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| **Radiocommunication Study Groups** |  |
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|  | **Document 5A/708-E** |
| **8 December 2022** |
| **English only** |
| Chairman, Working Party 5A | |
| report on the TWENTY-EIGHTH meeting of working party 5a | |
| (Geneva, 14-25 November 2022) | |

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Annexes

[1](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N01!MSW-E.docx) Working Party 5A Management

[2](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!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-0708!N03!MSW-E.docx) Consolidation of reports from the Working Groups of Working Party 5A

[4](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N04!MSW-E.docx) Working document towards preliminary draft revisions of the Questions assigned to Working Party 5A

[5](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N05!MSW-E.docx) Preliminary draft new Report ITU-R M.[AMATEUR.CHARACTERISTICS] – Amateur and amateur-satellite services characteristics and usage in the 1 240-1 300 MHz frequency band (*Source:* Doc. 5A/TEMP/254)

[6](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N06!MSW-E.docx) Preliminary draft new Recommendation ITU-R M.[AS GUIDANCE] – Guidance on technical and operational measures for the use of the frequency band 1 240-1 300 MHz by the Amateur and Amateur-satellite service in order to protect the RNSS (space-to-Earth) (*Source:* Doc. 5A/TEMP/258R1)

[7](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N07!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/261)

[8](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N08!MSW-E.docx) Working document towards a preliminary draft new Recommendation ITU-R M.[RSTT\_FRQ] – Harmonization of spectrum for existing and future Railway Radiocommunication Systems between Train and Trackside (RSTT) within the frequency bands allocated to the mobile service (*Source:* Doc. 5A/TEMP/260)

[9](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N09!MSW-E.docx) Working document towards a preliminary draft revision of Recommendation ITU-R M.1450-5 – Characteristics of broadband radio local area networks   
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[10](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N10!MSW-E.docx) Working document towards a preliminary draft revision of Report ITU-R M.2282-0 – Systems for public mobile communications with aircraft   
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[11](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N11!MSW-E.docx) Working document towards a preliminary draft new Report ITU-R M.[Utilities] – Utility Radiocommunication Systems operating in the land mobile service   
(*Source:* Doc. 5A/TEMP/267)

[12](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N12!MSW-E.docx) Working document towards a preliminary draft new Report ITU-R M.[AUDIO-PMSE\_LMS] – [Status and trends regarding regional and global usage of audio applications of PMSE in the land mobile service] (*Source:* Doc. 5A/TEMP/259R1)

[13](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N13!MSW-E.docx) Working document towards a preliminary draft Revision of Resolution ITU-R 55-3 – “ITU-R studies of disaster prediction, detection, mitigation and relief”   
(*Source:* Doc. 5A/TEMP/247)

[14](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N14!MSW-E.docx) Working document towards a draft report for sharing and compatibility studies in compliance with Resolution **246 (WRC-19)** in relation with WRC-23 agenda item 1.3 (*Source:* Doc. 5A/TEMP/265R1)

[15](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N15!MSW-E.docx) Working document towards a preliminary draft revision of 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/266)

[16](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N16!MSW-E.docx) Working document towards a preliminary draft new Report ITU-R M.[CAV] – Connected Automated Vehicles (CAV) (*Source:* Doc. 5A/TEMP/276R1)

[17](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N17!MSW-E.docx) 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/252R1)

[18](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N18!MSW-E.docx) 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/251R1)

[19](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N19!MSW-E.docx) Preliminary draft revision of Report ITU-R M.2479-0 – The use of land mobile systems, excluding IMT, for machine-type communications   
(*Source:* Doc. 5A/TEMP/275R1)

[20](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N20!MSW-E.docx) Working document towards draft new revision of Recommendation ITU-R F.1401-1 – Considerations for the identification of possible frequency bands for fixed wireless access and related sharing studies (*Source:* Doc. 5A/TEMP/269)

[21](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N21!MSW-E.docx) Working document towards a preliminary draft revision of Recommendation ITU-R F.1490-1 – Generic requirements for fixed wireless access systems  
(*Source:* Doc. 5A/TEMP/270)

[22](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N22!MSW-E.docx) Working document towards a preliminary draft revision of Recommendation ITU-R F.1763-1 – Radio interface standards for broadband wireless access systems in the fixed service operating below 66 GHz (*Source:* Doc. 5A/TEMP/271)

[23](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N23!MSW-E.docx) List of output documents

Annexes from previous WP 5A 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.”

[Annex 27](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0491!N27!MSW-E.docx) to [Doc. 5A/491](https://www.itu.int/md/R19-WP5A-C-0491/en): Working document towards a preliminary draft new Report ITU-R M.[LMS.SPEC.NEED.ABOVE.275 GHz] - Spectrum needs for land-mobile service applications in the frequency above 275 GHz.

[Annex 16](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0597!N16!MSW-E.docx) to [Doc. 5A/597](https://www.itu.int/md/R19-WP5A-C-0597/en): 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.

[Annex 17](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0597!N17!MSW-E.docx) to [Doc. 5A/597](https://www.itu.int/md/R19-WP5A-C-0597/en): Working document towards a preliminary draft new Report ITU-R   
M.[BB-WAS.FREQ] – Frequencies used by systems based on radio interface standards for broadband wireless access.

[Annex 20](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0597!N20!MSW-E.docx) to [Doc. 5A/597](https://www.itu.int/md/R19-WP5A-C-0597/en): Working document towards a preliminary draft revision of Report ITU-R M.2377-1 – Radiocommunication objectives and requirements for Public Protection and Disaster Relief.

[Annex 24](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0597!N24!MSW-E.docx) to [Doc. 5A/597](https://www.itu.int/md/R19-WP5A-C-0597/en): 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**.

Management documents referred to in the Report:

List of input documents: [Document 5A/704](https://www.itu.int/md/R19-WP5A-C-0704/en)

Final list of participants: [Document 5A/707](https://www.itu.int/md/R19-WP5A-C-0707/en)

1 Introduction

Working Party 5A (WP 5A) held its twenty-eighth (28th) meeting in Geneva from 14 to 25 November 2022. The meeting participants (see list in [Doc. 5A/707](https://www.itu.int/md/R19-WP5A-C-0707/en)) included up to 365 participants (note that the actual number was less because some participants represented more than one organization), from 55 countries representing 53 Member States, 17 recognized operating agencies, 20 scientific or industrial organizations, 7 regional and other international organizations, 2 Intergovernmental Organizations Operating Satellite Systems, 1 associate, 2 academia, and the ITU staff. WP 5A held three plenary sessions during the meeting period (on 14, 22 and 25 November 2022, see the meeting agendas in Documents 5A/ADM/[108R1](https://www.itu.int/md/R19-WP5A-ADM-0108/en), [143](https://www.itu.int/md/R19-WP5A-ADM-0143/en) and [153R1](https://www.itu.int/md/R19-WP5A-ADM-0153/en)).

The meeting dealt with 110 input documents (108 listed in [Doc. 5A/704](https://www.itu.int/md/R19-WP5A-C-0704/en) and 2 liaison documents that arrived during the meeting; Documents [5A/705](https://www.itu.int/md/R19-WP5A-C-0705) and [5A/706](https://www.itu.int/md/R19-WP5A-C-0706/en)) and upon their consideration the meeting prepared 39 output temporary documents (see list in [Annex 23](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N23!MSW-E.docx) to [Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)).

The opening plenary meeting agenda is in [Document 5A/ADM/108R1](https://www.itu.int/md/R19-WP5A-ADM-0108/en) and the SG 5 Counsellor presented [Document 5A/INFO/5](https://www.itu.int/md/R19-WP5A-INF-0005/en).

The Chairman’s Report of the twenty-seventh meeting of WP 5A ([Doc. 5A/597](https://www.itu.int/md/R19-WP5A-C-0597/en)) was approved, including the objectives for the 28th meeting as presented in section 5 of [Document 5A/597](https://www.itu.int/md/R19-WP5A-C-0597/en).

The structure of WP 5A for this meeting was adopted as presented in section 2.2 of [Annex 1](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0597!N01!MSW-E.docx) to [Document 5A/597](https://www.itu.int/md/R19-WP5A-C-0597/en).

[Annex 1](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N01!MSW-E.docx) to this meeting report contains the management aspects of WP 5A, including a summary of the status of the texts that are the responsibility of WP 5A, the WP 5A contacts in external organizations, and the use of electronic facilities.

The chairman informed about two meetings of the Coordinating Committee for Terminology (CCT = [CCV](https://www.itu.int/en/ITU-R/study-groups/rccv/)+[SCV](https://www.itu.int/en/ITU-T/committees/scv/)) meetings held on 3 June and 10 Nov 2022 (Docs. [CCV/42](https://www.itu.int/md/R19-CCV-C-0042/en), [CCV/51](https://www.itu.int/md/R19-CCV-C-0051/en)). The chairman of the CCV explain that they are considering updating Recommendation ITU-R V.431 with the addition of a new symbol for some specific bands and align the units with the SI.

The SG 5 Counsellor informed about a meeting of the UNECE Working Party on Automated/Autonomous and Connected Vehicles ([GRVA](https://unece.org/transport/vehicle-regulations/working-party-automatedautonomous-and-connected-vehicles-introduction)). This working party deals with the safety provisions related to the dynamics of vehicles in particular braking and steering. This group has been added to the list of WP 5A contacts relating to the ITS topic.

The chairman informed of the CPM23 management meeting that was held on 8-9 November 2022 to finalize the draft CPM Report based on the draft CPM text submitted by the responsible groups and the work of the chapter Rapporteurs. The Draft CPM Report is published and available at: https://www.itu.int/md/R19-CPM23.2-C/en.

The chairman drew the attention of the meeting to the WP 5A texts that are listed in section 1 of Annex 1 to [Document 5A/597](https://www.itu.int/md/R19-WP5A-C-0597/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. Canada presented [Document 5A/655](https://www.itu.int/md/R19-WP5A-C-0655/en) containing a template for the update of the Questions assigned to WP 5A proposing that it be attached to the chairman’s report for further work ([Annex 4](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N04!MSW-E.docx)).

The work program for the WP 5A meeting was adopted as presented in [Document 5A/ADM/106](http://www.itu.int/md/R19-WP5A-ADM-0106/en), with additions as shown in [Table 1](#t1) below. The initial draft schedule was adopted as per [Document 5A/ADM/107](http://www.itu.int/md/R19-WP5A-ADM-0107/en) and as the meetings of the working groups progressed adjustments to the schedule were made, in particular by removing unnecessary sessions, with the final list in [Document  5A/ADM/107(Rev.4)](http://www.itu.int/md/R19-WP5A-ADM-0107/en).

With the completion of the draft CPM text for topic 9.1-c, the work on fixed wireless access continues in WP 5A under Question [215-4/5](http://www.itu.int/pub/R-QUE-SG05.215) “Frequency bands, technical characteristics, and operational requirements for fixed wireless access systems in the fixed and/or land mobile services” and at the 28th meeting were able to consider in detail for the first time carry forward inputs from past meetings in this study period that proposed to update some F-series Recommendations relevant to the topic of the use of IMT technologies for fixed wireless applications.

At the opening plenary of WP 5A the SG 5 Counsellor described the working methods for offline email discussions during WP 5A/5C meetings. For details of these offline email activities refer to the [WP 5A 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).

The chairman asked the meeting participants to review the list of contacts that appears in section 4 of [Annex 1](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N01!MSW-E.docx) to [Document 5A/597](http://www.itu.int/md/R19-WP5A-C-0597/en) and inform him of any necessary changes (the updated list appears in section 4 of Annex 1 to [Document 5A/708](http://www.itu.int/md/R19-WP5A-C-0708/en) and updates between meetings are maintained by the BR and the Chairman of WP 5A). 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 WP 5A texts, 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) in section 2.3 of Annex 1, and guidance on vocabulary work in Section 2.1 §12 of Annex 1, pointing out that the latest revision is dated 7 September 2022.

At the opening Plenary of WP 5A 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 [Document 5A/701](https://www.itu.int/md/R19-WP5A-C-0701/en), on certain countries in Region 1 by Gabrielle Owen, The Netherlands, in [Document 5A/703](https://www.itu.int/md/R19-WP5A-C-0703/en), and on certain countries in Region 2 by Jonathan Siverling, USA, in [Document 5A/702](https://www.itu.int/md/R19-WP5A-C-0702/en); and at the closing plenary a report on certain countries in Region 3 by Hitoshi Yoshino, Japan, in [Document 5A/706](https://www.itu.int/md/R19-WP5A-C-0706/en). 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.

It was tentatively agreed that the 2 remaining meetings of WP 5A in this study cycle only need to be of eight working days.

# 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‑seventh meeting of WP 5A (section 5 of [Doc. 5A/708](http://www.itu.int/md/R19-WP5A-C-0708/en)) noting that need to consider also the proposals in the input contributions for the twenty-eighth meeting, in particular those related to the WRC-23 agenda items and topics under the responsibility of WP 5A. Actions regarding future updates of documents that have a joint WG5A/5C 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 [Document 5A/ADM/106(Rev.1)](http://www.itu.int/md/R19-WP5A-ADM-0106/en) as shown in [Table 1](#t1), including the organization of the work for the meeting (the documents in the rows “Reports” and “General” are assigned to all the Working Groups).  This table shows the assignments of contributions to a single working group to ensure that all contributions are considered; nevertheless, any contribution to the meeting can also be considered by the other working groups as needed.

TABLE 1

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

The documents carried forward to this meeting are highlighted in green (27 documents).  
New contributions: 597-706 (110 documents)

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| **Working Party 5A (Chairman:** [**José Costa**](mailto:jose.costa@ericsson.com?subject=WP5A-meeting)**, Canada)** | |
| **Reports** | [597](https://www.itu.int/md/R19-WP5A-C-0597/en) (Chairman, WP 5A); [701](http://www.itu.int/md/R19-WP5A-C-0701) (Disaster Relief L.R.); [702](http://www.itu.int/md/R19-WP5A-C-0702) (L.R. #2); [703](http://www.itu.int/md/R19-WP5A-C-0703) (L.R. #1);  706 (L.R. #3) |
| **General** | [541](https://www.itu.int/md/R19-WP5A-C-0541/en) (Canada); [655](http://www.itu.int/md/R19-WP5A-C-0655) (Canada); [704](http://www.itu.int/md/R19-WP5A-C-0704) (list of documents) |

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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) | *Characteristics:* [597](https://www.itu.int/md/R19-WP5A-C-0597/en) [Annex 10](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0597!N10!MSW-E.docx) (WP 5A); [666](http://www.itu.int/md/R19-WP5A-C-0666) (France)  *Proposed new Rec. M.[AS GUIDANCE]:* [597](https://www.itu.int/md/R19-WP5A-C-0597/en) [Annex 11](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0597!N11!MSW-E.docx) (WP 5A); [618](http://www.itu.int/md/R19-WP5A-C-0618) (WP 4C);  [656](http://www.itu.int/md/R19-WP5A-C-0656) (Canada); [661](http://www.itu.int/md/R19-WP5A-C-0661) (Russian Federation); [664](http://www.itu.int/md/R19-WP5A-C-0664) (France, Korea, China); [665](http://www.itu.int/md/R19-WP5A-C-0665) (France); [670](http://www.itu.int/md/R19-WP5A-C-0670) (IARU)  *Amateur satellite:* [588](https://www.itu.int/md/R19-WP5A-C-0588/en) (WP 4A) |
| **Sharing studies** | *Rec. ITU-R M.1732:* [597](https://www.itu.int/md/R19-WP5A-C-0597/en) [Annex 12](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0597!N12!MSW-E.docx) (WP 5A); [671](http://www.itu.int/md/R19-WP5A-C-0671) (IARU) |

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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)**)** | *Rep. ITU-R M.2442:* [597](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0597!N11!MSW-E.docx) [Annex 13](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0597!N13!MSW-E.docx) (WP 5A); [651](http://www.itu.int/md/R19-WP5A-C-0651) (Korea); [686](http://www.itu.int/md/R19-WP5A-C-0686) (China)  *Rec. RSTT Frequencies:* [597](https://www.itu.int/md/R19-WP5A-C-0597/en) [Annex 14](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0597!N14!MSW-E.docx) (WP 5A); [619](http://www.itu.int/md/R19-WP5A-C-0619) (APT); [620](http://www.itu.int/md/R19-WP5A-C-0620) (APT); [672](http://www.itu.int/md/R19-WP5A-C-0672) (ASMG); [673](http://www.itu.int/md/R19-WP5A-C-0673) (CITEL); [699](http://www.itu.int/md/R19-WP5A-C-0699) (CEPT) |
| **Broadband Wireless Access** | *Rec. ITU-R 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) (WP 5A)  *Rec. ITU-R M.1801:* [597](https://www.itu.int/md/R19-WP5A-C-0597/en) [Annex 16](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0597!N16!MSW-E.docx) (WP 5A)  *Rep. ITU-R M.[BB-WAS-FREQ]:* [597](https://www.itu.int/md/R19-WP5A-C-0597/en) [Annex 17](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0597!N17!MSW-E.docx) (WP 5A); [654](http://www.itu.int/md/R19-WP5A-C-0654) (Canada); [675](http://www.itu.int/md/R19-WP5A-C-0675) (IEEE)  *Rec. ITU-R M.1450:* [597](https://www.itu.int/md/R19-WP5A-C-0597/en) [Annex 15](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0597!N15!MSW-E.docx) (WP 5A); [642](http://www.itu.int/md/R19-WP5A-C-0642) (USA); [650](http://www.itu.int/md/R19-WP5A-C-0650) (Korea); [659](http://www.itu.int/md/R19-WP5A-C-0659) (Japan);  [663](http://www.itu.int/md/R19-WP5A-C-0663) (Canada); [667](http://www.itu.int/md/R19-WP5A-C-0667) (Brazil); [674](http://www.itu.int/md/R19-WP5A-C-0674) (IEEE); [677](http://www.itu.int/md/R19-WP5A-C-0677) (France); [679](http://www.itu.int/md/R19-WP5A-C-0679) (China) |
| **Land mobile systems** | *Utilities:* [597](https://www.itu.int/md/R19-WP5A-C-0597/en) [Annex 18](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0597!N18!MSW-E.docx) (WP 5A); [604](https://www.itu.int/md/R19-WP5A-C-0604/en) (WP 5C); [638](http://www.itu.int/md/R19-WP5A-C-0638) (USA); [648](http://www.itu.int/md/R19-WP5A-C-0648) (WP 5D); [649](http://www.itu.int/md/R19-WP5A-C-0649) (Korea); [668](http://www.itu.int/md/R19-WP5A-C-0668) (Brazil); [687](http://www.itu.int/md/R19-WP5A-C-0687) (China); [697](http://www.itu.int/md/R19-WP5A-C-0697) (UTC America Latina); [698](http://www.itu.int/md/R19-WP5A-C-0698) (UK)  *Testbeds:* [609](http://www.itu.int/md/R19-WP5A-C-0609) (ITU-T [FG-TBFxG](https://www.itu.int/en/ITU-T/focusgroups/tbfxg)); [646](http://www.itu.int/md/R19-WP5A-C-0646) (WP 5D)  *PSME/Res. 59:* [597](https://www.itu.int/md/R19-WP5A-C-0597/en) [Annex 19](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0597!N19!MSW-E.docx) (WP 5A); [644](http://www.itu.int/md/R19-WP5A-C-0644) (USA); [689](http://www.itu.int/md/R19-WP5A-C-0689) (Germany); [690](http://www.itu.int/md/R19-WP5A-C-0690) (Germany) |
| **Air to Ground** | *Update of Rep. ITU-R M.2282:* [359](https://www.itu.int/md/R19-WP5A-C-0359/en) [Annex 17](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N17!MSW-E.docx) (WP 5A); [683](http://www.itu.int/md/R19-WP5A-C-0683) (China); [694](http://www.itu.int/md/R19-WP5A-C-0694) (Germany) |
| **RLAN characteristics** | *Support WG 4 with characteristics for sharing & coexistence studies* |
| **ANTS, HNTS** | [633](http://www.itu.int/md/R19-WP5A-C-0633) (ITU-T SG 15); [634](http://www.itu.int/md/R19-WP5A-C-0634) (ITU-T SG 15) |

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| **Working Group 3: PPDR (Chairman:** [**Amy Sanders**](mailto:asanders@ntia.gov?subject=WP5A-meeting)**, USA)** | |
| **Update of ITU-R Reports** | *M.2377:* [597](https://www.itu.int/md/R19-WP5A-C-0597/en) [Annex 20](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0597!N20!MSW-E.docx) (WP 5A) |
| **Updates of ITU-R Resolutions** | *Res. 55:* [597](https://www.itu.int/md/R19-WP5A-C-0597/en) [Annex 21](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0597!N21!MSW-E.docx) (WP 5A); [639](http://www.itu.int/md/R19-WP5A-C-0639) (USA) |
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| **Working Group 4: Interference and sharing (Chairman:** [**Michael Kraemer**](mailto:michael.kraemer@intel.com?subject=WP5A-meeting)**, Germany)** | |
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| **Sharing studies (general)** | *WRC-23 General:* [621](http://www.itu.int/md/R19-WP5A-C-0621) (WMO)  *HF Adaptive Tutorial:* [603](https://www.itu.int/md/R19-WP5A-C-0603/en) (WP 5C)  *Antennas:* [598](https://www.itu.int/md/R19-WP5A-C-0598/en) (ITU-T SG 2)  *Rep. ITU-R M.2116:* [359](https://www.itu.int/md/R19-WP5A-C-0359/en) [Annex 19](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N19!MSW-E.docx) (WP 5A)  *Rec. ITU-R P.368-9 software:* [608](https://www.itu.int/md/R19-WP5A-C-0608/en) (WP 3M)  *Range 252-296 GHz:* [597](https://www.itu.int/md/R19-WP5A-C-0597/en) [Annex 23](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0597!N23!MSW-E.docx) (WP 5A); [617](http://www.itu.int/md/R19-WP5A-C-0617) (WP 4B); [626](http://www.itu.int/md/R19-WP5A-C-0626) (WP 7D); [628](http://www.itu.int/md/R19-WP5A-C-0628) (WP 7C); [657](http://www.itu.int/md/R19-WP5A-C-0657) (Japan); [678](http://www.itu.int/md/R19-WP5A-C-0678) (France)  *Beam WPT:* [615](http://www.itu.int/md/R19-WP5A-C-0615) (WP 1A); [616](http://www.itu.int/md/R19-WP5A-C-0616) (WP 4C); [627](http://www.itu.int/md/R19-WP5A-C-0627) (WP 7D)  *Non-Beam WPT:* [614](http://www.itu.int/md/R19-WP5A-C-0614) (WP 1A); [695](http://www.itu.int/md/R19-WP5A-C-0695) (Germany); [705](http://www.itu.int/md/R19-WP5A-C-0705) (WP 5B)  *WPT-EV:* [630](http://www.itu.int/md/R19-WP5A-C-0630) (WP 7A) |
| **Vocabulary** | [611](http://www.itu.int/md/R19-WP5A-C-0611) (CCT); [647](http://www.itu.int/md/R19-WP5A-C-0647) (WP 5D); [653](http://www.itu.int/md/R19-WP5A-C-0653) (ATDI) |
| **RLAN sharing (**[**Res. 229**](https://www.itu.int/oth/R0A0600009D/en)**)** | [529](https://www.itu.int/md/R19-WP5A-C-0529/en) (WP 7C); [555](https://www.itu.int/md/R19-WP5A-C-0555/en) (France); [676](http://www.itu.int/md/R19-WP5A-C-0676) (France) |
| **AI 1.2: IMT** [**Res. 245**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0002PDFE.pdf) |  |
| **AI 1.3: 3.6-3.8 R1** [**Res. 246**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0003PDFE.pdf) | [597](https://www.itu.int/md/R19-WP5A-C-0597/en) [Annex 22](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0597!N22!MSW-E.docx) (WP 5A); [660](http://www.itu.int/md/R19-WP5A-C-0660) (Russian Federation); [680](http://www.itu.int/md/R19-WP5A-C-0680) (China); [681](http://www.itu.int/md/R19-WP5A-C-0681) (China) |
| **AI 1.4: HIBS** [**Res. 247**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0004PDFE.pdf) | [612](http://www.itu.int/md/R19-WP5A-C-0612) (WP 5D); [622](http://www.itu.int/md/R19-WP5A-C-0622) (WP 6A); [625](http://www.itu.int/md/R19-WP5A-C-0625) (Chairmen, WPs 3J, 3K & 3M) |
| **AI 1.5: 470-960 R1** [**Res. 235**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000C0036PDFE.pdf) |  |
| **AI 1.8: Res. 155&5.484B** [**Res. 171**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0027PDFE.pdf) |  |
| **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) |  |
| **AI 1.12: EESS @45** [**Res. 656**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0012PDFE.pdf) | [605](https://www.itu.int/md/R19-WP5A-C-0605/en) (WP 5C); [623](http://www.itu.int/md/R19-WP5A-C-0623) (WP 6A); [631](http://www.itu.int/md/R19-WP5A-C-0631) (WP 7C); [632](http://www.itu.int/md/R19-WP5A-C-0632) (WP 7C) |
| **AI 1.13: SRS** [**Res. 661**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0013PDFE.pdf) | [601](https://www.itu.int/md/R19-WP5A-C-0601/en) (WP 5C); [629](http://www.itu.int/md/R19-WP5A-C-0629) (WP 7B) |
| **AI 1.14: EESS @231** [**Res. 662**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0014PDFE.pdf) | [606](https://www.itu.int/md/R19-WP5A-C-0606/en) (WP 5C); [635](http://www.itu.int/md/R19-WP5A-C-0635) (WP 7C) |
| **AI 1.15: FSS** [**Res. 172**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0015PDFE.pdf) | [600](https://www.itu.int/md/R19-WP5A-C-0600/en) (WP 5C); [636](http://www.itu.int/md/R19-WP5A-C-0636) (WP 4A) |
| **AI 1.16: FSS ESIM** [**Res. 173**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0016PDFE.pdf) | [599](https://www.itu.int/md/R19-WP5A-C-0599/en) (WP 5C) |
| **AI 1.17: ISL** [**Res. 773**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0017PDFE.pdf) | [602](https://www.itu.int/md/R19-WP5A-C-0602/en) (WP 5C) |
| **AI 1.18: MSS** [**Res. 248**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0018PDFE.pdf) |  |
| **AI 1.19: FSS @17** [**Res. 174**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0019PDFE.pdf) |  |
| **AI 9.1 a): SWS** [**Res. 657**](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0022PDFE.pdf) |  |
| **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) |  |
| [**Res. 731**](https://www.itu.int/oth/R0A060000A1/en)**: >71 GHz** | [597](https://www.itu.int/md/R19-WP5A-C-0597/en) [Annex 24](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0597!N24!MSW-E.docx) (WP 5A); [607](https://www.itu.int/md/R19-WP5A-C-0607/en) (WP 3M); [613](http://www.itu.int/md/R19-WP5A-C-0613) (WP 1A) |

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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)**)** | *CAV (*[*Question ITU-R 261/5*](https://www.itu.int/pub/R-QUE-SG05.261)*):* [597](https://www.itu.int/md/R19-WP5A-C-0597/en) [Annex 25](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0597!N25!MSW-E.docx) (WP 5A); [624](http://www.itu.int/md/R19-WP5A-C-0624) (ITU-T [FG-AI4AD](https://www.itu.int/en/ITU-T/focusgroups/ai4ad)); [637](http://www.itu.int/md/R19-WP5A-C-0637) (USA); [652](http://www.itu.int/md/R19-WP5A-C-0652) (Korea); [658](http://www.itu.int/md/R19-WP5A-C-0658) (Japan); [662](http://www.itu.int/md/R19-WP5A-C-0662) (Canada); [682](http://www.itu.int/md/R19-WP5A-C-0682) (China); [684](http://www.itu.int/md/R19-WP5A-C-0684) (China); [685](http://www.itu.int/md/R19-WP5A-C-0685) (China); [691](http://www.itu.int/md/R19-WP5A-C-0691) (Germany); [692](http://www.itu.int/md/R19-WP5A-C-0692) (Germany); [693](http://www.itu.int/md/R19-WP5A-C-0693) (Germany); [700](http://www.itu.int/md/R19-WP5A-C-0700) (Qualcomm)  *Rec. ITU-R M.2121:* [359](https://www.itu.int/md/R19-WP5A-C-0359/en) [Annex 25](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0359!N25!MSW-E.docx) (WP 5A); [641](http://www.itu.int/md/R19-WP5A-C-0641) (USA); [688](http://www.itu.int/md/R19-WP5A-C-0688) (France)  *Rep. ITU-R M.2444:* [491](https://www.itu.int/md/R19-WP5A-C-0491/en) [Annex 24](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0491!N24!MSW-E.docx) (WP 5A); [640](http://www.itu.int/md/R19-WP5A-C-0640) (USA); [669](http://www.itu.int/md/R19-WP5A-C-0669) (Brazil); [688](http://www.itu.int/md/R19-WP5A-C-0688) (France)  *Rec. ITU-R M.1307:* [571](https://www.itu.int/md/R19-WP5A-C-0571/en) (Japan) |
| [**Q.256/5**](https://www.itu.int/pub/R-QUE-SG05.256)**: >275 GHz** | *Spectrum needs:* [491](https://www.itu.int/md/R19-WP5A-C-0491/en) [Annex 27](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0491!N27!MSW-E.docx) (WP 5A) |
| **M2M** | *Rep. ITU-R M.2479:* [491](https://www.itu.int/md/R19-WP5A-C-0491/en) [Annex 25](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0491!N25!MSW-E.docx) (WP 5A); [610](http://www.itu.int/md/R19-WP5A-C-0610) (ITU-T FG-AI4A); [645](http://www.itu.int/md/R19-WP5A-C-0645) (ITU‑T FG‑AI4A); [696](http://www.itu.int/md/R19-WP5A-C-0696) (Germany) |

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| **Working Group FWA (Chairman:** [**Christine Di Lapi**](mailto:christine.dilapi@hii-tsd.com?subject=WP5A-meeting)**, USA)** | |
| **Documents carried forward** | [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) (WP 5A); [5A/271](http://www.itu.int/md/R19-WP5A-C-0271) (USA); [5A/307](http://www.itu.int/md/R19-WP5A-C-0307) (China); [5A/321](http://www.itu.int/md/R19-WP5A-C-0321) (UK/CEPT PTA); [5A/329](http://www.itu.int/md/R19-WP5A-C-0329) (Egypt); [5A/336](http://www.itu.int/md/R19-WP5A-C-0336) (UAE); [5A/418](http://www.itu.int/md/R19-WP5A-C-0418) (UK/CEPT PT A); [5A/431](http://www.itu.int/md/R19-WP5A-C-0431) (USA); [5A/445](http://www.itu.int/md/R19-WP5A-C-0445) (IAFI); [5A/458](http://www.itu.int/md/R19-WP5A-C-0458) (South Africa); [5A/469](http://www.itu.int/md/R19-WP5A-C-0469) (Egypt); [5A/472](http://www.itu.int/md/R19-WP5A-C-0472) (Russian Federation); [5A/478](http://www.itu.int/md/R19-WP5A-C-0478) (Saudi Arabia, UAE); [5A/521](http://www.itu.int/md/R19-WP5A-C-0521) (USA); [5A/582](http://www.itu.int/md/R19-WP5A-C-0582) (UAE) |
| **New documents** | [643](http://www.itu.int/md/R19-WP5A-C-0643) (USA) |

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](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N03!MSW-E.docx). The texts proposed by these Working Groups in TEMP documents ([Annex 23](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N23!MSW-E.docx)) were considered by WP 5A and those agreed are either included in annexes to this Report for further work to be considered at future meetings of WP 5A or were approved by WP 5A as liaison statements to other groups or for submission to Study Group 5 ([Annex 2](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N02!MSW-E.docx)).

# 3 Executive summary of the results of the meeting

## 3.1 Summary of documents approved by WP 5A

The list of texts that are the responsibility of Working Party 5A (WP 5A) has been updated in line with [Document 5/1(Rev.2)](http://www.itu.int/md/R19-SG05-C-0001/en) including the assignment of responsibilities to the working groups of WP 5A and identification of topics for the Recommendations and Reports ([Annex 1](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N01!MSW-E.docx)).

At a previous meeting, WP 5A 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 WP 5A between the meetings of WP 5A (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 WP 5A meetings.

The consolidation of all the texts approved by WP 5A at its 28th meeting, including 4 proposals to Study Group 5 and 4 liaison statements, appears in [Annex 2](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N02!MSW-E.docx) to [Document 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en).

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

**3.2.1 Draft revised Recommendation proposed for PSAA**

WP 5A proposed to Study Group 5 the following draft revised Recommendation for consideration for the procedure of simultaneous adoption and approval (PSAA).

– 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” – [Document 5/101](https://www.itu.int/md/R19-SG05-C-0101/en).

**3.2.2 Draft new and revised Reports proposed for approval**

WP 5A proposed to Study Group 5 the following draft new and revised Reports for consideration for approval.

– 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 – (Question ITU-R 256-1/5, ITU-R 257-1/5) – [Document 5/102](https://www.itu.int/md/R19-SG05-C-0102/en).

– 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 – [Document 5/80](https://www.itu.int/md/R19-SG05-C-080/en).

**3.2.3 Suppression of Recommendation**

WP 5A proposed to Study Group 5 the suppression of Recommendation [ITU-R M.1307 (1997](http://www.itu.int/rec/R-REC-M.1307/en)) “Automatic determination of location and guidance in the land mobile services”, since the information is very old and out of date.

**3.3 Amateur and amateur-satellite services**

Continued the work on a Preliminary Draft New Recommendation ITU-R M.[AS.GUIDANCE] “Guidance on technical and operational measures for the use of the frequency band 1 240-1 300 MHz by the Amateur and Amateur-satellite service in order to protect the RNSS (space-to-Earth)” ([Annex 6](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N06!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N06!MSW-E.docx)](http://www.itu.int/md/R15-WP5A-C-0650/en)) and a Preliminary Draft New Report ITU-R M.[AMATEUR CHARACTERISTICS] “Amateur and amateur-satellite services characteristics and usage in the 1 240-1 300 MHz frequency band” ([Annex 5](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N05!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N05!MSW-E.docx)](http://www.itu.int/md/R15-WP5A-C-0650/en)). Completed the work on the draft revision of Recommendation ITU-R M.1732 (see section 3.2.1).

**3.4 Systems and standards**

*RSTT:* continued the development 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 7](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N07!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)) and 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) within the frequency bands allocated to the mobile service” (Annex 8 to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)). Some members are of the view that sharing studies should be performed for these systems before harmonized frequencies can be recommended and other members are of the view that these systems would operate under an allocated radiocommunication service in accordance with the RR, so sharing studies should only be considered on a case-by-case basis when needed.

*RLAN & BWA standards:* continued 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” ([Annex 9](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N09!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)). No contributions were received at the 29th meeting toward developing the 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 16](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N16!MSW-E.docx) to [Doc. 5A/597](https://www.itu.int/md/R19-WP5A-C-0597/en)). Some members are of the view that sharing studies should be performed before characteristics or standards can be recommended and other members are of the view that the systems would operate under an allocated radiocommunication service in accordance with the RR, so sharing studies should only be considered on a case-by-case basis when needed.

*Utilities:* continued the development of a working document towards a preliminary draft new Report ITU-R M.[Utilities] – “Utility Radiocommunication Systems operating in the land mobile service” ([Annex 11](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N11!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)).

*Systems for public mobile communications with aircraft:* continued the work on the development of working document towards a preliminary draft revision of Report ITU-R M.2282-0 – “Systems for public mobile communications with aircraft” ([Annex 10](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N10!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)).

*Programme Making and Special Events (PMSE):* continued the work on the development of working document towards a preliminary draft new Report ITU-R M.[AUDIO-PMSE\_LMS] – [Status and trends regarding regional and global usage of audio applications of PMSE in the land mobile service] ([Annex 12](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N12!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)).

**3.5 Public protection and disaster relief**

The meeting advanced work on the draft revision of Resolution ITU-R 55-3 ([Annex 13](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N13!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)). Initiated the development of working documents toward revisions of Questions ITU-R 37-6/5 and ITU-R 209-6/5 ([Annex 4](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N04!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)).

**3.6 Interference and sharing**

Completed the draft new Report ITU-R M.[252-296 GHZ.LMS.FS.COEXIST] for submission to Study Group 5 (see section 3.2.2), developed a reply liaison statement to the CCT related to symbols in Recommendation ITU-R V.431-8 inconsistent with the definitions of the SI units, updated the working document on sharing and compatibility studies related to WRC-23 agenda item 1.3 ([Annex 14](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N14!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)), updated the working document towards a revision of Report ITU-R M.2116 ([Annex 15](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N15!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)), identified some issues that will need to be addressed at the next WP 5A meeting as outlined in carried-forward documents, and took note of a number of liaison statements from other Working Parties that did not require further action from WP 5A.

**3.7 New technologies**

Continued to develop a working document towards a preliminary draft new Report ITU-R M.[CAV] on Connected Automated Vehicles (CAV) ([Annex 16](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N16!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)).

Continued to develop a working document towards preliminary draft Revision of Recommendation ITU-R M.2121-0 on harmonization of frequency bands for Intelligent Transport Systems in the mobile service and elevated its status to preliminary draft Revision ([Annex 17](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N17!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)).

Continued to develop a working document towards preliminary draft Revision of Report ITU-R M.2444-0 on examples of arrangements for Intelligent Transport System and elevated its status to preliminary draft Revision ([Annex 18](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N18!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)).

Continued to develop a working document towards a preliminary draft revision of Report ITU-R M.2479-0 on the use of land mobile systems, excluding IMT, for machine-type communications, and elevated its status to preliminary draft Revision ([Annex 19](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N19!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)).

Initiated its work on the development of a working document towards a preliminary draft new Question [FUTURE-ITS-CAV] on studies related to ITS, CAV and future topics ([Annex 4](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N04!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)).

**3.8 Land Mobile Handbook**

No new activity since the publication of the 2021 edition of [Volume 4](http://www.itu.int/pub/R-HDB-49/en) of the Land Mobile Handbook – “Intelligent Transport Systems” (<https://www.itu.int/pub/R-HDB-49/en>).

**3.9 Vocabulary**

Work on vocabulary for topics under the responsibility of WP 5A continues and liaison activity with other groups and the CCV is taking place.

**3.10 Fixed Wireless Access**

With the completion of the draft CPM text for topic 9.1-c, the work on fixed wireless access continues in WP 5A under Question [215-4/5](http://www.itu.int/pub/R-QUE-SG05.215) “Frequency bands, technical characteristics, and operational requirements for fixed wireless access systems in the fixed and/or land mobile services” and at the 28th meeting were able to consider in detail for the first time carry forward inputs from past meetings in this study period that proposed to update some F-series Recommendations relevant to the topic of the use of IMT technologies for fixed wireless applications. Namely, working documents towards preliminary draft revisions of the following three F-series Recommendations were able to be created:

– Working document towards draft new revision of Recommendation [ITU-R F.1401-1](https://www.itu.int/rec/R-REC-F.1401/en) – “Considerations for the identification of possible frequency bands for fixed wireless access and related sharing studies” ([Annex 20](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N20!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)).

– Working document towards a preliminary draft revision of Recommendation [ITU-R F.1490-1](https://www.itu.int/rec/R-REC-F.1490/en) – “Generic requirements for fixed wireless access systems” ([Annex 21](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N21!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)).

– Working document towards a preliminary draft revision of Recommendation [ITU-R F.1763-1](https://www.itu.int/rec/R-REC-F.1763/en) – “Radio interface standards for broadband wireless access systems in the fixed service operating below 66 GHz” ([Annex 22](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N22!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)).

# 4 Objectives for the twenty-ninth meeting of WP 5A

The principal objective for the 29th meeting of Working Party 5A is to continue the work that may need to be conducted by WP 5A in support of the preparations for WRC-23 and to continue the work on the study questions assigned to WP 5A.

Based on the reports from the Working Groups of WP 5A, the following overall objectives are tentatively set for the 29th meeting of WP 5A:

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

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

– Respond to liaison notes from other groups and update other groups as appropriate.

– 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 8](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N08!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)).

– Development of working document towards a preliminary draft revision of Report ITU‑R [M.2442-0 – *Curr*](https://www.itu.int/pub/R-REP-M.2442)*ent and future usage of railway radiocommunication systems between train and trackside* ([Annex 7](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N07!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)).

– Development of working document towards a preliminary draft revision of Report ITU‑R [M.2282-0](https://www.itu.int/pub/R-REP-M.2282) – *Systems for public mobile communications with aircraft* ([Annex 10](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N10!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)).

– Development of working document towards a preliminary draft new Report ITU-R M.[Utilities] – *Utility communication systems* ([Annex 11](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N11!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)).

– Development of working document towards a preliminary draft revision of Recommendation ITU-R [M.1450-5](https://www.itu.int/rec/R-REC-M.1450/en) – *Characteristics of broadband radio local area networks* ([Annex 9](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N09!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)).

– Development of working document towards a preliminary draft revision of Recommendation ITU-R [M.1801-2](https://www.itu.int/rec/R-REC-M.1801/en) – *Radio interface standards for broadband wireless access systems, including mobile and nomadic applications, in the mobile service operating below 6 GHz* ([Annex 16](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0597!N16!MSW-E.docx) to [Doc. 5A/597](https://www.itu.int/md/R19-WP5A-C-0597/en)).

– Development of working document towards a preliminary draft revision of Recommendation ITU-R [M.2134-5 – *Rec*](https://www.itu.int/rec/R-REC-M.2134/en)*eiver 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)).

– Development of working document towards a preliminary draft new Report ITU-R M.[AUDIO-PMSE\_LMS] - *[Status and trends regarding regional and global usage of audio applications of PMSE in the land mobile service]* ([Annex 12](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N12!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)).

– Development of working document towards a preliminary draft new Report ITU-R M.[bb‑WAS.freq] - *Frequencies used by systems based on radio interface standards for broadband wireless access* ([Annex 17](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N17!MSW-E.docx) to [Doc. 5A/597](https://www.itu.int/md/R19-WP5A-C-0597/en))

– Continue the work on the WAS Study Questions on the basis of input contributions.

**3) Public protection and disaster relief**

– Further develop the working document toward the revision of Report ITU-R [M.2377-1, Radi](https://www.itu.int/pub/R-REP-M.2377)ocommunication objectives and requirements for Public Protection and Disaster Relief, based on input contributions ([Annex 20](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0597!N20!MSW-E.docx) to [Doc. 5A/597](https://www.itu.int/md/R19-WP5A-C-0597/en)).

– Further develop the working document toward the revision of Resolution ITU-R 55-3, ITU-R studies of disaster prediction, detection, mitigation and relief, based on input contributions, with the objective of submitting it to the meeting of Study Group 5 in September 2023 ([Annex 13](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N13!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)).

– Further develop the working documents toward revisions of Questions ITU-R 37-6/5 and ITU-R 209-6/5, based on input contributions, with the objective of submitting it to the meeting of Study Group 5 in September 2023 ([Annex 4](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N04!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)).

**4) Interference and sharing**

– Progress the ongoing revision of Report [ITU-R](https://www.itu.int/pub/R-REP-M.2116) [M.2116](https://www.itu.int/pub/R-REP-M.2116), in particular for WAS/RLAN parameters for the 6 GHz range ([Annex 15](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N15!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)).

– Continue work on the working document towards a preliminary draft new Report ITU-R M.[LMS.CONDITIONS>275GHz] (Annex 24 to [Doc. 5A/597](https://www.itu.int/md/R19-WP5A-C-0597/en)).

– Prepare a liaison statement to WP 3M in response to the request in Document [5A/607](https://www.itu.int/md/R19-WP5A-C-0607/en) to identify which P-series Recommendations may be of priority for extending applicability to higher frequencies above 100 GHz.

– Prepare a liaison statement to WP 1A in response to the request in Document [5A/613](https://www.itu.int/md/R19-WP5A-C-0613/en) to provide information on developments within the land-mobile service to be included in future revisions of Report ITU-R [SM.2352](https://www.itu.int/pub/R-REP-SM.2352).

**5) New technologies**

– Finalize preliminary draft revision of Recommendation [ITU-R M.2121-0](https://www.itu.int/rec/R-REC-M.2121/en) on harmonization of frequency bands for Intelligent Transport Systems in the mobile service, and upgrade its status to Draft Revision of the Recommendation ([Annex 17](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N17!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)).

– Finalize preliminary draft revision of Report ITU-R [M.2444-0](https://www.itu.int/pub/R-REP-M.2444) on Examples of arrangements for Intelligent Transport System , and upgrade its status to Draft Revision of the Recommendation ([Annex 18](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N18!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)).

– Finalize preliminary draft revision of Report [ITU-R M.2479-0](https://www.itu.int/pub/R-REP-M.2479) on the use of land mobile systems, excluding IMT, for machine-type communications, and upgrade its status to draft revision of the Recommendation ([Annex 19](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N19!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)). At the closing plenary of WP 5A the delegate of Germany pointed out that this document is mature and could be elevated at the next meeting, thus invited contributions to the next meeting with the objective of finalizing the draft revision.

– Continues the work on the development of working document towards a preliminary draft new Report ITU-R M.[CAV] on Connected Automated Vehicles (CAV)   
([Annex 16](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N16!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)).

– Continues to develop working document towards a preliminary draft new Question [FUTURE-ITS-CAV], taking into account a carried-forward document of Document [5A/691](https://www.itu.int/md/R19-WP5A-C-0691/en) and other input contributions to the 29th meeting of WP 5A in May 2023   
([Annex 4](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N04!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)).

– Continues the development of the working document towards a preliminary draft new Report ITU-R M.[LMS.SPEC.NEED.ABOVE.275 GHZ] – *Spectrum needs for land-mobile service applications in the frequency above 275 GHz* ([Annex 27](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N27!MSW-E.docx) to [Doc. 5A/491](https://www.itu.int/md/R19-WP5A-C-0491/en)).

**6) Fixed Wireless Access**

Continue the review and update of existing Recommendations and Reports, including the development of:

– Working document towards draft new revision of Recommendation [ITU-R F.1401-1](https://www.itu.int/rec/R-REC-F.1401/en) – “Considerations for the identification of possible frequency bands for fixed wireless access and related sharing studies” ([Annex 20](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N20!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)).

– Working document towards a preliminary draft revision of Recommendation [ITU-R F.1490-1](https://www.itu.int/rec/R-REC-F.1490/en) – “Generic requirements for fixed wireless access systems” ([Annex 21](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N21!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)).

– Working document towards a preliminary draft revision of Recommendation [ITU-R F.1763-1](https://www.itu.int/rec/R-REC-F.1763/en) – “Radio interface standards for broadband wireless access systems in the fixed service operating below 66 GHz” ([Annex 22](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N22!MSW-E.docx) to [[Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-0708/en)](http://www.itu.int/md/R15-WP5A-C-0650/en)).

**7) Land Mobile Handbook**

– Consider the need to update the handbooks that are the responsibility of WP 5A. 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 WP 5A (#29) is scheduled to be held from 9-18 May 2023. The final meeting of the study period is tentatively scheduled for 8 days within the period 11-22 September 2023. Members are strongly advised to pay attention to the strict time deadline for contributions, as announced in the forthcoming Circular Letter [5/LCCE](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.

The chairman of WP 5A welcomes comments on the draft ADM document with the assignment of contributions to the working groups for the 29th meeting in May 2023 that is posted in the WP 5A Share Folder [here](https://extranet.itu.int/rsg-meetings/sg5/wp5a/Share/Forms/Column%20view.aspx?RootFolder=%2Frsg%2Dmeetings%2Fsg5%2Fwp5a%2FShare%2FDraft%20ADM%20documents%20for%20May%202023&FolderCTID=0x012000FB880722B4622243913B1114C70648D5&View=%7B627C3C95%2DCC37%2D49E0%2D8D8A%2D33AC93C6F497%7D).

# 7 Progression of the work and concluding remarks

The work may continue by correspondence; however, no formal correspondence group was formed at the 28th meeting of WP 5A. The correspondence groups conduct their work using the Share Point facilities as described in section 6.5 of [Annex 1](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708!N01!MSW-E.docx) to [Doc. 5A/708](https://www.itu.int/md/R19-WP5A-C-708/en).

[Annex 1](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0708!N01!MSW-E) also summarizes the status of the texts that are the responsibility of WP 5A (section 1), the structure of WP 5A (section 2), and the list of contacts for liaison and collaboration with other organizations under Resolution ITU-R 9-5 (section 4).

The WP 5A 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 thanked all the WP 5A participants for their hard work, and in particular the Chairmen of the Working Groups, Mses. Amy Sanders and Christine Di Lapi, and Messrs. Dale Hughes, Lang Baozhen, Michael Kraemer, and Hitoshi Yoshino; the Liaison Rapporteurs, Mses. Gabrielle Owen and Amy Sanders and Messrs. Jonathan Siverling, Paul Najarian, Hitoshi Yoshino, and Brian Copsey; the LMH Rapporteur, Mr Takahiko Yamazaki; the Vocabulary Rapporteur, Mr Brian Patten; and the BR, in particular the SG 5 Counsellor, Mr Uwe Loewenstein, and his team in the BR study group department for the excellent support provided at the meetings, in particular Ms Alicia Soto Romero, as well as the organizers and moderators that supported the meeting with the use of Zoom platform.