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|  | **Radiocommunication Study Groups** |  |
| **INTERNATIONAL TELECOMMUNICATION UNION** |  |
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|  | **Document 5A/298-E** |
| **1 December 2016** |
| **English only** |
| Chairman, Working Party 5A |
| report on the SEVENTeenth meeting of working party 5a |
| (Geneva, 7-17 November 2016) |

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[1](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N01!MSW-E) Working Party 5A Management

[2](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N02!MSW-E) Consolidation of texts approved by Working Party 5A

[3](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N03!MSW-E) Consolidation of reports from the Working Groups of Working Party 5A
(Source: Docs. 5A/TEMP/70, 99R1, 123R1, 132, 133, 135, 136, 137)

[4](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N04!MSW-E) Working document towards preliminary draft CPM text for WRC-19 agenda item 1.1
(Source: Annex 4 to Doc. 5A/114)

[5](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N05!MSW-E) Work plan for WRC-19 agenda item 1.1 (Source: Doc. 5A/TEMP/102)

[6](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N06!MSW-E) Working document towards draft CPM text for WRC-19 agenda item 1.11
(Source: Annex 6 to Doc. 5A/114)

[7](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N07!MSW-E) Workplan for preparation for WRC-19 agenda item 1.11
(Source: Annex 7 to Doc. 5A/114)

[8](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N08!MSW-E) Elements of draft CPM text for WRC-19 agenda item 1.12
(Source: Doc. 5A/TEMP/66R1)

[9](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N09!MSW-E) Draft work plan for WRC-19 agenda item 1.12 (Source: Doc. 5A/TEMP/126R1)

[10](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N10!MSW-E) Working document towards preliminary draft CPM text for WRC-19 agenda item 1.16 (Source: Doc. 5A/TEMP/121R1)

[11](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N11!MSW-E) Draft workplan for WRC-19 agenda item 1.16 (Source: Doc. 5A/TEMP/83)

[12](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N12!MSW-E) Working document towards preliminary draft CPM text for WRC-19 agenda item 9.1 issue 9.1.5 (Source: Doc. 5A/TEMP/105R1)

[13](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N13!MSW-E) Draft workplan for WRC-19 agenda item 9.1 issue 9.1.5
(Source: Doc. 5A/TEMP/84)

[14](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N14!MSW-E) Working document toward preliminary draft new Report ITU-R M.[AMATEUR\_50\_MHz] - Spectrum needs for the amateur service in the frequency band 50-54 MHz in Region 1 and sharing with mobile fixed, radiolocation, and broadcasting services (Source: Doc. 5A/TEMP/128)

[15](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N15!MSW-E) Working document towards a preliminary draft new Report ITU-R M.[DPLMR] - Digital private land mobile radios systems (Source: Doc. 5A/TEMP/98)

[16](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N16!MSW-E) Working document towards a PDNR of technical and operational characteristics, implementation and spectrum needs of RSTT (Source: Doc. 5A/TEMP/124R1)

[17](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N17!MSW-E) Working document toward a preliminary draft revision of Recommendation ITU-R M.2003-1 - Multiple Gigabit Wireless Systems in frequencies around 60 GHz (Source: Doc. 5A/TEMP/91R1)

[18](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N18!MSW-E) Working document toward a preliminary draft revision of Report ITU-R M.2227-1 - Multiple Gigabit Wireless Systems in frequencies around 60 GHz
(Source: Doc. 5A/TEMP/90R1)

[19](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N19!MSW-E) Working document towards a preliminary draft new Recommendation ITU-R M.[MS-RXCHAR-28] - Receiver characteristics and protection criteria for systems (excluding IMT) in the mobile service in the frequency range 27.5-29.5 GHz for use in sharing studies (Source: Doc. 5A/TEMP/93)

[20](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N20!MSW-E) Working document towards a draft liaison statement to the Coordination Committee for Vocabulary (CCV) - Preliminary definitions for consideration for inclusion in the online integrated database of ITU Terms and Definitions
(Source: Doc. 5A/TEMP/76)

[21](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N21!MSW-E) Working document towards a preliminary draft revision of Recommendation ITU-R M.2015-1 - Frequency arrangements for public protection and disaster relief radiocommunication systems in accordance with Resolution 646 (Rev.WRC-15) (Source: Doc. 5A/TEMP/74R1)

[22](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N22!MSW-E) Working document towards a preliminary draft new Report ITU-R M.[PPDR SPECTRUM] - Spectrum requirements for Public Protection and Disaster Relief (PPDR) (Source: Doc. 5A/TEMP/72)

[23](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N23!MSW-E) Working document towards a preliminary draft new Report ITU-R M.[RLAN MITIGATION] - Study of proposed additional mitigation techniques to facilitate sharing between RLAN systems and incumbent services
(Source: Doc. 5A/TEMP/109)

[24](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N24!MSW-E) Compilation of technical information on possible candidate techniques that could be used by RLAN to facilitate sharing (Source: Doc. 5A/TEMP/108)

[25](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N25!MSW-E) Working document towards a preliminary draft new Report ITU-R M.[RLAN REQ‑PAR] - Technical characteristics and operational requirements of WAS/RLAN in the 5 GHz frequency range (Source: Doc. 5A/TEMP/110)

[26](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N26!MSW-E) Working document towards a preliminary draft new Report ITU-R M.[AGGREGATE RLAN MEASUREMENTS] - Use of aggregate RLAN measurements from airborne and terrestrial platforms to support studies under WRC‑19 agenda item 1.16 (Source: Doc. 5A/TEMP/88)

[27](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N27!MSW-E) Working document towards a preliminary draft new Report ITU-R M.[RLAN SHARING] - Sharing and compatibility studies of WAS/RLAN in the 5 GHz frequency range (Source: Doc. 5A/TEMP/120R1)

[28](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N28!MSW-E) Working document towards a preliminary draft new Report ITU-R M.[GEO.SHARE] - Sharing schemes in the land mobile service on the basis of geographical use (Source: Doc. 5A/TEMP/111)

[29](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N29!MSW-E) Working document towards a preliminary draft new Report ITU-R M.[300GHz\_MS\_CHAR] - Technical and operational characteristics of the land mobile service applications operating in the frequency range 275-450 GHz
(Source: Doc. 5A/TEMP/67R1)

[30](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N30!MSW-E) Working document toward a preliminary draft new Report ITU-R M.[ITS USAGE] - Intelligent transport systems (ITS) usage in ITU Member States
(Source: Doc. 5A/TEMP/125)

[31](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N31!MSW-E) List of output documents

**Annexes from previous WP 5A Chairman’s Reports that are being carried forward:**

[Annex 16](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N16!MSW-E) to [Doc. 5A/114](http://www.itu.int/md/R15-WP5A-C-0114): Working document towards a preliminary draft new [Recommendation][or Report] ITU-R M.[AMATEUR-WSJT] – Use of structured data, error correction, and encoding/decoding techniques to improve communication reliability in the amateur services.

**Management documents referred to in the Report:**

List of input documents: [Doc. 5A/280(Rev.1)](http://www.itu.int/md/R15-WP5A-C-0280/en)

Final list of participants: [Doc. 5A/297](http://www.itu.int/md/R15-WP5A-C-0297)

# 1 Introduction

Working Party 5A (WP 5A) held its seventeenth (17th) meeting from 7-17 November 2016 in Geneva, chaired by José Costa (Canada). The meeting participants (see list in [Doc. 5A/297](http://www.itu.int/md/R15-WP5A-C-0297)) included 249 participants from 42 countries representing 42 administrations, 6 recognized operating agencies, 12 scientific or industrial organizations, 2 United Nations, its specialized agencies and the International Atomic Energy Agency, 4 regional and other international organizations, one regional telecommunication organization, 2 intergovernmental organizations operating satellite systems, one associate, and the BR. WP 5A held three plenary sessions during the meeting period (on 7, 12, and 17 May 2016).

The meeting dealt with 171 input documents (184 listed in [Doc. 5A/280(Rev.1)](http://www.itu.int/md/R15-WP5A-C-0280/en) minus 13 liaison statements that arrived on the last day of the meeting and will be considered at the 18th meeting of WP 5A, Docs. 5A/285 to 296) and upon their consideration the meeting prepared 74 output temporary documents (see list in [Annex 31](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N31!MSW-E) to [Doc. 5A/298](http://www.itu.int/md/R15-WP5A-C-0298/en)).

[Annex 1](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N01!MSW-E) contains the management aspects of WP 5A, including a summary of the status of the texts that are the responsibility of WP 5A and the use of electronic facilities.

The Chairman’s Report of the sixteenth meeting of WP 5A ([Doc. 5A/114](http://www.itu.int/md/R15-WP5A-C-0114/en)) was adopted, including the objectives for the 17th meeting as presented in Section 4 of [Annex 1](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N01!MSW-E) to [Doc. 5A/114](http://www.itu.int/md/R15-WP5A-C-0114/en).

The structure of WP 5A for this meeting was also adopted as presented in section 2.2 of Annex 1 in [Doc. 5A/114](http://www.itu.int/md/R15-WP5A-C-0114/en), which is reproduced in [Annex 1](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N01!MSW-E) of [Doc. 5A/298](http://www.itu.int/md/R15-WP5A-C-0298/en).

The Chairman asked the meeting participants to review the list of contacts that appears in section 4 of Annex 1 in [Doc. 5A/114](http://www.itu.int/md/R15-WP5A-C-0114/en) and inform him of any necessary changes (the final list appears in section 4 of the updated [Annex 1](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N01!MSW-E) ([Doc. 5A/298](http://www.itu.int/md/R15-WP5A-C-0298/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 work program for the WP 5A meeting was adopted as presented in [Doc. 5A/ADM/6(Rev.1)](http://www.itu.int/md/R15-WP5A-ADM-0006/en).

At the opening Plenary the Chairman drew the attention of the meeting to the WP 5A texts that are listed in Section 1 of Annex 1 in [Doc. 5A/114](http://www.itu.int/md/R15-WP5A-C-0114/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. The Chairman pointed out the guidelines for the preparation of WP 5A texts in Section 2.3 of Annex 1 in [Doc. 5A/114](http://www.itu.int/md/R15-WP5A-C-0114/en) and the outline of the preparatory work for WRC-15 in Section 3 of Annex 1 in [Doc. 5A/114](http://www.itu.int/md/R15-WP5A-C-0114/en). (reproduced in [Annex 1](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N01!MSW-E) of [Doc. 5A/298](http://www.itu.int/md/R15-WP5A-C-0298/en))

The Liaison Rapporteurs presented their reports during the 3 Plenary sessions of WP 5A, including on [Disaster Relief](http://www.itu.int/ITU-R/index.asp?category=information&link=emergency&lang=en) by Amy Sanders ([Doc. 5A/281R1](http://www.itu.int/md/R15-WP5A-C-0281)), on certain countries in Region 2 by Brennan Price, presented by the new Region 2 liaison rapporteur, Jonathan Siverling ([Doc. 5A/282](http://www.itu.int/md/R15-WP5A-C-0282)), on certain countries in Region 1 by Gabrielle Owen ([Doc. 5A/283](http://www.itu.int/md/R15-WP5A-C-0283)), and on certain countries in Region 3 by Hitoshi Yoshino ([Doc. 5A/284](http://www.itu.int/md/R15-WP5A-C-0284)).

# 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 sixteenth meeting of WP 5A (section 4 of [Doc. 5A/114](http://www.itu.int/md/R15-WP5A-C-0114/en)) noting that need to consider also the proposals in the input contributions for the seventeenth meeting, in particular those related to the WRC-19 agenda items under the responsibility of WP 5A.

With regard to the update of documents that are the joint responsibility of WPs 5A and 5C, the two Working Parties held a joint meeting and [section 3.6.1](#s361) summarizes the results of the joint meeting. Future 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. The responsibilities for input contributions were assigned as per [Table 1](#t1), showing also 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

NOTE – Documents are posted at <http://www.itu.int/md/R15-WP5A-C/en>

The documents carried forward from previous meetings are highlighted in green.

|  |
| --- |
| **Working Party 5A (Chairman:** José Costa**, Canada)** |
| **Reports** | [114](http://www.itu.int/md/R15-WP5A-C-0114/en) (Chairman, WP 5A); [281](http://www.itu.int/md/R15-WP5A-C-0281R1) (Disaster Relief L.R.), [282](http://www.itu.int/md/R15-WP5A-C-0282) (Region 2 L.R.); [283](http://www.itu.int/md/R15-WP5A-C-0283) (Region 1 L.R.); [284](http://www.itu.int/md/R15-WP5A-C-0284) (Region 3 L.R.) |
| **General** | [79](http://www.itu.int/md/R12-WP5A-C-0079) [Annex 25](http://www.itu.int/md/dologin_md.asp?lang=en&id=R12-WP5A-C-0079!N25!MSW-E) (WP 5A); [150](http://www.itu.int/md/R15-WP5A-C-0150/en) (WP 5D); [159](http://www.itu.int/md/R15-WP5A-C-0159/en) (Chairman, WP 5D); [169](http://www.itu.int/md/R15-WP5A-C-0169/en) (Chairman, CPM-19); [192](http://www.itu.int/md/R15-WP5A-C-0192/en) (ITU-D SG 2); [280](http://www.itu.int/md/R15-WP5A-C-0280/en) (List of documents) |
| **Working Group 1: Amateur Services (Chairman:** Dale Hughes**, Australia)** |
| **AI 1.1 (**[Res. 658](http://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000C0001PDFE.pdf)**)** | [114](http://www.itu.int/md/R15-WP5A-C-0114/en) [Annex 4](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N04!MSW-E), [Annex 5](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N05!MSW-E), & [Annex 15](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N15!MSW-E) (WP 5A); [259](http://www.itu.int/md/R15-WP5A-C-0259/en) (IARU); [261](http://www.itu.int/md/R15-WP5A-C-0261/en) (IARU); [278](http://www.itu.int/md/R15-WP5A-C-0278/en) (WP 6A) |
| **Amateur texts** | [114](http://www.itu.int/md/R15-WP5A-C-0114/en) [Annex 14](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N14!MSW-E) & [Annex 16](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N16!MSW-E) (WP 5A); [195](http://www.itu.int/md/R15-WP5A-C-0195) (Russian Federation); [220](http://www.itu.int/md/R15-WP5A-C-0220/en) (Canada); [262](http://www.itu.int/md/R15-WP5A-C-0262/en) (IARU) |
| **Amateur services protection** | *Wireless power transmission:* [137](http://www.itu.int/md/R15-WP5A-C-0137/en), [138](http://www.itu.int/md/R15-WP5A-C-0138/en), [139](http://www.itu.int/md/R15-WP5A-C-0139/en) (WP 1A); [189](http://www.itu.int/md/R15-WP5A-C-0189/en) (WP 6A) |
|  |  |
| **Working Group 2: Systems and standards (Chairman:** Lang Baozhen**, China)** |
| **AI 1.11 (Railways** [Res. 236](http://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000C0012PDFE.pdf)**)** | [114](http://www.itu.int/md/R15-WP5A-C-0114/en) [Annex 6](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N06!MSW-E), [Annex 7](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N07!MSW-E), & [Annex 19](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N19!MSW-E) (WP 5A); [155](http://www.itu.int/md/R15-WP5A-C-0155/en) (WP 3K); [167](http://www.itu.int/md/R15-WP5A-C-0167/en) (APT); [187](http://www.itu.int/md/R15-WP5A-C-0187/en) (3GPP TSG RAN); [198](http://www.itu.int/md/R15-WP5A-C-0198) (Russian Federation); [227](http://www.itu.int/md/R15-WP5A-C-0227/en) (Korea); [230](http://www.itu.int/md/R15-WP5A-C-0230/en) (China); [239](http://www.itu.int/md/R15-WP5A-C-0239) (China); [237](http://www.itu.int/md/R15-WP5A-C-0237) (Motorola Solutions); [253](http://www.itu.int/md/R15-WP5A-C-0253/en) (Japan); [254](http://www.itu.int/md/R15-WP5A-C-0254/en) (Japan); [255](http://www.itu.int/md/R15-WP5A-C-0255/en) (Japan); [273R1](http://www.itu.int/md/R15-WP5A-C-0273/en) ([5-LCCE-60](http://www.itu.int/md/R00-SG05-CIR-0060/en) responses) |
| **Broadband Wireless Access** | [123](http://www.itu.int/md/R15-WP5A-C-0123/en) (WP 5C); [128](http://www.itu.int/md/R15-WP5A-C-0128/en) (WP 1B); [173](http://www.itu.int/md/R15-WP5A-C-0173/en) (WP 4C); [175](http://www.itu.int/md/R15-WP5A-C-0175/en) (ITU-D SG 1); [182](http://www.itu.int/md/R15-WP5A-C-0182/en) (WP 5D); [184](http://www.itu.int/md/R15-WP5A-C-0184/en) (WP 5D); [218](http://www.itu.int/md/R15-WP5A-C-0218/en) (USA); [223](http://www.itu.int/md/R15-WP5A-C-0223/en) (Canada); [272](http://www.itu.int/md/R15-WP5A-C-0272/en) (WP 4A); [279](http://www.itu.int/md/R15-WP5A-C-0279) (WP 6B) |
| **Hearing aids and related** |  |
| **Land mobile systems** | [114](http://www.itu.int/md/R15-WP5A-C-0114/en) [Annex 17](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N17!MSW-E) & [Annex 18](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N18!MSW-E) (WP 5A); [160](http://www.itu.int/md/R15-WP5A-C-0160/en) (WP 5D); [166](http://www.itu.int/md/R15-WP5A-C-0166/en) (APT); [172](http://www.itu.int/md/R15-WP5A-C-0172/en) (3GPP TSG RAN); [188](http://www.itu.int/md/R15-WP5A-C-0188/en) (3GPP TSG RAN); [200](http://www.itu.int/md/R15-WP5A-C-0200) (CEPT/ECC WGFM); [219](http://www.itu.int/md/R15-WP5A-C-0219/en) (Canada); [236](http://www.itu.int/md/R15-WP5A-C-0236) (Motorola Solutions) |
| **ANTs, HNTs. etc.** | [132](http://www.itu.int/md/R15-WP5A-C-0132/en) (WP 1A); [143](http://www.itu.int/md/R15-WP5A-C-0143/en) (WP 1B); [176](http://www.itu.int/md/R15-WP5A-C-0176/en) (ITU-T SG 15); [178](http://www.itu.int/md/R15-WP5A-C-0178/en) (ITU-T SG 15); [179](http://www.itu.int/md/R15-WP5A-C-0179/en) (ITU-T SG 15); [180](http://www.itu.int/md/R15-WP5A-C-0180/en) (ITU-T SG 15) |
| **MGWS** | [215](http://www.itu.int/md/R15-WP5A-C-0215/en) (USA) |
| **RLAN characteristics** | *(support WG 4 on RLANs)* |
| **Millimetre-wave systems** | *(support WG 5 on millimetre-wave systems)* |
| **Working Group 3: PPDR (Chairman:** Amy Sanders**, USA)** |
| **PPDR General** | [144](http://www.itu.int/md/R15-WP5A-C-0144/en) (WP 5D); [145](http://www.itu.int/md/R15-WP5A-C-0145/en) (WP 5D); [170](http://www.itu.int/md/R15-WP5A-C-0170/en) (ITU-T SG 17); [190](http://www.itu.int/md/R15-WP5A-C-0190/en) (ITU-D SG 2) |
| **Update Rec. ITU-R M.2015** | [Res. 646 (Rev.WRC-15)](http://www.itu.int/oth/R0A0600001A/en); [736](http://www.itu.int/md/R12-WP5A-C-0736/en) [Annex 6](http://www.itu.int/md/dologin_md.asp?lang=en&id=R12-WP5A-C-0736!N06!MSW-E) (WP 5A); [60](http://www.itu.int/md/R15-WP5A-C-0060) (China); [67](http://www.itu.int/md/R15-WP5A-C-0067) (Mexico); [75](http://www.itu.int/md/R15-WP5A-C-0075) (USA); [80](http://www.itu.int/md/R15-WP5A-C-0080) (Australia); [85](http://www.itu.int/md/R15-WP5A-C-0085) (Germany, France, Luxemburg); [90](http://www.itu.int/md/R15-WP5A-C-0090) (Motorola Solutions); [114](http://www.itu.int/md/R15-WP5A-C-0114/en) [Annex 20](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N20!MSW-E) (WP 5A); [168](http://www.itu.int/md/R15-WP5A-C-0168/en) (APT); [174](http://www.itu.int/md/R15-WP5A-C-0174) (Germany); [194](http://www.itu.int/md/R15-WP5A-C-0194) (Australia); [199](http://www.itu.int/md/R15-WP5A-C-0199) (New Zealand); [214](http://www.itu.int/md/R15-WP5A-C-0214/en) (USA); [222](http://www.itu.int/md/R15-WP5A-C-0222/en) (Canada); [238](http://www.itu.int/md/R15-WP5A-C-0238) (Motorola Solutions); [240](http://www.itu.int/md/R15-WP5A-C-0240) (UAE); [242](http://www.itu.int/md/R15-WP5A-C-0242/en) (Qatar); [244](http://www.itu.int/md/R15-WP5A-C-0244) (Colombia); [251](http://www.itu.int/md/R15-WP5A-C-0251/en) (Japan) |
| **PPDR Spectrum** | [114](http://www.itu.int/md/R15-WP5A-C-0114/en) [Annex 21](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N21!MSW-E) (WP 5A); [234](http://www.itu.int/md/R15-WP5A-C-0234) (Telstra); [235](http://www.itu.int/md/R15-WP5A-C-0235) (Telstra) |
| **Update Rep. ITU-R M.2377** | [233](http://www.itu.int/md/R15-WP5A-C-0233) (Telstra) |
|  |  |
| **Working Group 4: Interference and sharing (Chairman:** Michael Kraemer**, Germany)** |
| **Sharing studies (general)** | [118](http://www.itu.int/md/R15-WP5A-C-0118/en) (WP 5B); [119](http://www.itu.int/md/R15-WP5A-C-0119/en) (WP 5B); [134](http://www.itu.int/md/R15-WP5A-C-0134/en) (WP 1A); [135](http://www.itu.int/md/R15-WP5A-C-0135/en) (WP 1A); [141](http://www.itu.int/md/R15-WP5A-C-0141/en) (WP 1A); [152](http://www.itu.int/md/R15-WP5A-C-0152/en) (WP 3J); [153](http://www.itu.int/md/R15-WP5A-C-0153/en) (WP 3L); [154](http://www.itu.int/md/R15-WP5A-C-0154/en) (WPs 3K & 3M); [158](http://www.itu.int/md/R15-WP5A-C-0158/en) (WPs 3K & 3M); [183](http://www.itu.int/md/R15-WP5A-C-0183/en) (WP 5D); [185](http://www.itu.int/md/R15-WP5A-C-0185/en) (ATDI); [267](http://www.itu.int/md/R15-WP5A-C-0267/en) (WP 7D); [275](http://www.itu.int/md/R15-WP5A-C-0275/en) (WP 4A); [277](http://www.itu.int/md/R15-WP5A-C-0277/en) (WP 6A)*Wireless power transmission:* [136](http://www.itu.int/md/R15-WP5A-C-0136/en) (WP 1A) |
| **Dynamic Access – sharing** | *(support WG 5 on sharing & coexistence studies)* |
| **Sharing by zones** | [114](http://www.itu.int/md/R15-WP5A-C-0114/en) [Annex 27](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N27!MSW-E) (WP 5A); [117](http://www.itu.int/md/R15-WP5A-C-0117/en) (WP 5C); [140](http://www.itu.int/md/R15-WP5A-C-0140/en) (WP 1A); [142](http://www.itu.int/md/R15-WP5A-C-0142/en) (WP 1B); [148](http://www.itu.int/md/R15-WP5A-C-0148/en) (WP 5D); [224](http://www.itu.int/md/R15-WP5A-C-0224/en) (Canada); [274](http://www.itu.int/md/R15-WP5A-C-0274/en) (WP 4A) |
| **Non-ionizing radiation** | [130](http://www.itu.int/md/R15-WP5A-C-0130/en) (SG 1); [186](http://www.itu.int/md/R15-WP5A-C-0186/en) (ITU-T SG 5); [191](http://www.itu.int/md/R15-WP5A-C-0191/en) (ITU-D SG 2) |
| **AI 1.16 (**[Res. 239](http://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000C0017PDFE.pdf)**)** | [114](http://www.itu.int/md/R15-WP5A-C-0114/en) [Annex 10](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N10!MSW-E), [Annex 11](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N11!MSW-E), [Annex 22](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N22!MSW-E), [Annex 23](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N23!MSW-E), [Annex 24](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N24!MSW-E), [Annex 25](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N25!MSW-E), and [Annex 26](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N26!MSW-E) (WP 5A); [181](http://www.itu.int/md/R15-WP5A-C-0181/en) (WP 4A); [196](http://www.itu.int/md/R15-WP5A-C-0196) (Russian Federation); [202](http://www.itu.int/md/R15-WP5A-C-0202) (Switzerland); [203](http://www.itu.int/md/R15-WP5A-C-0203) (Switzerland); [204](http://www.itu.int/md/R15-WP5A-C-0204/en) (WP 7C); [210](http://www.itu.int/md/R15-WP5A-C-0210/en) (USA); [231](http://www.itu.int/md/R15-WP5A-C-0231/en) (China); [241](http://www.itu.int/md/R15-WP5A-C-0241/en) (France); [243](http://www.itu.int/md/R15-WP5A-C-0243) (Ericsson); [245](http://www.itu.int/md/R15-WP5A-C-0245) (UK); [246](http://www.itu.int/md/R15-WP5A-C-0246) (UK); [247](http://www.itu.int/md/R15-WP5A-C-0247) (UK); [252](http://www.itu.int/md/R15-WP5A-C-0252/en) (Japan); [260](http://www.itu.int/md/R15-WP5A-C-0260/en) (IARU); [264](http://www.itu.int/md/R15-WP5A-C-0264/en) (Luxemburg) |
| **AI 9.1/Issue 9.1.5 (**[Res. 764](http://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000C0023PDFE.pdf)**)** | [114](http://www.itu.int/md/R15-WP5A-C-0114/en) [Annex 12](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N12!MSW-E) & [Annex 13](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N13!MSW-E) (WP 5A); [197](http://www.itu.int/md/R15-WP5A-C-0197) (Russian Federation); [209](http://www.itu.int/md/R15-WP5A-C-0209/en) (USA) |
| **AI 1.2 (400 MHz** [Res. 765](http://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000C0002PDFE.pdf)**)** |  |
| **AI 1.3 (460 MHz** [Res. 766](http://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000C0003PDFE.pdf)**)** | [147](http://www.itu.int/md/R15-WP5A-C-0147/en) (WP 5D); [266](http://www.itu.int/md/R15-WP5A-C-0266/en) (WP 7B); [269](http://www.itu.int/md/R15-WP5A-C-0269/en) (WP 7B) |
| **AI 1.5 (FSS** [Res. 158](http://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000C0005PDFE.pdf)**)** | [73](http://www.itu.int/md/R15-WP5A-C-0073) (WP 4A); [217](http://www.itu.int/md/R15-WP5A-C-0217/en) (USA);  |
| **AI 1.6 (nonGSO FSS** [Res.159](http://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000C0006PDFE.pdf)**)** | [270](http://www.itu.int/md/R15-WP5A-C-0270/en) (WP 7D) |
| **AI 1.7 (nonGSO FSS** [Res.659](http://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000C0007PDFE.pdf)**)** | [115](http://www.itu.int/md/R15-WP5A-C-0115/en) (WP 5B); [121](http://www.itu.int/md/R15-WP5A-C-0121/en) (WP 5C); [271](http://www.itu.int/md/R15-WP5A-C-0271/en) (WP 7B) |
| **(AI 1.8) (GMDSS** [Res. 359](http://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000C0008PDFE.pdf)**)** |  |
| /**1.9.1 (160 MHz** [Res. 362](http://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000C0009PDFE.pdf)**)** |  |
| /**1.9.2 (VDES/MMSS** [Res. 360](http://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000C0010PDFE.pdf)**)** | [120](http://www.itu.int/md/R15-WP5A-C-0120/en) (WP 5B); [229](http://www.itu.int/md/R15-WP5A-C-0229) (China) |
| **AI 1.10 (GADSS** [Res. 426](http://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000C0011PDFE.pdf)**)** |  |
| **AI 1.13 (IMT** [Res. 238](http://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000C0014PDFE.pdf)**)** | [124](http://www.itu.int/md/R15-WP5A-C-0124/en) (TG 5/1); [125](http://www.itu.int/md/R15-WP5A-C-0125/en) (Chairmen, SG 3, WP 3J, WP 3K & WP 3M); [177](http://www.itu.int/md/R15-WP5A-C-0177/en) (WP 4A); [211](http://www.itu.int/md/R15-WP5A-C-0211/en) (USA); [226](http://www.itu.int/md/R15-WP5A-C-0226/en) (IEEE); [265](http://www.itu.int/md/R15-WP5A-C-0265/en) (Intel) |
| **AI 1.14 (HAPS** [Res. 160](http://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000C0015PDFE.pdf)**)** | [116](http://www.itu.int/md/R15-WP5A-C-0116/en) (WP 5C); [157](http://www.itu.int/md/R15-WP5A-C-0157/en) (WP 3M); [213](http://www.itu.int/md/R15-WP5A-C-0213/en) (USA) |
| **EESS 45 MHz (Res. 656)** | [207](http://www.itu.int/md/R15-WP5A-C-0207/en) (USA); [263](http://www.itu.int/md/R15-WP5A-C-0263/en) (IARU) |
| **> 275 GHz**  | *(support WG 5 on sharing & coexistence studies)* |
| **/9.1.3 (nonGSO** [Res. 157](http://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000C0021PDFE.pdf)**)** | [74](http://www.itu.int/md/R15-WP5A-C-0074) (WP 4A); [206](http://www.itu.int/md/R15-WP5A-C-0206/en) (USA); [258](http://www.itu.int/md/R15-WP5A-C-0258/en) (Germany) |
| **/9.1.9 (50 GHz FSS** [Res. 162](http://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000C0025PDFE.pdf)**)** | [72](http://www.itu.int/md/R15-WP5A-C-0072) (WP 4A); [146](http://www.itu.int/md/R15-WP5A-C-0146/en) (WP 5D) |
| **ITU-T Interference** | [162](http://www.itu.int/md/R15-WP5A-C-0162/en) (WP 5D) |
| **Working Group 5: New technologies (Chairman:** Hitoshi Yoshino**, Japan)** |
| **AI 1.12 (ITS** [Res. 237](http://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000C0013PDFE.pdf)**)** | [114](http://www.itu.int/md/R15-WP5A-C-0114/en) [Annex 8](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N08!MSW-E) & [Annex 9](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N09!MSW-E) (WP 5A); [208](http://www.itu.int/md/R15-WP5A-C-0208/en) (USA) |
| **ITS** | *V2X:* [232](http://www.itu.int/md/R15-WP5A-C-0232/en) (China)*Rail.link:* [114](http://www.itu.int/md/R15-WP5A-C-0114/en) [Annex 30](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N30!MSW-E) (WP 5A); [256](http://www.itu.int/md/R15-WP5A-C-0256/en) (Japan)*ITS Usage:* [114](http://www.itu.int/md/R15-WP5A-C-0114/en) [Annex 29](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N29!MSW-E) (WP 5A); [165](http://www.itu.int/md/R15-WP5A-C-0165/en) (APT); [216](http://www.itu.int/md/R15-WP5A-C-0216/en) (USA); [221](http://www.itu.int/md/R15-WP5A-C-0221/en) (Canada);[248](http://www.itu.int/md/R15-WP5A-C-0248/en) (Japan and Singapore)*Handbook:* [228](http://www.itu.int/md/R15-WP5A-C-0228/en) (Korea) |
| **AI 1.15 (> 275 GHz** [Res. 767](http://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000C0016PDFE.pdf)**)** | [114](http://www.itu.int/md/R15-WP5A-C-0114/en) [Annex 28](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N28!MSW-E) (WP 5A); [122](http://www.itu.int/md/R15-WP5A-C-0122/en) (WP 5C); [126](http://www.itu.int/md/R15-WP5A-C-0126/en) (WP 1A); [131](http://www.itu.int/md/R15-WP5A-C-0131/en) (WP 1A); [133](http://www.itu.int/md/R15-WP5A-C-0133/en) (WP 1A); [156](http://www.itu.int/md/R15-WP5A-C-0156/en) (WP 3M); [163](http://www.itu.int/md/R15-WP5A-C-0163/en) (WPs 3K & 3M); [201](http://www.itu.int/md/R15-WP5A-C-0201/en) (CEPT CPG PTA); [225](http://www.itu.int/md/R15-WP5A-C-0225/en) (IEEE); [249](http://www.itu.int/md/R15-WP5A-C-0249/en) (Japan); [257](http://www.itu.int/md/R15-WP5A-C-0257/en) (Germany); [268](http://www.itu.int/md/R15-WP5A-C-0268/en) (WP 7C) |
| **CRS / Dynamic Access** | [127](http://www.itu.int/md/R15-WP5A-C-0127/en) (WP 1B); [129](http://www.itu.int/md/R15-WP5A-C-0129/en) (WP 1B); [149](http://www.itu.int/md/R15-WP5A-C-0149/en) (WP 5D); [205](http://www.itu.int/md/R15-WP5A-C-0205/en) (WP 7C) |
| **/9.1.8 (MTC** [Res. 958](http://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000C0024PDFE.pdf)**)** | [151](http://www.itu.int/md/R15-WP5A-C-0151/en) (WP 5D); [161](http://www.itu.int/md/R15-WP5A-C-0161/en) (WP 5D); [164](http://www.itu.int/md/R15-WP5A-C-0164/en) (ITU-T SG 20); [171](http://www.itu.int/md/R15-WP5A-C-0171/en) (ITU-T JCA-IoT & SC&C); [193](http://www.itu.int/md/R15-WP5A-C-0193/en) (WP 5D) |
| **Millimetre-wave systems** | [212](http://www.itu.int/md/R15-WP5A-C-0212/en) (USA); [250](http://www.itu.int/md/R15-WP5A-C-0250/en) (Japan) |

The Working Groups developed preliminary draft revised/new Recommendations, Reports, 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=R15-WP5A-C-0298!N03!MSW-E). The texts proposed by these Working Groups in TEMP documents ([Annex 31](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N31!MSW-E)) were considered by WP 5A and are either annexed 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](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N02!MSW-E)).

# **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 WP 5A has been updated in line with [Doc. 5/1(Rev.1)](http://www.itu.int/md/R15-SG05-C-0001), including the assignment of responsibilities to the Working Groups of WP 5A and identification of topics for the Recommendations and Reports ([Annex 1](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N01!MSW-E)). WP 5A agreed to propose to SG 5 that Recommendation ITU-R M.2057 could be assigned a joint responsibility with WP 5B since it contains radar characteristics.

The [Guide to the use of ITU-R texts relating to the amateur and amateur-satellite services](http://www.itu.int/oth/R0A06000067) was updated at the 17th meeting and approved for posting on the WP 5A webpage: <http://www.itu.int/ITU-R/go/rwp5a>

The consolidation of all the texts approved by WP 5A, 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=R15-WP5A-C-0298!N02!MSW-E) to [Doc. 5A/298](http://www.itu.int/md/R15-WP5A-C-0298/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

Working Party 5A proposed the following draft revised Recommendation for consideration for adoption by Study Group 5.

• Draft revision of Recommendation ITU R M.1732-1 - Characteristics of systems operating in the amateur and amateur-satellite services for use in sharing studies – [Doc. 5/32](http://www.itu.int/md/R15-SG05-C-0032/en)

### 3.2.2 Draft revised and new Reports

Working Party 5A proposed the following draft revised and new Reports for consideration for approval by Study Group 5.

• Draft revision of Report ITU-R M.2014-2 - Digital land mobile systems for dispatch traffic – [Doc. 5/33](http://www.itu.int/md/R15-SG05-C-0033/en)

• Draft new Report ITU-R M.[RAIL.LINK] - Introduction to railway communication systems in certain countries [– Doc. 5/29](http://www.itu.int/md/R15-SG05-C-0029/en)

## 3.3 Amateur and amateur-satellite services

The work continues for WRC-19 agenda item 1.1; the preliminary draft CPM text and work plan for this agenda item appear in Annexes 4 and 5 of [Doc. 5A/298](http://www.itu.int/md/R15-WP5A-C-0298/en), respectively. Completed a draft revision of Recommendation ITU-R M.1732-1 ([Doc. 5/32](http://www.itu.int/md/R15-SG05-C-0032/en)). Developed a working document towards a preliminary draft new Report ITU-R M.[AMATEUR\_50\_MHz] ([Annex 14](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N14!MSW-E)). A working document towards a preliminary draft new [Recommendation][or Report] ITU-R M.[AMATEUR-WSJT] ([Annex 15](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N15!MSW-E) to [Doc. 5A/114](http://www.itu.int/md/R15-WP5A-C-0114/en)) is carried over for further work at the 18th meeting. Updated the “[Guide to the use of ITU-R texts relating to the amateur and amateur-satellite services](http://www.itu.int/oth/R0A06000067)” for posting on the WP 5A webpage. Four liaison statements were sent to other groups ([Annex 2](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N02!MSW-E)).

## 3.4 Systems and standards

Work on WRC-19 agenda item 1.11 is continuing; the preliminary draft CPM text and work plan for this agenda item appear in Annexes 6 and 7 of [Doc. 5A/298](http://www.itu.int/md/R15-WP5A-C-0298/en), respectively. Completed a draft revision of Report ITU-R M.2014-2 ([Doc. 5/33](http://www.itu.int/md/R15-SG05-C-0033/en)) and continued with the development of two preliminary draft new Reports, ITU-R M.[DPLMR] on digital private land mobile radios systems ([Annex 15](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N15!MSW-E)) and ITU-R M.[RAIL.RSTT] on technical and operational characteristics, implementation and spectrum needs of railway radiocommunication systems between train and trackside ([Annex 16](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N16!MSW-E)). Working documents were initiated towards preliminary draft revisions of Recommendation ITU-R M.2003 ([Annex 17](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N17!MSW-E)) and Report ITU-R M.2227 ([Annex 18](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N18!MSW-E)) on “Multiple gigabit wireless systems in frequencies around 60 GHz”. A working document has been initiated on receiver characteristics and protection criteria for systems (excluding IMT) in the mobile service in the frequency range 27.5-29.5 GHz for use in sharing studies ([Annex 19](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N19!MSW-E)). Initiated the development of a working document towards a draft liaison statement to the CCV with preliminary definitions for consideration for inclusion in the online integrated database of ITU Terms and Definitions ([Annex 20](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N20!MSW-E)). Six liaison statements were sent to other groups ([Annex 2](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N02!MSW-E)).

## 3.5 Public protection and disaster relief

Worked continued on the development of working document towards a preliminary draft revision of Recommendation ITU-R M.2015-1 ([Annex 21](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N21!MSW-E)) on frequency arrangements for PPDR radiocommunication systems and a working document towards a preliminary draft new Report ITU‑R M.[PPDR SPECTRUM] on spectrum requirements for PPDR ([Annex 22](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N22!MSW-E)). Two liaison statements were sent to WP 5D ([Annex 2](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N02!MSW-E)).

## 3.6 Interference and sharing

A structure for the work under WRC-19 agenda item 1.16 was further developed (the preliminary draft CPM text and work plan for this agenda item appear in Annexes 10 and 11 of [Doc. 5A/298](http://www.itu.int/md/R15-WP5A-C-0298/en), respectively). Continued the development of the working document towards a PDN Report ITU-R M.[RLAN MITIGATION] describing possible additional mitigation techniques to facilitate sharing between RLAN systems and incumbent services ([Annex 23](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N23!MSW-E)). Four working documents towards preliminary draft new ITU-R Reports were continued to be developed, three of them related to sharing studies in support of agenda item 1.16 (Annexes [25](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N25!MSW-E), [26](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N26!MSW-E), and [27](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0114!N27!MSW-E)) and one on sharing schemes in the land mobile service on the basis of geographical use ([Annex 28](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N28!MSW-E)). Fourteen liaison statements were sent to other groups ([Annex 2](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N02!MSW-E)).

### 3.6.1 Joint meeting of WP 5A and WP 5C

A WP 5A/5C Ad Hoc meeting was held on Monday, 7 November 2016, at 17:30 hours to discuss items of joint interest. The following topics were discussed:

|  |  |
| --- | --- |
| **Topic** | **Documents** |
| EMF | [5C/117](http://www.itu.int/md/R15-WP5C-C-0117/en) = [5A/191](http://www.itu.int/md/R15-WP5A-C-0191/en) |
| Infrastructure Sharing | [5C/75](http://www.itu.int/md/R15-WP5C-C-0075/en) = [5A/128](http://www.itu.int/md/R15-WP5A-C-0128) |
|  | [5C/103](http://www.itu.int/md/R15-WP5C-C-0103/en) = [5A/173](http://www.itu.int/md/R15-WP5A-C-0173) |
|  | [5C/110](http://www.itu.int/md/R15-WP5C-C-0110/en) = [5A/184](http://www.itu.int/md/R15-WP5A-C-0184) |
| F.758 | [5C/57 Annex 13](https://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5C-C-0057!N13!MSW-E) |
|  | [5C/126](http://www.itu.int/md/R15-WP5C-C-0126/en) |
|  | [5C/111](http://www.itu.int/md/R15-WP5C-C-0111/en) |
| Vocabulary | [5C/105](http://www.itu.int/md/R15-WP5C-C-0105/en) = [5A/175](http://www.itu.int/md/R15-WP5A-C-0175) |
|  | [5C/109](http://www.itu.int/md/R15-WP5C-C-0109/en) = [5A/182](http://www.itu.int/md/R15-WP5A-C-0182) |
|  | [5C/164](http://www.itu.int/md/R15-WP5C-C-0164/en) = [5A/272](http://www.itu.int/md/R15-WP5A-C-0272) |
| F.1336 | [5C/57 Annex 2](https://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5C-C-0057!N02!MSW-E) |
|  | [5C/113](http://www.itu.int/md/R15-WP5C-C-0113/en) = [5A/185](http://www.itu.int/md/R15-WP5A-C-0185) |
|  | [5C/136](http://www.itu.int/md/R15-WP5C-C-0136/en) |

It was agreed that WP 5A would take responsibility for drafting joint liaison statements on infrastructure sharing and vocabulary ([Annex 2](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N02!MSW-E)) and WP 5C would take responsibility for the proposed updates of Recommendations ITU-R F.758 ([Annex 13](https://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5C-C-0173!N13!MSW-E) to [Doc. 5C/173](http://www.itu.int/md/R15-WP5C-C-0173/en)) and ITU‑R F.1336 ([Annex 2](https://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5C-C-0173!N02!MSW-E) to [Doc. 5C/173](http://www.itu.int/md/R15-WP5C-C-0173/en)) since the ongoing revision of Recommendation ITU-R F.1336 is focussed on the fixed service section and only covers editorial corrections for the mobile service section. Regarding the contributions related to WRC-19 agenda items 1.1 and 1.15 and the EMF liaison statement from ITU-D SG 2 it was agreed that each working party would proceed independently.

## 3.7 New technologies

Continued the work on WRC-19 agenda item 1.12 (ITS) and developed a draft work plan and elements of draft CPM text for this agenda item (Annexes 8 and 9 of [Doc. 5A/298](http://www.itu.int/md/R15-WP5A-C-0298/en), respectively). Completed the draft new Report ITU R M.[RAIL.LNK] on introduction to railway communication systems in certain countries ([Doc. 5/29](http://www.itu.int/md/R15-SG05-C-0029/en)). Continued to develop a working document towards a preliminary draft new Report ITU-R M.[ITS USAGE] of Intelligent transport systems usage report in ITU member states ([Annex 30](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N30!MSW-E)). Continued the development of a preliminary draft new Report ITU-R M.[300GHz\_MS\_CHAR] on technical and operational characteristics of the land mobile service in the frequency range 275-450 GHz ([Annex 29](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N29!MSW-E)), and it was agreed that this Report could refer to the identical appendix on attenuation characteristics in the frequency range 275-[320] GHz of the companion Report for the fixed service being developed by WP 5C. Eight liaison statements were sent to other groups ([Annex 2](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N02!MSW-E)).

## 3.8 Land Mobile Handbook

Since the publication of Volume 5 (Deployment of broadband wireless access systems) no further activity on handbooks has been undertaken yet; WP 5A is maintaining liaison with ITU-D Study Group 2 to assist them with their work. The Land Mobile Handbook Rapporteur informed the meeting that she has initiated soliciting contributions for updates of [Volume 3](http://www.itu.int/pub/R-HDB-47/en) (Dispatch and advanced messaging systems) and [Volume 4](http://www.itu.int/pub/R-HDB-49/en) (Intelligent transportation systems).

## 3.9 Vocabulary

WP 5A decided to abandon the working document towards the development of the land mobile vocabulary with a view to develop either a new Recommendation or a future revision of the existing [Recommendation ITU‑R M.1797](http://www.itu.int/rec/R-REC-M.1797/en) ([Annex 25](http://www.itu.int/md/dologin_md.asp?lang=en&id=R12-WP5A-C-0079!N25!MSW-E) to [Doc. 5A/79](http://www.itu.int/md/R12-WP5A-C-0079/en)) and focus the efforts instead on the development of a working document towards a draft liaison statement to the CCV with preliminary definitions for consideration for inclusion in the online integrated database of ITU Terms and Definitions ([Annex 20](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N20!MSW-E)).

# 4 Objectives for the eighteenth meeting of WP 5A

The principal objective for the 18th 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-19 and to continue the work on the study questions assigned to WP 5A.

Based on the reports from the Working Groups, the following overall objectives are tentatively set for the 18th meeting of WP 5A:

1) Amateur and amateur-satellite

– Continue work on WRC-19 agenda item 1.1 spectrum needs, sharing and compatibility studies and continue work on developing draft CPM text for WRC-19 agenda item 1.1.

– Review ITU-D Questions, Recommendations, Reports and Handbooks relevant to the amateur and amateur-satellite services and, if necessary, develop liaison statements to responsible ITU-D Study Groups.

– Continue to review and, update as necessary, ITU-R Recommendations, Reports and Handbooks relevant to the amateur and amateur-satellite services.

2) Systems and standards

– Studies of WRC-19 A.I. 1.11, including the development of the working document M.[RAIL.RSTT] on technical and operational characteristics, implementation and spectrum needs of railway radiocommunication systems between train and trackside[[1]](#footnote-1).

– Development of a preliminary draft new Recommendation ITU-R M.[DPLMR].

– Development of preliminary draft revisions of Recommendation ITU-R M.2003-1 and Report ITU-R M.2227-1.

– Development of the working document on receiver characteristics and protection criteria for systems (excluding IMT) in the mobile service in the frequency range 27.5‑29.5 GHz for use in sharing studies.

3) Public protection and disaster relief

– Further develop the working document toward a preliminary draft revision of Recommendation ITU-R M.2015-1.

– Further develop the working document toward a preliminary draft new Report ITU-R M.[PPDR SPECTRUM], “Spectrum calculations and requirements for Public Protection and Disaster Relief (PPDR)”.

– Consider the planned consequential revision of Report ITU-R M.2377 as reflected in the workplan and the proposal to undertake broader revision of the document as reflected in [Doc. 5A/233](http://www.itu.int/md/R15-WP5A-C-0233).

– Consider a possible liaison statement to affected regional groups to determine the frequency arrangements for Regions 2 and 3 that comprise the substance of Recommendation ITU-R M.1826 have been properly incorporated into the revision of Recommendation ITU-R M.2015-1 and seeking their views on the possible consequential suppression of Recommendation ITU-R M.1826.

– Consider consequential revisions to other ITU-R documents under the purview of WG 3, based on Doc. [5A/80.](http://www.itu.int/md/R15-WP5A-C-0080)

[4)](http://www.itu.int/md/R15-WP5A-C-0080) Interference and sharing

– Continue to the work under WRC-19 agenda item 1.16 and the related work on the RLAN mitigation techniques.

– Consider the proposal to revise Recommendation ITU-R M.1652 or to develop a new Recommendation in this regard.

– Create a working document for the revision of Report ITU-R M.2116.

– Review [Doc. 5A/136](http://www.itu.int/md/R15-WP5A-C-0136) on Wireless Power Transmission and provide comments to WP 1A as appropriate.

– Review [Doc. 5A/191](http://www.itu.int/md/R15-WP5A-C-0191) on non-ionizing radiation and provide comments to ITU-D SG 2 as appropriate.

– Continue work on the working document on sharing schemes in the land mobile service.

– Provide technical characteristics to WP 4A for the work on issue 9.1.9 under WRC-19 agenda item 9.1.

5) New technologies

– Continue the development of a working document towards a preliminary draft new Report ITU-R M.[ITS USAGE].

– Continue the update of the handbook volume 4 "Intelligent Transport Systems" of the Land Mobile Handbook (LMH).

– Continues the development of a working document towards a preliminary draft new Report ITU-R M.[300GHz\_MS\_CHAR] on technical and operational characteristics of the land mobile service in the frequency range 275-450 GHz.

– Consider initiating work on developing a working document on Machine Type Communications within the purview of WP 5A, based on input contributions.

6) 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.

7) Vocabulary

– Continue the development of the land mobile vocabulary ([Annex 20](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N20!MSW-E)).

# 5 Future meetings

The next meeting of WP 5A (#18) is scheduled to be held within the period 22 May – 1 June 2017 in Geneva.  **The deadline for the submission of contributions is 16:00 hours UTC, Monday, 15 May 2017[[2]](#footnote-2)[1].**

# 6 Progression of the work and concluding remarks

The work will continue by correspondence; specifically, a correspondence group was created to progress the work on RSTT. 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=R15-WP5A-C-0298!N01!MSW-E).

[Annex 1](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!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, Ms Amy Sanders and Messrs Dale Hughes, Lang Baozhen, Michael Kraemer, and Hitoshi Yoshino; the LMH Rapporteur, Dr Gabrielle Owen; the vocabulary Rapporteur, Mr Brennan Price; the Liaison Rapporteurs, Mses Gabrielle Owen and Amy Sanders and Messrs Brennan Price, Jonathan Siverling, Paul Najarian, Hitoshi Yoshino, Brian Copsey and Haim Mazar; and the BR, in particular the WP 5A Counsellor, Mr Sergio Buonomo, and his team for the excellent support provided at the meetings.

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1. Administrations are encouraged to:

– carefully review their information of RSTT contained in the existing responses to the questionnaire and to categorize them into correct applications by filling them into the right tables within Chapter 4 to the Working Document ([Annex 16](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N16!MSW-E));

– contribute actively to the next WP 5A meeting, further providing their technical and operational information on RSTT and filling them into proper tables within Chapter 4, and also providing brief introductions and spectrum requirements of their systems of RSTT ([Annex 16](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP5A-C-0298!N16!MSW-E)). [↑](#footnote-ref-1)
2. [1]  Members are strongly advised to pay attention to the strict time deadline. Contributions received after the deadline will be considered at the nineteenth meeting of WP 5A. [↑](#footnote-ref-2)