.int/md/R19-WP5A-C-0308/en) (GSMA); [313](https://www.itu.int/md/R19-WP5A-C-0313/en) (South Africa, Zimbabwe); [322](https://www.itu.int/md/R19-WP5A-C-0322/en) (Germany); [328](https://www.itu.int/md/R19-WP5A-C-0328/en) (ESOA); [330](https://www.itu.int/md/R19-WP5A-C-0330/en) (GSA);  [331](https://www.itu.int/md/R19-WP5A-C-0331/en) (Egypt, UAE); [332](https://www.itu.int/md/R19-WP5A-C-0332/en) (Egypt, UAE); [333](https://www.itu.int/md/R19-WP5A-C-0333/en) (Egypt, UAE); [334](https://www.itu.int/md/R19-WP5A-C-0334/en) (Egypt, UAE) |
| **AI 1.4: HIBS** [**Res. 247**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0004PDFE.pdf) | [248](https://www.itu.int/md/R19-WP5A-C-0248/en) (WP5D); [251](https://www.itu.int/md/R19-WP5A-C-0251/en) §3.3 (WMO); [261](https://www.itu.int/md/R19-WP5A-C-0261/en) §9.1a (IARU); [262](https://www.itu.int/md/R19-WP5A-C-0262/en) (WP6A) |
| **AI 1.5: 470-960 R1** [**Res. 235**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000C0036PDFE.pdf) | [176](https://www.itu.int/md/R19-WP5A-C-0176/en) (UK); [179](https://www.itu.int/md/R19-WP5A-C-0179/en) (BBC); [186](https://www.itu.int/md/R19-WP5A-C-0186/en) (France); [197](https://www.itu.int/md/R19-WP5A-C-0197/en) (Thales SA); [199](https://www.itu.int/md/R19-WP5A-C-0199/en) (Germany); [200](https://www.itu.int/md/R19-WP5A-C-0200/en) (Germany); [201](https://www.itu.int/md/R19-WP5A-C-0201/en) (Germany); [202](https://www.itu.int/md/R19-WP5A-C-0202/en) (Motorola Solutions); [240R3](https://www.itu.int/md/R19-WP5A-C-0240/en) (France); [243](https://www.itu.int/md/R19-WP5A-C-0243/en) (CEPT CPG PTD);  [249](https://www.itu.int/md/R19-WP5A-C-0249/en) (WP5D); [250](https://www.itu.int/md/R19-WP5A-C-0250/en) (WP5D); [251](https://www.itu.int/md/R19-WP5A-C-0251/en) §3.4 (WMO); [315](https://www.itu.int/md/R19-WP5A-C-0315/en) (France); [316](https://www.itu.int/md/R19-WP5A-C-0316/en) (France);  [323](https://www.itu.int/md/R19-WP5A-C-0323/en) (Germany *et al.*); [324](https://www.itu.int/md/R19-WP5A-C-0324/en) (Germany); [325](https://www.itu.int/md/R19-WP5A-C-0325/en) (Germany); [349](https://www.itu.int/md/R19-WP5A-C-0349/en) (WPS 3k & 3M)  [*CACE/966*](https://www.itu.int/md/R00-CACE-CIR-0966/en)*:* [242](https://www.itu.int/md/R19-WP5A-C-0242/en) Annex 2 (UK/CEPT WGFM); [259](https://www.itu.int/md/R19-WP5A-C-0259/en) (Switzerland); [267](https://www.itu.int/md/R19-WP5A-C-0267/en) (Sweden);  [268](https://www.itu.int/md/R19-WP5A-C-0268/en) (Austria); [279](https://www.itu.int/md/R19-WP5A-C-0279/en) (UK); [282](https://www.itu.int/md/R19-WP5A-C-0282/en) (Russian Federation); [309](https://www.itu.int/md/R19-WP5A-C-0309/en) (Saudi Arabia);  [311](https://www.itu.int/md/R19-WP5A-C-0311/en) (Ireland); [312](https://www.itu.int/md/R19-WP5A-C-0312/en) (The Netherlands); [314](https://www.itu.int/md/R19-WP5A-C-0314/en) (Tunisia); [320](https://www.itu.int/md/R19-WP5A-C-0320/en) (Italy); [326](https://www.itu.int/md/R19-WP5A-C-0326/en) (Lithuania);  [335](https://www.itu.int/md/R19-WP5A-C-0335/en) (UAE) |
| **AI 1.8: Res.155 & 5.484B** [**Res. 171**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0027PDFE.pdf) | [223](https://www.itu.int/md/R19-WP5A-C-0223/en) (WP5C); [356](https://www.itu.int/md/R19-WP5A-C-0356/en) (Director, BR) |
| **AI 1.9 Appendix 27** [**Res. 429**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0009PDFE.pdf) |  |
| **AI 1.10: AMS** [**Res. 430**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0010PDFE.pdf) | [229](https://www.itu.int/md/R19-WP5A-C-0229/en) (WP5B); [234](https://www.itu.int/md/R19-WP5A-C-0234/en) (WP5C); [251](https://www.itu.int/md/R19-WP5A-C-0251/en) §3.6 (WMO); [350](https://www.itu.int/md/R19-WP5A-C-0350/en) (WPS 3k & 3M) |
| **AI 1.12: EESS @45** [**Res. 656**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0012PDFE.pdf) | [251](https://www.itu.int/md/R19-WP5A-C-0251/en) §3.7 (WMO); [261](https://www.itu.int/md/R19-WP5A-C-0261/en) §1.12 (IARU); [342](https://www.itu.int/md/R19-WP5A-C-0342/en) (WP7C) |
| **AI 1.13: SRS** [**Res. 661**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0013PDFE.pdf) | [251](https://www.itu.int/md/R19-WP5A-C-0251/en) §3.8 (WMO) |
| **AI 1.14: EESS @231** [**Res.662**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0014PDFE.pdf) | [251](https://www.itu.int/md/R19-WP5A-C-0251/en) §3.9 (WMO); [261](https://www.itu.int/md/R19-WP5A-C-0261/en) §1.14 (IARU); [340](https://www.itu.int/md/R19-WP5A-C-0340/en) (WP7C) |
| **AI 1.15: FSS** [**Res. 172**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0015PDFE.pdf) | [232](https://www.itu.int/md/R19-WP5A-C-0232/en) (WP5C); [251](https://www.itu.int/md/R19-WP5A-C-0251/en) §3.10 (WMO) |
| **AI 1.16: FSS ESIM** [**Res. 173**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0016PDFE.pdf) | [32](https://www.itu.int/md/R19-WP5A-C-0032/en) (WP4A); [251](https://www.itu.int/md/R19-WP5A-C-0251/en) §3.11 (WMO); [339](https://www.itu.int/md/R19-WP5A-C-0339/en) (WP7C) |
| **AI 1.17: ISL** [**Res. 773**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0017PDFE.pdf) | [31](https://www.itu.int/md/R19-WP5A-C-0031/en) (WP4A); [251](https://www.itu.int/md/R19-WP5A-C-0251/en) §3.12 (WMO); [264](https://www.itu.int/md/R19-WP5A-C-0264/en) (WP7B); [338](https://www.itu.int/md/R19-WP5A-C-0338/en) (WP7C) |
| **AI 1.18: MSS** [**Res. 248**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0018PDFE.pdf) | [29](https://www.itu.int/md/R19-WP5A-C-0029/en) (WP4C); [251](https://www.itu.int/md/R19-WP5A-C-0251/en) §3.13 (WMO); [261](https://www.itu.int/md/R19-WP5A-C-0261/en) §1.18 (IARU) |
| **AI 1.19: FSS @17** [**Res. 174**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0019PDFE.pdf) | [30](https://www.itu.int/md/R19-WP5A-C-0030/en) (WP4A); [214](https://www.itu.int/md/R19-WP5A-C-0214/en) (WP4A) |
| **AI 9.1 a): SWS** [**Res. 657**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0022PDFE.pdf) | [226](https://www.itu.int/md/R19-WP5A-C-0226/en) (WP5C); [251](https://www.itu.int/md/R19-WP5A-C-0251/en) §3.15 (WMO); [261](https://www.itu.int/md/R19-WP5A-C-0261/en) §9.1a (IARU); [278](https://www.itu.int/md/R19-WP5A-C-0278/en) (IARU) via WG5A-1 |
| **AI 9.1 d): EESS@36** [**Doc.573**](https://www.itu.int/dms_pub/itu-r/md/16/wrc19/c/R16-WRC19-C-0573!!MSW-E.docx) | [251](https://www.itu.int/md/R19-WP5A-C-0251/en) §3.18 (WMO); [344](https://www.itu.int/md/R19-WP5A-C-0344/en) (WP7C) |
| [**Res. 731**](https://www.itu.int/oth/R0A060000A1/en)**: >71 GHz** | [221](https://www.itu.int/md/R19-WP5A-C-0221/en) [Annex 14](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0221!N14!MSW-E.docx) (WP5A); [224](https://www.itu.int/md/R19-WP5A-C-0224/en) (WP5C); [225](https://www.itu.int/md/R19-WP5A-C-0225/en) (Chairmen, SG1, SG5 and SG7);  [251](https://www.itu.int/md/R19-WP5A-C-0251/en) Annex (WMO); [295](https://www.itu.int/md/R19-WP5A-C-0295/en) (Canada); [327](https://www.itu.int/md/R19-WP5A-C-0327/en) (ESA, EUMETSAT); [343](https://www.itu.int/md/R19-WP5A-C-0343/en) (WP7C); [354](https://www.itu.int/md/R19-WP5A-C-0354/en) (WP7C) |

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| **Working Group 5: New technologies (Chairman:** [**Hitoshi Yoshino**](mailto:hitoshi.yoshino@g.softbank.co.jp?subject=WP5A-meeting)**, Japan)** | |
| **ITS**  **(incl.** [**Rec. 208 (WRC-19)**](https://www.itu.int/oth/R0A060000A3/en)**)** | *General:* [238](https://www.itu.int/md/R19-WP5A-C-0238/en) (ITU-T (FG-VM)); [256](https://www.itu.int/md/R19-WP5A-C-0256/en) (ETSI TC ITS); [280](https://www.itu.int/md/R19-WP5A-C-0280/en) (ITU-T FG-VM); [297](https://www.itu.int/md/R19-WP5A-C-0297/en) (Brazil)  *CAV (*[*Question ITU-R 261/5*](https://www.itu.int/pub/R-QUE-SG05.261)*):* [221](https://www.itu.int/md/R19-WP5A-C-0221/en) [Annex 16](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0221!N16!MSW-E.docx) (WP5A); [283](https://www.itu.int/md/R19-WP5A-C-0283/en) (Japan); [284](https://www.itu.int/md/R19-WP5A-C-0284/en) (Japan);  [290](https://www.itu.int/md/R19-WP5A-C-0290/en) (Korea); [302](https://www.itu.int/md/R19-WP5A-C-0302/en) (China); [303](https://www.itu.int/md/R19-WP5A-C-0303/en) (China) |
| [**Q.256/5**](https://www.itu.int/pub/R-QUE-SG05.256)**: >275 GHz** | *Rep. M.2417:* [221](https://www.itu.int/md/R19-WP5A-C-0221/en) [Annex 17](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0221!N17!MSW-E.docx) (WP5A); [260](https://www.itu.int/md/R19-WP5A-C-0260/en) Annex 1 (IEEE); [294](https://www.itu.int/md/R19-WP5A-C-0294/en) (Canada) |

The Working Groups developed preliminary draft revised/new Recommendations, Reports, Questions, and liaison statements, and progress reports on the work. The detailed reports from the Working Groups are contained in [Annex 3](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N03!MSW-E). The texts proposed by these Working Groups in TEMP documents ([Annex 28](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N28!MSW-E)) were considered by WP5A and are either annexed to this Report for further work to be considered at future meetings of WP5A or were approved by WP5A as liaison statements to other groups or for submission to Study Group 5 ([Annex 2](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N02!MSW-E)).

# 3 Executive summary of the results of the meeting

## 3.1 Summary of documents approved by WP5A

The list of texts that are the responsibility of Working Party 5A (WP5A) has been updated in line with Doc. [5/1(Rev.1)](http://www.itu.int/md/R19-SG05-C-0001/en), including the assignment of responsibilities to the working groups of WP5A and identification of topics for the Recommendations and Reports ([Annex 1](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N01!MSW-E)).

At a previous meeting, WP5A already decided to implement factual editorial updates of the guides to the use of ITU-R texts related to the radiocommunication services under the responsibility of WP5A between the meetings of WP5A (i.e., updates of references to Recommendations, Reports and Handbooks as they are approved), while amendments of substance will be considered for approval at the WP5A meetings.

The consolidation of all the texts approved by WP5A, including the liaison statements and proposals to Study Group 5, appears in [Annex 2](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N02!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en).

## 3.2 Summary of proposals and documents submitted by Working Party 5A to Study Group 5

WP5A approved a draft new Question for submission to Study Group 5: draft new study Question ITU-R [RSTT]/5 – “Studies related to the further development of RSTT” – [Doc. 5/39](https://www.itu.int/md/R19-SG05-C-0039/en).

## 3.3 Amateur and amateur-satellite services

Continued the work on the draft CPM text and the work plan for activities covering WRC-23 agenda item 9.1 topic b). Sent one liaison statement to WP4C & WP3M on the progress of the work on topic 9.1 b). Developed a preliminary draft new Report ITU-R M.[AMATEUR.CHARACTERISTICS] ([Annex 10](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N10!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)). Developed a preliminary draft revision of Recommendation ITU-R M.1732-2 - Characteristics of systems operating in the amateur and amateur-satellite services for use in sharing studies ([Annex 11](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N11!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)).

## 3.4 Systems and standards

*RSTT:* finalized the development of draft new Study Question ITU-R [RSTT] – “Studies related to the further development of RSTT” for submission to SG5 ([Annex 2](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N02!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)); continued the development of a working document towards a preliminary draft new Recommendation ITU-R M.[RSTT\_FRQ] – “Spectrum Harmonization for Railway Radiocommunication Systems between Train and Trackside (RSTT)” ([Annex 15](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N15!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)); and a working document towards a preliminary draft revision of Report ITU-R M.2442-0 – “Current and future usage of railway radiocommunication systems between train and trackside” ([Annex 14](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N14!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)).

*RLAN & BWA standards:* initiated the development of a working document towards a preliminary draft revision of Recommendation ITU-R M.1450-5 – “Characteristics of broadband radio local area networks” and .a working document towards a preliminary draft revision of Recommendation ITU-R M.1801-2 – “Radio interface standards for broadband wireless access systems, including mobile and nomadic applications, in the mobile service operating below 6 GHz”. Two liaison statements were sent to the RLAN & BWA external organizations requesting further inputs for the draft revisions of these Recommendations ([Annex 2](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N02!MSW-E)).

*UCS:* Continued the development of a working document towards a preliminary draft new Report ITU-R M.[UCS] – “Utility Communication Systems” ([Annex 16](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N16!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)).

*Systems for public mobile communications with aircraft:* continued the development of a working document towards a preliminary draft revision of Report ITU-R M.2282-0 – “Systems for public mobile communications with aircraft” ([Annex 17](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N17!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)).

*Protection of land mobile systems:* Regarding the proposed draft revision of Rec. ITU-R M.2134 “Receiver characteristics and protection criteria for systems in the mobile service in the frequency range 27.5-29.5 GHz for use in sharing and compatibility studies”, no agreement was reached on the issue of changing the deterministic interference protection criteria methodology currently employed by the land mobile service in this band to a statistical methodology specified as a percentage of time since it could impact other terrestrial radiocommunication services that use the same deterministic approach. The current working document in [Annex 11](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0221!N11!MSW-E) to [Doc. 5A/221](http://www.itu.int/md/R19-WP5A-C-0221/en) is carried forward and further contributions are invited to the next meeting.

*Internet of Things:* A reply liaison statement was sent to ITU-T Study Group 11 on “The framework of testing of identification systems used in Internet of Things”, in relation to the new Recommendation ITU-T Q.4063 ([Annex 2](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N02!MSW-E)).

## 3.5 Public protection and disaster relief

It was agreed to propose suppression of the Compendium of ITU’s Work on Emergency Telecommunications, for which a liaison statement was sent seeking the concurrence from other ITU groups involved in the Compendium ([Annex 2](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N02!MSW-E)). The meeting also agreed to once again invite contributions to revise Report ITU-R M.2377 and two reply liaison statements were sent to groups in ITU-T ([Annex 2](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N02!MSW-E)).

## 3.6 Interference and sharing

Continued developing the draft revision of Recommendation ITU-R M.1824 ([Annex 20](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N20!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)) and initiated a draft revision of Report ITU-R M.2116 ([Annex 19](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N19!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)), continued work related to the frequency ranges 92-109.5 GHz ([Annex 21](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N21!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)) and 252-296 GHz ([Annex 22](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N22!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)), as well as *invites ITU-R 2* of Resolution **731** ([Annex 23](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N23!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)). Sent a reply liaison statement to ITU-T Study Group 5, ITU-D Study Group 2, and ITU-R Working Parties 1A and 1C on human exposure to EMF ([Annex 2](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N02!MSW-E)). Furthermore, it was decided to discontinue several working documents that had been carried forward from the last study cycle (cf. [Doc. 5A/221](http://www.itu.int/md/R19-WP5A-C-0221/en)), for which it became clear that no further work was expected going forward.

Continued the preparatory work for WRC-23 agenda item 1.3 where WP5A is the lead group. Provided technical characteristics and other relevant information to various Working Parties for WRC-23 related sharing studies and other sharing studies in 9 liaison statements. Regarding WRC‑23 agenda item 1.5, WP5A agreed to submit information on spectrum use and spectrum needs of the land mobile service within the frequency band 470-960 MHz in Doc. 5A/TEMP/140(Rev.1) to TG 6/1 in a liaison statement ([Doc. 6-1/33](https://www.itu.int/md/R19-TG6.1-C-0033/en)). After a long discussion (lasting about 2 hours) at the closing plenary of WP5A and extra-ordinary efforts to reach a compromise, no consensus could be reached on including the material regarding parameters and studies related to the land mobile service within the frequency band 470-960 MHz in Doc. 5A/TEMP/139(Rev.1) into the liaison statement, so this TEMP document was abandoned; the contributors were encouraged to submit their material directly to TG6/1 and the Chairman of WP5A was asked to convey the contents of the TEMP document separately to TG6/1 (cf. [Doc. 6-1/34](https://www.itu.int/md/R19-TG6.1-C-0034/en)). The administrations of France and Germany provided the following joint statement for inclusion in the WP5A Chairman’s report:

“In accordance with Administrative Circulars CA/251, CACE/955 and CACE/966, WP5A received 21 contributions in 2021 on agenda item 1.5. Several liaison statements were drafted to enable transmission of this information in time with the deadline of May 15th 2021 on the spectrum use and needs, and related proposals on parameters for studies, technical characteristics and protection criteria. Despite acceptance of every wording for compromise in the cover letters, the signing and other administrations were denied the possibility to have their elements taken into consideration. To that end, one administration claimed the right to reject random parts of said elements instead of respecting equality between the contributors. There was also no technical justification provided, why elements were not acceptable to be sent to TG 6/1 as they were factual technical information provided by ITU-R members. Hence, part of the elements provided to WP5A were vetoed and as a result, none of the elements gathered by WP5A was sent to TG 6/1.

The concerns expressed by one administration have been addressed properly by reiterated compromise proposals with several negative qualifiers (e.g. that the contributions only contain the view of the contributors, that the content was neither discussed nor agreed on). Such disclaimer has been usually used to outline that specific information in an LS were not representing an agreed view of an ITU-R WP. The signing administrations are deeply concerned that the meeting did not conclude in a way of normal practice for conference related material, i.e. by inviting the objecting administration to provide its diverging view in a relevant statement.

The undersigning administration deplores this outcome at WP5A since A.I. 1.5 addresses the Mobile Service.”

## 3.7 New technologies

Continued to develop a working document towards a Preliminary Draft New Report ITU‑R M.[CAV] ] “Connected Automated Vehicles” ([Annex 24](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N24!MSW-E.docx) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)).

Initiated a draft revision of Recommendation [ITU-R M.2121-0](https://www.itu.int/rec/R-REC-M.2121/en) – “Harmonization of frequency bands for Intelligent Transport Systems in the mobile service” ([Annex 25](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N25!MSW-E.docx) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)) and a draft revision of Report [ITU-R M.2444-0](https://www.itu.int/pub/R-REP-M.2444) – “Examples of arrangements for Intelligent Transport Systems deployments under the mobile service” ([Annex 26](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N26!MSW-E.docx) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)).

Continued to develop a working document towards a preliminary draft revision of Report [ITU-R M.2417-0](https://www.itu.int/pub/R-REP-M.2417) on Technical and operational characteristics of land-mobile service applications in the frequency range 275-450 GHz ([Annex 27](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N27!MSW-E.docx) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)).

Two liaison statements were sent to other ITU groups and the ITS external organizations regarding the draft revisions of Recommendation [ITU-R M.2121-0](https://www.itu.int/rec/R-REC-M.2121/en) and Report [ITU-R M.2444-0](https://www.itu.int/pub/R-REP-M.2444) ([Annex 2](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N02!MSW-E)).

## 3.8 Land Mobile Handbook

No new activity.

## 3.9 Vocabulary

The vocabulary for RLANs on DFS and TCP (elements for a future update of Rec. ITU-R M.1450), which as carried forward in [Annex 17](https://www.itu.int/dms_pub/itu-r/md/15/wp5a/c/R15-WP5A-C-0844!N17!MSW-E.docx) to [Doc. 5A/844](https://www.itu.int/md/R15-WP5A-C-0844/en) (elements for a future update of Rec. ITU-R M.1450), was included in in the working document in [Annex 12](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N12!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en).

## 3.10 Joint activity of WP5A and WP5C on WRC-23 topic 9.1 c)

WPs 5A and 5C agreed that for the May 2021 block meeting there would be no need for a joint plenary of the working parties, since the expected results may be attached to the Chairmen’s Reports. Therefore, the work on WRC-23 topic 9.1 c) “Study the use of International Mobile Telecommunication systems for fixed wireless broadband in the frequency bands allocated to the fixed service on a primary basis, in accordance with [Resolution **175 (WRC-19)**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0024PDFE.pdf)” was conducted in the Ad Hoc working group (WG) 5A/5C.

The WG considered all the input contributions assigned to it: Documents [5A/221](https://www.itu.int/md/R19-WP5A-C-0221/en) [Annex 8](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0221!N08!MSW-E.docx) (WP5A); [5A/221](https://www.itu.int/md/R19-WP5A-C-0221/en) [Annex 9](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0221!N09!MSW-E.docx) (WP5A); [5A/221](https://www.itu.int/md/R19-WP5A-C-0221/en) [Annex 18](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0221!N18!MSW-E.docx) (WP5A); [5A/251](https://www.itu.int/md/R19-WP5A-C-0251/en) §3.17 (WMO); [5A/271](https://www.itu.int/md/R19-WP5A-C-0271/en) (USA); [5A/273](https://www.itu.int/md/R19-WP5A-C-0273/en) (IAFI); [5A/307](https://www.itu.int/md/R19-WP5A-C-0307/en) (China); [5A/321](https://www.itu.int/md/R19-WP5A-C-0321/en) (CEPT); [5A/329](https://www.itu.int/md/R19-WP5A-C-0329/en) (Egypt); and [5A/336](https://www.itu.int/md/R19-WP5A-C-0336/en) (UAE).

Document [5A/251](https://www.itu.int/md/R19-WP5A-C-0251/en) §3.17 (WMO) was noted for information. Based on the other contributions, the WG discussed the vocabulary, the proposed updates of existing Recommendations, and the proposed development of a new draft Recommendation/Report; however, no consensus could be reached due to the shortness of time available, all the input contributions are carried forward to the next meeting, and WP5A and WP5C agreed to the creation of a correspondence group to progress the work between the 25th and 26th meetings of the working parties, with the Terms of Reference in Attachment 9 to [Annex 3](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N03!MSW-E).

No liaison statements to other working parties were considered. Input contributions are encouraged for the next meeting scheduled for November 2021 to help progress the work on topic 9.1 c).

# 4 Summary of WRC-23 preparations

WP5A has responsibility for one WRC-23 agenda item and two topics under agenda item 9.1, as summarized in the following table:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Agenda item /  Topic | Topic | Resolution | Draft CPM text | Workplan/ Report of activities |
| 1.3 | Primary allocation of the band 3 600-3 800 MHz to the mobile service within Region 1 | [**246** (WRC-19)](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0003PDFE.pdf) | [Annex 4](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N04!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en) | [Annex 5](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N05!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en) |
| /9.1 b) | Amateur service and amateur-satellite service allocations in 1 240-1 300 MHz | [**774** (WRC‑19)](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0023PDFE.pdf) | [Annex 6](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N06!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en) | [Annex 7](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N07!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en) |
| /9.1 c) | IMT for fixed wireless broadband in the frequency bands allocated to the fixed services on primary basis | [**175** (WRC-19)](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0024PDFE.pdf) | [Annex 8](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N08!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en) | [Annex 9](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N09!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en) |

These annex numbers of the WP5A Chairman’s Report are maintained from meeting to meeting until the work is completed. The annexes with the work plans will be converted to reports of the work undertaken as the work is progressed.

Refer to [section 3](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N01!MSW-E.docx#s3) of [Annex 1](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N01!MSW-E.docx) for further information on the WRC-23 preparations, in particular the principles in [section 3.1](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N01!MSW-E.docx#s31) of [Annex 1](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N01!MSW-E.docx) to [Doc.  5A/359](http://www.itu.int/md/R19-WP5A-C-0359/en) or in the Annex to [CVC-16/2](https://www.itu.int/md/R19-CVC-C-0002/en).

WP5A invites the membership to provide characteristics and protection criteria where applicable for radiocommunication systems operating and intended to operate in the future in the frequency band subject to WRC-23 agenda items.

# 5 Objectives for the twenty-sixth meeting of WP5A

The principal objective for the 26th meeting of Working Party 5A is to assess the work that may need to be conducted by WP5A in support of the preparations for WRC-23, as per the results of CPM23-1, and to continue the work on the study questions assigned to WP5A.

Based on the reports from the Working Groups of WP5A (cf. [Annex 3](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N03!MSW-E)), the following overall objectives are tentatively set for the 26th meeting of WP5A:

**1) Amateur and amateur-satellite services**

– Based on contributions continue work on WRC-23 agenda item 9.1 b).

– Update WG5A-1 work plan as required.

– Respond to liaison notes from other groups as appropriate.

– Based on contributions continue work on revisions to Rec. ITU-R M.1732 ([Annex 11](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N11!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)).

– Progress the work on the preliminary draft new Report ITU-R M.[AMATEUR.CHARACTERISTICS] ([Annex 10](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N10!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)).

– Deal with any other work relevant to the amateur and amateur-satellite service that is brought to the meeting.

**2) Systems and standards**

– Development of the working document towards a preliminary draft new Recommendation ITU-R M.[RSTT\_FRQ] – “Spectrum Harmonization for Railway Radiocommunication Systems between Train and Trackside (RSTT)” ([Annex 15](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N15!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)).

– Development of the working document towards a preliminary draft revision of Report ITU-R M.2442-0 – “Current and future usage of railway radiocommunication systems between train and trackside” ([Annex 14](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N14!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)).

– Development of the working document towards a preliminary draft revision of Report ITU‑R M.2282-0 – “Systems for public mobile communications with aircraft” ([Annex 14](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N14!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)).

– Development of the working document towards a preliminary draft new Report ITU-R M.[UCS] – “Utility Communication Systems” ([Annex 16](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N16!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)).

– Development of working document towards a preliminary draft revision of Recommendation ITU-R M.1450-5- Characteristics of broadband radio local area networks ([Annex 12](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N12!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)).

– Development of working document towards a preliminary draft revision of Recommendation ITU-R M.1801-2- Radio interface standards for broadband wireless access systems, including mobile and nomadic applications, in the mobile service operating below 6 GHz ([[Annex 13](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N13!MSW-E)](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0221!N12!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)).

– Development of working document towards a preliminary draft revision of Recommendation ITU-R M.2134-5- Receiver characteristics and protection criteria for systems in the mobile service in the frequency range 27.5-29.5 GHz for use in sharing and compatibility studies ([Annex 11](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0221!N11!MSW-E) to [Doc. 5A/221](http://www.itu.int/md/R19-WP5A-C-0221/en)).

– Continue the work on the WAS Study Questions based on input contributions.

**3) Public protection and disaster relief**

– Consider any responses received regarding the possible suppression of the Compendium of ITU’s Work on Emergency Telecommunications.

– Consider input contributions on possible editorial, or more substantive, revisions to Report ITU-R M.2377.

– Consider input contributions on the possible development of a new document on emergency communications under the land mobile service.

**4) Interference and sharing**

– Continue work on the various working documents that are currently under development on interference and sharing (including Annexes [18](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N18!MSW-E), [19](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N19!MSW-E), [20](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N20!MSW-E), [21](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N21!MSW-E), [22](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N22!MSW-E) and [23](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N23!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)).

– Continue work in preparation of WRC-23 agenda item 1.3 as the lead group, including discussion on the possible overlap in the technical studies depending on the agreed parameters.

– Consider how to respond to WP7C related to the ongoing study work in response to Resolution 731.

**5) New technologies**

– Continue to develop a working document towards a PDN revision of Recommendation ITU-R M.2121 – “Harmonization of frequency bands for Intelligent Transport Systems in the mobile service” ([Annex 25](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N25!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)).

– Continue to develop a working document towards a PDN revision of Report ITU-R M.2444 – “Examples of arrangements for Intelligent Transport Systems deployments under the mobile service” ([Annex 26](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N26!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)).

– Continue to develop a working document towards a PDN Report ITU-R M.[CAV] “Connected Automated Vehicles” ([Annex 24](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N24!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)).

– Continue to develop a preliminary draft revision of Report ITU-R M.2417 “Technical and operational characteristics of land-mobile service applications in the frequency range 275‑450 GHz” ([Annex 27](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N27!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en)).

**6) WRC-23 topic 9.1 c)**

– Continue the studies in a joint activity with WP5C based on input contributions.

**7) Land Mobile Handbook**

– Consider the need to update the handbooks that are the responsibility of WP5A. The development of future volumes will be contribution driven.

**8) Vocabulary**

– Continue the development of the land mobile vocabulary and liaise with the CCV.

# 6 Future meetings

The next meeting of WP5A (#26) is expected to be an e-meeting and is scheduled to be held in the period from 15-26 November 2021, which will be the 4th e-meeting of WP5A. If these dates are confirmed the deadline for contributions will be 1600 hours UTC, Monday, 8 November 2021[[2]](#footnote-2).

# 7 Progression of the work and concluding remarks

The work may continue by correspondence. The correspondence groups will conduct their work using the Share Point facilities as described in section 6.5 of [Annex 1](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N01!MSW-E) to [Doc. 5A/359](https://www.itu.int/md/R19-WP5A-C-0359/en).

[Annex 1](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0359!N01!MSW-E) also summarizes the status of the texts that are the responsibility of WP5A (section 1), the structure of WP5A (section 2), and the list of contacts for liaison and collaboration with other organizations under Resolution ITU-R 9-5 (section 4).

The WP5A and wireless access systems (WAS) home pages can be found, respectively, at:

<http://www.itu.int/ITU-R/go/rwp5a/en>

<http://www.itu.int/ITU-R/go/rwp8a-was>.

In closing, the Chairman thanks all the WP5A participants for their hard work, and in particular the Chairmen of the Working Groups, Ms. Amy Sanders and Messrs. Dale Hughes, Lang Baozhen, Michael Kraemer, and Hitoshi Yoshino; the LMH Rapporteur, Mr. Takahiko Yamazaki; the Vocabulary Rapporteur, Mr. Brian Patten; the Liaison Rapporteurs, Mses. Gabrielle Owen and Amy Sanders and Messrs. Jonathan Siverling, Paul Najarian, Hitoshi Yoshino, and Brian Copsey; and the BR, in particular the SG5 Counsellor, Mr. Uwe Loewenstein, and his team for the excellent support provided at the meetings, as well as the organizers and moderators that supported this e‑meeting with the use of GoToWebinar tool. Special thanks also to the members of the terrestrial services department for kindly providing on short notice the requested extensive information from the MIFR for all incumbent services in the frequency bands studied under WRC-23 agenda items for which WP5A is a responsible or contributing group.

1. The BR provided the requested information in a timely manner in Documents [5A/355](https://www.itu.int/md/R19-WP5A-C-0355/en) and [5A/356](https://www.itu.int/md/R19-WP5A-C-0356/en).

    [↑](#footnote-ref-1)
2. Members are strongly advised to pay attention to the strict time deadline for contributions; refer to the forthcoming [5/LCCE Circular Letter](https://www.itu.int/md/R00-SG05-CIR/e) announcing the meeting. It is also advised to submit the contributions early in the case there are technical difficulties with either the email servers or the files submitted, because the revision of input contributions is not possible after the deadline. [↑](#footnote-ref-2)