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| **Radiocommunication Study Groups** |  |
| **INTERNATIONAL TELECOMMUNICATION UNION** |  |
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| Source: Documents 5A/TEMP/293R1, 321R1, 329, 327, 328 | **Annex 3 toDocument 5A/736-E** |
| **3 August 2015** |
| **English only** |
| Annex 3 to Working Party 5A Chairman’s Report |
| consolidation of reports from the working groupsof working party 5a |
|  |

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[Attachment 1](#att1): Summary of the course of action toward the review of Recommendations and Reports associated with work on WRC-15 agenda item 1.3 and status of work.

[Attachment 2](#att2): Work plan for the development of a new Report ITU-R M.[ITS USAGE] on the usage of intelligent transport systems in ITU-R member states.

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NOTE – Throughout this Annex reference is made to the temporary documents (5A/TEMP/…) produced by the Working Groups. Since these documents are not kept, please refer to [Annex 11](http://www.itu.int/md/dologin_md.asp?lang=en&id=R12-WP5A-C-736!N11!MSW-E) of [Doc. 5A/736](http://www.itu.int/md/R12-WP5A-C-0736/en) to find the final disposition of these documents by Working Party 5A.

LIST OF INPUT CONTRIBUTIONS CARRIED FORWARD TO THE NEXT WP 5A MEETING:

WG 5A-3: [5A/697](http://www.itu.int/md/R12-WP5A-C-0697/en), [5A/698](http://www.itu.int/md/R12-WP5A-C-0698/en) (Australia)

WG 5A-4: [5A/666](http://www.itu.int/md/R12-WP5A-C-0666/en) (WP 3M); [5A/700](http://www.itu.int/md/R12-WP5A-C-0700/en), [5A/703](http://www.itu.int/md/R12-WP5A-C-0703/en) (Canada); [5A/728](http://www.itu.int/md/R12-WP5A-C-0728/en) (WP 4A).

# 1 Working Group 5A-1 – Amateur and amateur-satellite services (Chairman: Mr Dale Hughes, Australia)

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1.1 Executive Summary

Working Group 5A-1 met three times, reviewed a number of existing ITU-R Recommendations and Questions relevant to the amateur and amateur satellite service, noted one liaison statement and created one liaison statement.

1.2 Detailed Report

WG 5A-1 was assigned the following documents:

|  |  |
| --- | --- |
| **Amateur texts** | [689](http://www.itu.int/md/R12-WP5A-C-0689/en) (USA); [694](http://www.itu.int/md/R12-WP5A-C-0694/en) (Australia); [720](http://www.itu.int/md/R12-WP5A-C-0720/en), [721](http://www.itu.int/md/R12-WP5A-C-0721/en), [722](http://www.itu.int/md/R12-WP5A-C-0722/en)-Amateur (IARU) |
| **Morse code** | [640](http://www.itu.int/md/R12-WP5A-C-0640/en) (WP 5B) |

Document [5A/640](http://www.itu.int/md/R12-WP5A-C-0640/en), a liaison statement regarding Morse telegraphy identification methods for oceanographic radars in the 3-50 MHz frequency range was noted with no further action required.

Documents 5A/[689](http://www.itu.int/md/R12-WP5A-C-0689/en) (USA) and 5A/[720](http://www.itu.int/md/R12-WP5A-C-0720/en) (IARU) proposed modifications to Recommendation
ITU-R M.1544 *Minimum qualifications of radio amateurs.* This update is complete and is submitted for approval to be elevated to Study Group 5 as Document [5A/TEMP/297](https://extranet.itu.int/rsg-meetings/sg5/wp5a/TEMP/297e.docx?Web=1).

Document 5A/[694](http://www.itu.int/md/R12-WP5A-C-0694/en) (AUS) covers proposed modifications to Recommendation ITU-R M.1732 *Characteristics of systems operating in the amateur and amateur-satellite services for use in sharing studies.* The proposed modifications were discussed and the document is carried forward as a working document for further consideration at the next Working Party 5 meeting as Document [5A/TEMP/294](https://extranet.itu.int/rsg-meetings/sg5/wp5a/TEMP/294e.docx?Web=1).

The liaison statement advising other groups of the proposed changes to Recommendation
ITU-R M.1732 is Document [5A/TEMP/296](https://extranet.itu.int/rsg-meetings/sg5/wp5a/TEMP/296e.docx?Web=1).

Document 5A/[721](http://www.itu.int/md/R12-WP5A-C-0721/en) (IARU) is an update to ITU-R Question 48 *Techniques and frequency usage in the amateur service and amateur-satellite service*. The question has been updated and is submitted for approval to be elevated to Study Group 5 as Document [5A/TEMP/295](https://extranet.itu.int/rsg-meetings/sg5/wp5a/TEMP/295e.docx?Web=1).

Document 5A/[722](http://www.itu.int/md/R12-WP5A-C-0722/en) (IARU) was jointly discussed within WG 5A-1 then passed to WG 5A-3 for further discussion and elevation to Working Party 5A.

The chair enjoyed working with all of the delegates and is grateful for their thoughtful and high quality contributions, determination to complete our work and general goodwill.

# **2** **Working Group 5A-2 – Systems and standards (Chairman: Mr Lang Baozhen, China)**

Executive summary

The development of preliminary draft new Report ITU-R M.[LOCAL\_COVERAGE] was completed and will be submitted to SG 5. The work of the development of a preliminary draft revision of Report ITU-R M.2014 was initiated.

# Systems and standards

Working Group 5A-2 met three times at the fifteenth meeting of WP 5A in Bucharest with approximately 30 delegates in attendance. Working Group 5A-2 received the 22 documents remanded by the WP 5A plenary as follows:

|  |  |
| --- | --- |
|  | **Documents** |
| **2.1** **Broadband Wireless Access** | [642](http://www.itu.int/md/R12-WP5A-C-0642/en) (WP 5C); [646](http://www.itu.int/md/R12-WP5A-C-0646/en) (ITU-T SG 15); [651](http://www.itu.int/md/R12-WP5A-C-0651/en) (WP 5D); [664](http://www.itu.int/md/R12-WP5A-C-0664/en) (WP 3K); [673](http://www.itu.int/md/R12-WP5A-C-0673/en), [674](http://www.itu.int/md/R12-WP5A-C-0674/en) (WP 1B);  |
| **2.2 Local coverage aspects** | [614](http://www.itu.int/md/R12-WP5A-C-0614/en), [636](http://www.itu.int/md/R12-WP5A-C-0636/en) [Annex 5](http://www.itu.int/md/dologin_md.asp?lang=en&id=R12-WP5A-C-0636!N05!MSW-E) (WP 5A); [665](http://www.itu.int/md/R12-WP5A-C-0665/en) (CG on Rep. Local Coverage); [686](http://www.itu.int/md/R12-WP5A-C-0686/en) (China); [702](http://www.itu.int/md/R12-WP5A-C-0702/en) (Canada); [705](http://www.itu.int/md/R12-WP5A-C-0705/en), [706](http://www.itu.int/md/R12-WP5A-C-0706/en) (Japan) |
| **2.3 Hearing aids and related** | [650](http://www.itu.int/md/R12-WP5A-C-0650/en) (ITU-D SG 1 Rapporteur) ; [658](http://www.itu.int/md/R12-WP5A-C-0658/en) (SG 5) |
| **2.4 ANTs** | [647](http://www.itu.int/md/R12-WP5A-C-0647/en), [648](http://www.itu.int/md/R12-WP5A-C-0648/en) (ITU-T SG 15) |
| **2.5 Out-of-band emissions** | [654](http://www.itu.int/md/R12-WP5A-C-0654/en) (WP 5D); [670](http://www.itu.int/md/R12-WP5A-C-0670/en) (WP 1A) |
| **2.6 Smart grid** | [683](http://www.itu.int/md/R12-WP5A-C-0683/en) (WP 1A) |
| **2.7 Report ITU-R M.2014** | [707](http://www.itu.int/md/R12-WP5A-C-0707/en) (Japan) |
| **2.8 Vocabulary** | [729](http://www.itu.int/md/R12-WP5A-C-0729/en) (CCV) |

Working Group 5A-2 set up one drafting group to deal with the local coverage aspects.

- DG5A2-1 Local Coverage Mr. Hitoshi Yoshino

## 2.1 Broadband Wireless Access

The meeting considered 6 Documents [642](http://www.itu.int/md/R12-WP5A-C-0642/en) (WP 5C); [646](http://www.itu.int/md/R12-WP5A-C-0646/en) (ITU-T SG 15); [651](http://www.itu.int/md/R12-WP5A-C-0651/en) (WP 5D);
[664](http://www.itu.int/md/R12-WP5A-C-0664/en) (WP 3K); [673](http://www.itu.int/md/R12-WP5A-C-0673/en), [674](http://www.itu.int/md/R12-WP5A-C-0674/en) (WP 1B).

A liaison statement (5A/[642](http://www.itu.int/md/R12-WP5A-C-0642/en)) of WP 5C is a reply liaison statement to ITU-T Study Group 15,
ITU-R WP 5D, MEF on work on draft new Report ITU-R F.[FS.IMT/BB].WP5C thanks ITU-T Study Group 15, ITU-R WP 5D and MEF for their liaison statements. An updated version of the working document towards a preliminary draft new Report ITU-R F.[FS.IMT/BB] is attached. Because the liaison is just information for WP 5A, the meeting did not consider any replies.

A liaison statement (Doc. 5A/[646](http://www.itu.int/md/R12-WP5A-C-0646/en)) from ITU-T SG 15 informed the ITU-R Study Group 1, WP 5A and WP 5D that a draft revised ITU-T G.9959 has been agreed by Q15/15 and it has been consented at the ITU-T SG 15 meeting on 5 December 2014. Q15/15 has duly considered the suggestion of
WP 5A and WP 5D to remove the physical layer from G.9959 and add it to a radio related draft Recommendation ITU-R “G.wnb-freq.” Q15/15 considers that the best course of action is to have the draft revised ITU-T G.9959 maintain the same structure of ITU-T G.9959 (2012) for a variety of technical reasons and also to avoid causing confusion to the industry. Q15/15 proposes to ITU-R WP 5A and WP 5D that a possible way forward would be to keep the baseband signal processing PHY part in G.9959 as it is now, and to have a draft ITU-R “G.wnb‑freq” include the required material by normative reference. Upon approval of this ITU-R draft “G.wnb-freq”, Study Group 15 will revise ITU-T G.9959 to normatively reference it, thus creating a one-to-one correspondence between the radio-related part in ITU-R and the non-radio related part in ITU-T. Doc. 5A/[673](http://www.itu.int/md/R12-WP5A-C-0673/en) from WP 1B is a reply liaison to ITU-T SG 15 on ITU-T G.9959. WP 1B has given due consideration of the request of SG 15 for a draft Recommendation ITU-R “G.wnb-freq” and developed a working document towards a PDN Recommendation “Narrow-Band Wireless Home Networking transceivers” in order to satisfy the requirement for the radio-related part of Recommendation ITU‑T G.9959. WP 1B replied to the liaison statement from ITU-T SG15 on behalf of ITU-R; WG 5A-2 did not see the need for further action at this point in time.

A liaison statement (Doc. 5A/[651](http://www.itu.int/md/R12-WP5A-C-0651/en)) informed that WP 5D is developing a draft new ITU-R Report on “Audio-visual capabilities and applications provided over terrestrial IMT systems”. The purpose of the Report is to describe technical and operational characteristics of interactive unicast and multicast audio-visual capabilities and applications provided over terrestrial IMT systems (AV over IMT). WG 5A-2 took note of it and did not see the need for further action at this point in time.

A liaison statement (Doc. 5A/[664](http://www.itu.int/md/R12-WP5A-C-0664/en)) from WP 3K provided the results of 5 GHz RLAN (802.11ac) Access Point emission pattern measurements of consumer and enterprise devices. Dr. Belen Montenegro-Villacieros made a detail presentation of the measurements. WG 5A-2 took note of it and did not see the need for further action at this point in time.

A liaison statement (Doc. 5A/[674](http://www.itu.int/md/R12-WP5A-C-0674/en)) informed that WP 1B is developing a new Report on Innovative regulatory tools to support enhanced shared use of the spectrum (Report
ITU-R SM.[INNOVATIVE REGULATORY TOOLS]). WG 5A-2 reviewed the working document and developed a reply liaison statement which is in document 5A/TEMP/[301](http://www.itu.int/md/R12-WP5A-150706-TD-0301/en).

## 2.2 Local coverage aspects

Working Group 5A-2 considered seven contributions [614](http://www.itu.int/md/R12-WP5A-C-0614/en), [636](http://www.itu.int/md/R12-WP5A-C-0636/en) [Annex 5](http://www.itu.int/md/dologin_md.asp?lang=en&id=R12-WP5A-C-0636!N05!MSW-E) (WP 5A); [665](http://www.itu.int/md/R12-WP5A-C-0665/en) (CG on Rep. Local Coverage); [686](http://www.itu.int/md/R12-WP5A-C-0686/en) (China); [702](http://www.itu.int/md/R12-WP5A-C-0702/en) (Canada); [705](http://www.itu.int/md/R12-WP5A-C-0705/en), [706](http://www.itu.int/md/R12-WP5A-C-0706/en) (Japan).

DG5A2-1 Local Coverage finalised the development of Report ITU-R M.[LOCAL\_CoVERAGE] based on the input contributions (Doc. 5A/TEMP/314).

After the completion of the Report ITU-R M.[LOCAL\_COVERAGE], WG 2 discussed its future work on local coverage, including a possible Recommendation on local coverage. There were views/concerns from the floor that if WG 2 decide to commence the development of the recommendation on local coverage, the following should be clarified: 1) exact additional elements to be recommended should need to be identified beyond the guidelines described in Report
ITU-R M.[LOCAL\_COVERAGE] and justifications/reasons for the elements to be recommended, 2) what kind of items should be recommended as an ITU-R Recommendation: technical matters
(e.g. specification, requirements for service operation, characteristics for sharing/coexistence) or regulatory matters, 3) a scope and/or structure of a possible Recommendation and study items for the Recommendation. WG 2 agreed to continue the discussion on whether or not WG 2 would start the development of a draft Recommendation on local coverage at the next WP 5A meeting in May 2016.

The CG activity on Local Coverage is not needed. The CG was closed.

## 2.3 Hearing aids and related

The meeting considered 2 documents [650](http://www.itu.int/md/R12-WP5A-C-0650/en) (ITU-D SG 1 Rapporteur) and [658](http://www.itu.int/md/R12-WP5A-C-0658/en) (SG 5).

Working Group 5A-2 took note of the information provided by ITU-D SG 1 and ITU-R SG 5 as contained in Documents 5A/[650](http://www.itu.int/md/R12-WP5A-C-0650/en) and 5A/[658](http://www.itu.int/md/R12-WP5A-C-0658/en) respectively.

## 2.4 ANTs

Two liaison statements (5A/ [647](http://www.itu.int/md/R12-WP5A-C-0647/en) and 5A/[648](http://www.itu.int/md/R12-WP5A-C-0648/en)) from ITU-T SG 15 were considered. WG 5A-2 reviewed the new revision of ANT Standards overview and ANT workplan and developed a reply liaison statement which is Doc. 5A/TEMP/[300](http://www.itu.int/md/R12-WP5A-150706-TD-0300/en).

## 2.5 Out-of-band emissions

A liaison (Doc. 5A/[654](http://www.itu.int/md/R12-WP5A-C-0654/en)) from WP 5D provided the reply information to WP 1A on characteristics of the unwanted emissions in the out-of-band and spurious domains for digital modulation technology used in broadband communication systems. WG 5A-2 took note of it and did not see the need for further action at this point in time.

A liaison (Doc. 5A/[670](http://www.itu.int/md/R12-WP5A-C-0670/en)) from WP 1A provided the information of working document towards a preliminary draft new report ITU-R SM.[CHAR-UNWANTED] “Characteristics of the unwanted emissions in the out-of-band and spurious domains for digital modulation technology used in broadband communication systems”. WG 5A-2 reviewed the working document and developed a reply liaison statement which is Doc. 5A/TEMP/[302](http://www.itu.int/md/R12-WP5A-150706-TD-0302/en).

## 2.6 Smart grid

A liaison (Doc. 5A/[683](http://www.itu.int/md/R12-WP5A-C-0683/en)) from WP 1A provided the information on Report
ITU-R SM.[SMART\_GRID] on the Smart Grid project. WG 5A-2 took note of it and did not see the need for further action at this point in time.

## 2.7 Report ITU-R M.2014

Doc. 5A/[707](http://www.itu.int/md/R12-WP5A-C-0707/en) proposed to include the NXDN system in the revision of Report ITU-R M.2014-2 and remove the IDRA. As a result of the discussion, a working document towards the draft revision of Report ITU-R M.2014-2 (Doc. 5A/TEMP/[303](http://www.itu.int/md/R12-WP5A-150706-TD-0303/en)) was developed based on Doc. 5A/[707](http://www.itu.int/md/R12-WP5A-C-0707/en). A liaison statement (Doc. 5A/TEMP/[305](http://www.itu.int/md/R12-WP5A-150706-TD-0305/en)) was developed to invite external organizations to consider the working document and provide update or new material to complete the revision work as well.

## 2.8 Vocabulary

In reviewing the terms and definitions provided by Working Party 5A the CCV suggested that Working Party 5A selects the most significant term for each definition (Doc. 5A/[729](http://www.itu.int/md/R12-WP5A-C-0729/en)). WG 5A-2 reviewed the definitions and developed a reply liaison statement in Doc. 5A/TEMP/[304](http://www.itu.int/md/R12-WP5A-150706-TD-0304/en).

## 2.9 Review of ITU-R texts

Working Group 5A-2 reviewed the WP 5A texts Section 1 of [Annex 1](http://www.itu.int/md/dologin_md.asp?lang=en&id=R12-WP5A-C-0636!N01!MSW-E) to [Doc. 5A/636](http://www.itu.int/md/R12-WP5A-C-0636/en),
and [Doc. 5/2R3](http://www.itu.int/md/R12-SG05-C-0002/en), [Guide to the use of ITU-R texts related to the land mobile service](http://www.itu.int/oth/R0A06000001/en) ([Doc. 5A/701](http://www.itu.int/md/R12-WP5A-C-0701/en)), Vocabulary ([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), Res. [33-3](http://www.itu.int/pub/R-RES-R.33/en), [34-3](http://www.itu.int/pub/R-RES-R.34/en), [35-3](http://www.itu.int/pub/R-RES-R.35/en), [36-3](http://www.itu.int/pub/R-RES-R.36/en)), [Doc. 5A/729](http://www.itu.int/md/R12-WP5A-C-0729/en). No update was proposed.

## 2.10 Objectives for the next meeting

The objectives for the next meeting are to continue the work on WAS Study Questions on the basis of input contributions and, in particular, to continue the work on:

- Development of a preliminary draft revision of Report ITU-R M.2014.

## 2.11 Chairman’s closing remarks

Finally, the Chairman of Working Group 5A-2 wishes to thank all participants of WG 5A- 2 for their contributions and cooperation and particularly thank DG Chair Dr. Hitoshi Yoshino for his good and efficient work.

# 3 Working Group 5A-3 – Public protection and disaster relief (Chairman: Ms Amy Sanders, USA)

## 3.1 Executive summary

Working Group 3 met on three occasions and considered 15 input contributions to this meeting and two Annexes to the previous Working Party 5A Chairman’s Report. The input documents were related to revisions of documents under the purview of WG 3. One sub-working group conducted the majority of the work. The work of the group produced one document for consideration for transmission to Study Group 5, one document to be included in the Chairman’s Report, and two liaison statements.

## 3.2 Organization of the work

As outlined in Section 3 of [Annex 3 of 5A/543](http://www.itu.int/md/R12-WP5A-C-0543%21N03%21MSW-E) the Objectives for this meeting were to:

– continue development of the preliminary draft new Report ITU-R M.[PPDR] based input contributions;

– consider the further development of Annex 7 of the Chairman’s Report, “Elements for consideration in future discussions on Recommendation ITU-R M.2015”.

All input contributions were introduced at the Working Group level. The Disaster Relief Rapporteur’s Report (Doc. [5A/724](http://www.itu.int/md/R12-WP5A-C-0724/en)) was presented at the WP 5A Plenary. The WP 5A Chairman also tasked all WGs to conduct a review the questions assigned to WP 5A, progress of the studies requested by WRC Resolutions and Recommendations, work conducted by WP 5A in support of ITU-R Resolutions, the relevant portions of the “Guide to the use of ITU-R texts related to the land mobile service”, and to identify any relevant vocabulary to share with the CCV. These items were addressed at the Working Group level.

## 3.3 Execution of objectives

**Objective 1: Continue development of the preliminary draft new Report ITU-R M.[PPDR] based input contributions;**

A single Sub-Working Group was established under the leadership of Mr. Andy Gowans, UK to address the further development of preliminary draft new Report ITU-R M.[PPDR],

Sub-Working Group 5A-3 PPDR Reports met on 13 occasions. The SWG was assigned seven input contributions and Annex 6 of the Chairman’s Report. The meeting also agreed to consider one document from the Sharepoint. The documents considered by the meeting, as well as their sources, are shown in the table below:

|  |  |
| --- | --- |
| **Draft new Rep. ITU-R M.[PPDR] & Supp. of M.2033**  | [636](http://www.itu.int/md/R12-WP5A-C-0636/en) [Annex 6](http://www.itu.int/md/dologin_md.asp?lang=en&id=R12-WP5A-C-0636!N06!MSW-E) (WP 5A); [684R1](http://www.itu.int/md/R12-WP5A-C-0684/en) (China); [690](http://www.itu.int/md/R12-WP5A-C-0690/en) (Australia, Canada, UK/CEPT, USA); [691](http://www.itu.int/md/R12-WP5A-C-0691/en) (UK); [695](http://www.itu.int/md/R12-WP5A-C-0695/en), [696](http://www.itu.int/md/R12-WP5A-C-0696/en) (Australia); [699](http://www.itu.int/md/R12-WP5A-C-0699/en) (Canada); [713](http://www.itu.int/md/R12-WP5A-C-0713/en) (Motorola Solutions); [714](http://www.itu.int/md/R12-WP5A-C-0714/en) (Korea); [719](http://www.itu.int/md/R12-WP5A-C-0719/en) (Israel); [723](http://www.itu.int/md/R12-WP5A-C-0723/en) (India), Sharepoint (USA) |

The group worked on finalizing the preliminary draft new Report in line with the inputs. The group carried out detailed consideration of all input contributions and incorporated revisions, as appropriate, in to the draft new Report.

To progress this work, three offline drafting groups focused on areas identified as requiring more in-depth consideration. The offline groups then reported their results to the SWG, which carefully considered the revisions and incorporated the material, as appropriate, into the draft new Report.

In discussions in the SWG and in WG 3, it was suggested that in the next study cycle WP 5A should consider the possible development of a Recommendation or Report on spectrum requirements for public protection and disaster relief. It was further suggested that Annexes 6 and 7 of the preliminary draft new Report might serve as the basis for the development of that possible new Report or Recommendation.

The meeting agreed to continue its liaison activity with WP 5D and inform them of the further development of the preliminary draft new Report, the methodologies employed in estimating the spectrum requirements for PPDR, and the possibility that WP 5A would develop a new Report or Recommendation on spectrum requirements for PPDR in the next cycle.

As a result of the diligent efforts of all participants, the SWG was able to produce a clean version of the preliminary draft new Report for consideration in WG 3, which subsequently proposed that WP 5A consider elevating the document to draft new Report for consideration in Study Group 5.

Based on the guidance from the WP 5A Chairman, the SWG also developed a list of vocabulary terms that were used in the preliminary draft new Report which did not yet appear in the ITU vocabulary database. A liaison statement to the CCV was developed to transmit these terms to the appropriate body for consideration for inclusion in the database.

As a result of the work on the preliminary draft new Report, three documents were created:

1 [TEMP/315Rev.1](https://extranet.itu.int/rsg-meetings/sg5/wp5a/TEMP/315e.docx?Web=1) – [Draft] Liaison Statement to Working Party 5D to be dispatched pending the approval of [preliminary] draft new Report ITU-R M.[PPDR]

2 [TEMP/319Rev.1](https://extranet.itu.int/rsg-meetings/sg5/wp5a/TEMP/319e.docx?Web=1) – [Preliminary] draft new Report ITU-R M.[PPDR] to be considered in WP 5A Plenary

3 [TEMP/320Rev.2](https://extranet.itu.int/rsg-meetings/sg5/wp5a/TEMP/320e.docx?Web=1) – [Draft] Liaison Statement to the CCV to be dispatched pending the approval of [preliminary] draft new Report ITU-R M.[PPDR]

**Objective 2: Consider the further development of Annex 7 of the Chairman’s Report, “Elements for a future revision of Recommendation ITU-R M.2015.**

At the previous meeting, WP 5A approved the revision of Recommendation ITU-R M.2015, which was subsequently approved at SG 5. That meeting also created an Annex on “Elements for consideration in future discussions on Recommendation ITU-R M.2015”, which was reflected in Annex 7 to 5A/[636](http://www.itu.int/md/R12-WP5A-C-0636/en). At this meeting, four contributions were received related to the possible future revision of Recommendation ITU-R M.2015, “Frequency arrangements for public protection and disaster relief radiocommunication systems in UHF bands in accordance with Resolution **646 (Rev.WRC‑12)**”, as detailed in the table below:

|  |  |
| --- | --- |
| **Update of Rec. ITU-R M.2015, Frequency arrangements for public protection and disaster relief radiocommunication systems in UHF bands in accordance with Resolution 646 (Rev.WRC-12)** | [636](http://www.itu.int/md/R12-WP5A-C-0636/en) [Annex 7](http://www.itu.int/md/dologin_md.asp?lang=en&id=R12-WP5A-C-0636!N07!MSW-E) (WP 5A); [679](http://www.itu.int/md/R12-WP5A-C-0679/en) (UK/CEPT); [697](http://www.itu.int/md/R12-WP5A-C-0697/en), [698](http://www.itu.int/md/R12-WP5A-C-0698/en) (Australia); [715](http://www.itu.int/md/R12-WP5A-C-0715/en) (Korea) |

Each of the input contributions was introduced and discussed in WG 3. After consideration of the content of the contributions, the meeting decided to include the substantive portions of 5A/679 and 5A/[715](http://www.itu.int/md/R12-WP5A-C-0715/en) in the “Elements” document as examples. The meeting agreed to carry forward Documents 5A/[697](http://www.itu.int/md/R12-WP5A-C-0697/en) and 5A/[698](http://www.itu.int/md/R12-WP5A-C-0698/en) for consideration in future meetings.

As a result of this work, one document was created:

1. [TEMP/318Rev.1](https://extranet.itu.int/rsg-meetings/sg5/wp5a/TEMP/318e.docx?Web=1) – Elements for consideration in future discussions on Recommendation ITU-R M.2015 - to be carried forward as an Annex to the Chairman’s Report.

## 3.4 Other matters

### 3.4.1 Relevant Recommendations and Reports

Based on the work accomplished at this meeting, the Chair of WG 3 reviewed Attachment 4 of [Annex 3 of Document 5A/636](http://www.itu.int/md/dologin_md.asp?lang=en&id=R12-WP5A-C-0636!N03!MSW-E), “Proposed course of action toward the review of Recommendations and Reports associated with work on WRC-15 agenda item 1.3 and status of work.” and made appropriate updates to reflect actions taken in Study Group 5 and the work of this meeting.
The updated document is contained in [Attachment 1](#att1) to this Annex and is now entitled “Summary of the course of action toward the review of Recommendations and Reports associated with work on WRC-15 agenda item 1.3 and status of work”.

### 3.4.2 Administrative issues

WG 3 followed the WP 5A Chairman’s instructions to review the status of WP 5A texts, including the questions assigned to WP 5A, progress of the studies requested by WRC Resolutions and Recommendations, work conducted by WP 5A in support of ITU-R Resolutions, the relevant portions of the “Guide to the use of ITU-R texts related to the land mobile service”, and to identify any relevant vocabulary to share with the CCV. A number of updates were provided to the WP 5A Chairman for inclusion in the texts.

### 3.4.3 Future work

With regard to work on public protection and disaster relief in the next study cycle, the following objectives could be considered:

– the further development of the “Elements for consideration in future discussions on Recommendation ITU-R M.2015”, and

– the possible development of a Recommendation or Report on spectrum requirements for public protection and disaster relief.

The WG Chairman would like to express particular appreciation and gratitude to Mr. Gowans for his patient and wise leadership of the subworking group and to all the participants of Working Group 3 for their contributions and cooperative approach to the discussions.

**Attachment:**

[Attachment 1](#att1): Summary of the course of action toward the review of Recommendations and
Reports associated with work on WRC-15 agenda item 1.3 and status of work.

# 4 Working Group 5A-4 – Interference and sharing (Chairman: Mr Michael Kraemer, Germany)

Executive Summary

WG 5A-4 continued discussions on 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. WG 5A-4 furthermore developed proposals for revisions of two Questions (ITU-R [1-5/5](http://www.itu.int/pub/R-QUE-SG05.1) and ITU-R [242-1/5](http://www.itu.int/pub/R-QUE-SG05.242)). WG 5A-4 also developed elements for a liaison statement to the ITU-D/ITU-R Joint Group for Resolution 9 and agreed on a liaison statement to WP 4A on the working document towards a Preliminary Draft New Recommendation
ITU-R SF.[INTERF.AREA]. Finally, WG 5A-4 reviewed and revised the various 5A texts as well as the summary of work done in response to WRC Resolutions.

# 4.1 Introduction

Working Group 5A-4 met seven times during the July 2015 meeting of Working Party 5A and considered 30 input contributions and developed 5 output documents.

# 4.2 Consideration of input documents

The following issues were considered based on input contributions as assigned to WG 5A-4 by the WP 5A opening plenary based on Document 5A/ADM/29(Rev.1).

## 4.2.1 Revision of Recommendation ITU-R F.758-5

Input document: [5A/637](http://www.itu.int/md/R12-WP5A-C-0637/en) (WP 5C)

WG 5A-4 took note of the ongoing work in WP 5C on this issue and did not see the need for futher action at this point in time.

## 4.2.2 TV receiving antenna pattern for use in sharing studies

Input document: [5A/643](http://www.itu.int/md/R12-WP5A-C-0643/en) (WP 6A)

WG 5A-4 took note of the information provided by WP 6A on television broadcast receiving antenna pattern for use in sharing studies in the frequency range 470-862 MHz and did not see the need for further action at this point in time.

## 4.2.3 Revision of Recommendation ITU-R P.619

Input document: [5A/666](http://www.itu.int/md/R12-WP5A-C-0666/en) (WP 3M)

WG 5A-4 took note of the ongoing work in WP 3M on this issue and agreed to come back to this issue at the next meeting of WP 5A for a more detailed review and the possible development of a reply liaison statement. As a consequence, it was agreed to carry Document 5A/666 forward to the next WP 5A meeting.

## 4.2.4 Questions assigned to WP 5A

Input documents: [5A/655](http://www.itu.int/md/R12-WP5A-C-0655/en) (WP 5D); [5A/693](http://www.itu.int/md/R12-WP5A-C-0693/en) (Saudi Arabia, Bahrain, UAE, and Jordan); [5A/704](http://www.itu.int/md/R12-WP5A-C-0704/en) (Japan)

Output documents: 5A/TEMP/290(Rev.1) (Revision of Question ITU-R 242-1/5); 5A/TEMP/291 (Revision of Question ITU-R 1-5/5)

Regarding Question ITU-R [209-4/5](http://www.itu.int/pub/R-QUE-SG05.209) and Question ITU-R [241-2/5](http://www.itu.int/pub/R-QUE-SG05.241), WG 5A-4 took note of the information provided by WP 5D and this issue was covered in detail by WG 5A-3 and WG 5A-5 respectively.

Regarding Question ITU-R 1-5/5, WG 5A-4 updated that Question based on Document 5A/693. In this regard, it was also discussed whether a liaison statement to WP 1A should be developed on a possible revision of some relevant SM-series Recommendations and this issue will be further considered at the next WP 5A meeting, once the modified Question has been approved by Study Group 5.

Based on the proposal in Document 5A/704, WG 5A-4 agreed to broaden the scope of Question ITU-R 242-1/5, which is currently assigned only to WP 5C, to now also cover antenna radiation patterns for the mobile service for use in sharing studies. With this extended scope, this Question should be assigned jointly to WP 5A, WP 5C and WP 5D in the new study cycle after WRC-15.

## 4.2.5 Dynamic Access – sharing

Input documents: [5A/638](http://www.itu.int/md/R12-WP5A-C-0638/en) (WP 5B); [5A/649](http://www.itu.int/md/R12-WP5A-C-0649/en) (ITU-D/ITU-R Joint Group for Resolution 9); [5A/656](http://www.itu.int/md/R12-WP5A-C-0656/en) (WP 5D); [5A/672](http://www.itu.int/md/R12-WP5A-C-0672/en) (WP 1B)

WG 5A-4 took note of the comments provided by WP 1B, WP 5B and WP 5D in Documents 5A/672, 5A/638 and 5A/656 respectively, and did not see the need for further action at this point in time.

Regarding Document 5A/649, elements for a reply liaison statement to the ITU-D/ITU-R Joint Group for Resolution 9 were developed from a WG 5A-4 perspective and these were included into the overall reply as developed in WG 5A-5 (see Document 5A/TEMP/306).

## 4.2.6 Human exposure to RF fields

Input documents: [5A/652](http://www.itu.int/md/R12-WP5A-C-0652/en) and [657](http://www.itu.int/md/R12-WP5A-C-0657/en) (ITU-T SG 5); [5A/661](http://www.itu.int/md/R12-WP5A-C-0661/en) (WP 6A)

WG 5A-4 took note of the information provided by ITU-T SG 5 and WP 6A on this issue and did not see the need for further action at this point in time.

## 4.2.7 Interference from wired telecommunications systems and liaison with ITU-T

Input documents: [5A/639](http://www.itu.int/md/R12-WP5A-C-0639/en) (WP 5B); [5A/653](http://www.itu.int/md/R12-WP5A-C-0653/en) (ITU-T SG 5); [5A/660](http://www.itu.int/md/R12-WP5A-C-0660/en)(Rev.1) (SG 6); [5A/675](http://www.itu.int/md/R12-WP5A-C-0675/en), [676](http://www.itu.int/md/R12-WP5A-C-0676/en) and [677](http://www.itu.int/md/R12-WP5A-C-0677/en) (WP 1A); [5A/733](http://www.itu.int/md/R12-WP5A-C-0733/en) (ITU-T SG 9)

WG 5A-4 took note of the comments provided by WP 1A, WP 5B, ITU-R Study Group 6, ITU-T Study Group 5 and ITU-T Study Groups 9 on these issues and did not see the need for further action at this point in time.

## 4.2.8 RLAN mitigation techniques

Input documents: [5A/664](http://www.itu.int/md/R12-WP5A-C-0664/en) (WP 3K); [5A/688](http://www.itu.int/md/R12-WP5A-C-0688/en) (USA); [5A/700](http://www.itu.int/md/R12-WP5A-C-0700/en) and [703](http://www.itu.int/md/R12-WP5A-C-0703/en) (Canada)

Output documents: 5A/TEMP/316 (RLAN compilation document); 5A/TEMP/317 (Working document towards a PDN Report ITU-R M.[RLAN MITIGATION])

WG 5A-4 took note of the results of 5 GHz RLAN (802.11ac) Access Point emission pattern measurements of consumer and enterprise devices as provided by WP 3K in Document 5A/664 and did not have any comments at this point in time.

WG 5A-4 agreed with the proposal in Document 5A/688 to carry the working document towards a PDN Report ITU-R M.[RLAN MITIGATION] forward to the next meeting of WP 5A for continued work.

Based on the proposals in Document 5A/703, WG 5A-4 discussed possible updates to the working document towards a PDN Report ITU-R M.[RLAN MITIGATION]. However, due to lack of time it was not possible to fully review this contribution. Therefore, Document 5A/703 is carried forward to the next meeting of WP 5A for further consideration.

Due to the different views expressed during the discussion, it was not possible to agree on specific updates to the working document towards a PDN Report ITU-R M.[RLAN MITIGATION] and the document essentially remains unchanged from the previous meeting. An Editor’s Note was inserted at the beginning of the working document to address this issue.

The areas where different views were expressed and no agreement could be reached in the discussion include:

‑ Whether this report should only cover the 5 350-5 470 MHz band or also other part of the 5 GHz frequency range (essentially the entire 5 GHz frequency range);

‑ Whether or not this report should address the practicability of the possible additional mitigation techniques to facilitate sharing between RLAN systems and incumbent services;

‑ Whether or not this report should address military radars and their characteristics.

When discussing the proposed scope for the working document as contained in Document 5A/703, further edits were made to that proposal and the following text is the outcome of that discussion, noting that the discussions on the scope of the document have not concluded:

“*This document contains technical information describing possible additional mitigation techniques [including their technical feasibility] that could be applied when developing and deploying RLAN systems, in particular in the frequency bands in the 5 GHz frequency range. It does not address the effectiveness of these techniques as mitigation techniques with respect to other existing services.*”

As described above, it was agreed in the end to not update the working document at this point in time and instead record the current state of the discussion on the scope in the Report of the WG 5A‑4 activities. This text will be further discussed at the next meeting as part of the overall discussions on the working document, and in particular regarding the above mentioned areas where different views were expressed regarding the overall scope of the report, and the text may then be inserted into the working document with modifications as appropriate.

Document [5A/700](http://www.itu.int/md/R12-WP5A-C-0700/en) proposed updates to the compilation of technical information on techniques that could be used in RLAN deployments to facilitate sharing as contained in Annex 9 of the Chairman’s Report of the last WP 5A meeting (see Document 5A/636). Due to lack of time it was not possible to review this contribution. As a result, Document 5A/700 is carried forward to the next meeting of WP 5A for further consideration. An Editor’s Note was inserted at the beginning of the compilation document to address this issue.

## 4.2.9 Working document towards a Preliminary Draft New Recommendation ITU-R SF.[INTERF.AREA]

Input document: [5A/728](http://www.itu.int/md/R12-WP5A-C-0728/en) (WP 4A)

Output document: 5A/TEMP/322(Rev.1) (Liaison Statement to WP 4A)

Since the liaison statement from WP 4A was only received shortly before the start of the WP 5A meeting, WG 5A-4 was not able to carry out a thorough review of the document, both from the point of view of WP 5A’s workload and from the point of view of availability of the appropriate experts of some delegations.

WG 5A-4 expects to provide comments from its first meeting in the study cycle after WRC-15, after a thorough review of the working document towards a Preliminary Draft New Recommendation ITU‑R SF.[INTERF.AREA] at that WP 5A meeting. As a consequence, it was agreed to carry Document 5A/728 forward to the next WP 5A meeting. A reply liaison statement to inform WP 4A was developed accordingly.

## 4.2.10 WRC-15 agenda item 1.8

Input document: [5A/725](http://www.itu.int/md/R12-WP5A-C-0725/en) (WP 4A)

WG 5A-4 took note of the information provided by WP 4A on this issue and did not see a need for further action at this point in time.

## 4.2.11 WRC-15 agenda item 1.9, issue 1.9.1

Input document: [5A/727](http://www.itu.int/md/R12-WP5A-C-0727/en) (WP 4A)

WG 5A-4 took note of the information provided by WP 4A on this issue and did not see a need for further action at this point in time.

## 4.2.12 WRC-15 agenda item 1.10

Input document: [5A/687](http://www.itu.int/md/R12-WP5A-C-0687/en) (WP 4C)

WG 5A-4 took note of the information provided by WP 4C on this issue and did not see a need for further action at this point in time.

# 4.3 Administrative matters

## 4.3.1 Revision of WP 5A texts

WG 5A-4 reviewed and editorially updated the status of texts of Working Party 5A as contained in section 1 of Annex 1 to Document 5A/636 to be included in the new version of section 1 as produced by the WP 5A Chairman.

WG 5A-4 agreed to the updated Guide to the use of ITU-R texts related to the land mobile service as proposed in Document 5A/701 and did not have further comments.

WG 5A-4 had no further comments to the Vocabulary of terms for the land mobile service as contained in Annex 25 to Document 5A/79 and did not review the proposed definitions in Document 5A/729 as all these terms were relevant to WG 5A-2.

## 4.3.2 Progress of the studies requested by WRC Resolutions and Recommendations

The summary of the work conducted by WP 5A in support of WRC Resolutions as prepared by the Chairman of Study Group 5 (see Document 5A/663(Rev.1)) was reviewed by WG 5A-4 from an interference and sharing perspective, and some text was agreed to briefly summarize the status of these studies in the Executive Report of the WP 5A Chairman to the next Study Group 5 meeting in July 2015.

## 4.3.3 Work conducted by WP 5A in support of ITU-R Resolutions

WG 5A-4 reviewed the summary of the progress of studies requested in ITU-R Resolutions as contained in Annex 2 to Document 5/42 and did not have further comments from an interference and sharing perspective.

# 4.4 Objectives for the next WP 5A meeting

**The objectives for the next meeting related to “Interference and Sharing” are:**

‑ Review the ongoing work on the revision of Recommendation ITU-R P.619 (see Document [5A/666](http://www.itu.int/md/R12-WP5A-C-0666/en)) and provide comments to WP 3M as appropriate;

‑ Review the ongoing work in WP 4A on the working document towards a Preliminary Draft New Recommendation ITU‑R SF.[INTERF.AREA] (see Document 5A/728) and provide comments to WP 4A as appropriate;

‑ Continue to develop the working document towards a PDN Report
ITU-R M.[RLAN MITIGATION] on possible additional mitigation techniques to facilitate sharing between RLAN systems and incumbent services;

‑ Further work on the compilation of technical information on techniques that could be used in RLAN deployments to facilitate sharing;

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

# 4.5 Conclusion

The Chairman of WG 5A-4 would like to thank all the WG 5A-4 participants for their active contributions to the work of WG 5A-4.

# 5 Working Group 5A-5 – New technologies (Chairman: Mr Hitoshi Yoshino, Japan)

Working Group 5A-5 (WG 5A-5) met eight times during the 15th meeting of ITU-R WP 5A from 6th to 16th July, 2015. Around 45 delegates from Australia, Germany, Canada, China, France, Italy, India, Japan, Korea, The Netherlands, Russian Federation, Thailand, United Kingdom, USA, Alcatel-Lucent, Ericsson, Intel, Microsoft, Motorola, Orange, Robert Bosch and Telecom Italia participated in the meetings. The tasks assigned to WG 5A-5 address new technologies.

Twenty five input contributions were attributed to WG 5A-5, which were:

|  |  |
| --- | --- |
| – Intelligent transport system (ITS) (Q. 205-5/5) | Documents 5A/[636](http://www.itu.int/md/R12-WP5A-C-0636/en) [Annex 10](http://www.itu.int/md/dologin_md.asp?lang=en&id=R12-WP5A-C-0636!N10!MSW-E), [Annex 11](http://www.itu.int/md/dologin_md.asp?lang=en&id=R12-WP5A-C-0636!N11!MSW-E), [Annex 12](http://www.itu.int/md/dologin_md.asp?lang=en&id=R12-WP5A-C-0636!N12!MSW-E), [Annex 13](http://www.itu.int/md/dologin_md.asp?lang=en&id=R12-WP5A-C-0636!N13!MSW-E) (WP 5A); [668](http://www.itu.int/md/R12-WP5A-C-0668/en), [669](http://www.itu.int/md/R12-WP5A-C-0669/en) (IEEE); [671](http://www.itu.int/md/R12-WP5A-C-0671/en) (WP 1B); [685](http://www.itu.int/md/R12-WP5A-C-0685/en) (China); [692](http://www.itu.int/md/R12-WP5A-C-0692/en) (Beijing University of Posts and Telecommunications, China Mobile, Datang, Huawei); [709](http://www.itu.int/md/R12-WP5A-C-0709/en), [710](http://www.itu.int/md/R12-WP5A-C-0710/en), [711](http://www.itu.int/md/R12-WP5A-C-0711/en), [712](http://www.itu.int/md/R12-WP5A-C-0712/en) (Japan); [716](http://www.itu.int/md/R12-WP5A-C-0716/en), [717](http://www.itu.int/md/R12-WP5A-C-0717/en), [718](http://www.itu.int/md/R12-WP5A-C-0718/en) (Korea) |
| – Dynamic Access -Technology | Documents 5A/[638](http://www.itu.int/md/R12-WP5A-C-0638/en) (WP 5B); [649](http://www.itu.int/md/R12-WP5A-C-0649/en) (ITU-D/ITU-R Joint Group for Resolution 9); [656](http://www.itu.int/md/R12-WP5A-C-0656/en) (WP 5D); [672](http://www.itu.int/md/R12-WP5A-C-0672/en) (WP 1B) |
| – Above 275 GHz | Documents 5A/[678](http://www.itu.int/md/R12-WP5A-C-0678/en), [680](http://www.itu.int/md/R12-WP5A-C-0680/en), [681](http://www.itu.int/md/R12-WP5A-C-0681/en), [682](http://www.itu.int/md/R12-WP5A-C-0682/en) (WP 1A); [708](http://www.itu.int/md/R12-WP5A-C-0708/en) (Japan) |

WG 5A-5 established a Sub-working Group (SWG) and a Drafting Group (DG) to facilitate its work:

|  |  |
| --- | --- |
| SWG/DG (Chairman) | Terms of Reference |
| SWG 5A-5-1 – ITS: Intelligent Transport System(Mr. Satoshi Oyama, Japan) | – Develop and finalize a working document towards a preliminary draft new Recommendation ITU-R M.[V2X] on radio interface standards of vehicle-to-vehicle and vehicle-to-infrastructure communication for intelligent transport systems (ITS) applications– Develop and finalize a working document towards a preliminary draft revision of Report ITU-R M.2228 on advanced ITS radiocommunications– Develop a working document toward a draft new Report ITU-R M.[ITS USAGE] on Intelligent transport systems usage report in ITU-R member countries. |
| DG 5A-5-1-1 – Rail.Link(Dr. Hiroyuki Tsuji, Japan) | – Develop a working document towards a preliminary draft new Report ITU-R M.[RAIL.LINK] |

The other issues were directly considered by the meetings of WG 5A-5.

SWG 5A-5-1 on ITS and DG 5A-5-1-1 on Rail Link met five times and once, respectively, during the 15th meeting of WP 5A.

# 5.1 Executive summary

WG 5A-5 completed its work on the development of a preliminary draft new Recommendation ITU-R M.[V2X] on “Radio interface standards of vehicle-to-vehicle and vehicle-to-infrastructure communications for Intelligent Transport System applications” and a preliminary draft revision of Report ITU-R M.2228 on “Advanced Intelligent Transport System Radiocommunications”.
WG 5A-5 continued to develop a working document toward a preliminary draft new Report ITU‑R M.[ITS USAGE] on Intelligent transport systems usage report in ITU-R member states. WG 5A-5 continued to develop a working document towards a preliminary draft new Report ITU‑R M.[RAIL.LNK]. WG 5A-5 initiated its work on technical and operational characteristics of the land mobile service in the frequency range 275-1 000 GHz and developed a draft new Question ITU-R [THZ LAND MOBILE CHA] on technical and operational characteristics of the land mobile service in the frequency range 275-1 000 GHz. WG 5A-5 revised Question ITU-R 241-2/5 on cognitive radio systems in the land mobile service.

# 5.2 Intelligent transport system (ITS)

WG 5A-5 considered twelve input contributions and developed six output documents:

1) Working document towards a preliminary draft new Recommendation ITU-R M.[V2X] on radio interface standards of vehicle-to-vehicle and vehicle-to-infrastructure communication for ITS applications (Document 5A/TEMP/308R1), in which Table 6 included IEEE standards. After the considerations of this document, WG 5A-5 agreed to elevate the working document towards a preliminary draft new Recommendation
ITU-R M.[V2X] to a preliminary draft new Recommendation. WG 5A-5 agreed to submit this document to WP 5A plenary for approval to send it to SG 5. WG 5A-5 decided to send a liaison statement to external Standards Development Organizations (SDOs) including asking them to provide information on their progress of ITS radio interface technologies (Document 5A/TEMP/310R1);

2) Working document towards a preliminary draft revision of Report ITU-R M.2228 on advanced ITS radiocommunications, which was finally elevated to a preliminary draft revision (Document 5A/TEMP/307R1). WG 5A-5 agreed to submit this document to WP 5A plenary for approval to send it to SG 5;

3) Working document toward a preliminary draft new Report M.[ITS USAGE] of intelligent transport systems usage report in ITU Member States
(Document 5A/TEMP/313R1); and

4) Working document toward a preliminary draft new Report ITU-R M.[RAIL.LINK] on systems for public mobile communications with train (Document 5A/TEMP/312R1).

WG 5A-5 also reviewed and updated the schedules in its work plans on working document towards a preliminary draft new Recommendation ITU-R M.[ITS-USAGE] and working document toward a preliminary draft new Report M.[IRAIL.LINK] ([Attachment 2](#att2) and [Attachment 3](#att3), respectively).

Regarding a liaison statement from WP 1B on a proposed new Question concerning spectrum management on ITS, WG 5A-5 created a reply liaison statement to WP 1B (Document 5A/TEMP/311).

It was agreed that WG 5A-5 would not take any actions on WRC-15 agenda item 1.18 in this meeting.

# 5.3 Revision of Question ITU-R 241-2/5 on Cognitive Radio Systems (CRSs)

WG 5A-5 developed a preliminary draft revision of Question ITU-R 241-2/5 on cognitive radio systems in the land mobile service (Document 5A/TEMP/299).

# 5.4 Liaison Statements on Dynamic Spectrum Access

WG 5A-5 noted two liaison statements copied for information to WP 5A from WPs 5B and 5D, providing comments on WP 1B’s working document towards a preliminary draft new Report
ITU-R SM.[DYNAMIC ACCESS]. WG 5A-5 also considered a liaison statement from WP 1B on WP 1B’s working document towards a preliminary draft new Report
ITU-R SM.[CRS SPECTRUM MANAGEMENT], formerly called a preliminary draft new Report ITU-R SM.[DYNAMIC ACCESS]. WG 5A-5 decided not to respond at this time to this liaison statement since WP 1B’s work on this Report has just restarted and the working document is not matured enough to comment.

WG 5A-5 reviewed a liaison statement from ITU-D/ITU-R joint group for WTDC Resolution 9, regarding the work plan and draft outline for the Resolution 9 output report. In particular, WG 5A-5 was interested in its activities regarding *resolves 4: to compile case studies and collect best practices regarding national uses of shared spectrum access, including DSA, and study the economic and social benefits arising from the effective sharing of spectrum resources*. WG 5A-5 together with WG 5A-4 developed a reply liaison statement to the joint group to provide some relevant references to ITU-R publications.

# 5.5 Technical and operational characteristics of the land mobile service in the frequency range 275-1 000 GHz

WG 5A-5 initiated its work on technical and operational characteristics of the land mobile service in the frequency range 275-1 000 GHz. Based on an input contribution, WG 5A-5 developed a preliminary draft new Question ITU-R [THZ LAND MOBILE CHAR] on technical and operational characteristics of the land mobile service in the frequency range 275-1 000 GHz (Document 5A/TEMP/289). WG 5A-5 also developed a reply liaison statement to WP 1A to provide information on the development of this new Question (Document 5A/TEMP/288).

# 5.6 Review of ITU-R texts

WG 5A-5 reviewed ITU-R texts pertinent to WG 5A-5 in Annex 1 to Doc. 5A/636 (WP 5A).

There were no views on suppression or revision with regard to the existing ITU-R Recommendations, Reports and Handbooks relating to WG 5A-5. The meeting agreed to retain all the ITU-R Recommendations, Reports and handbooks relating to WG 5A-5. WG 5A-5 also reviewed the Guide to the use of ITU-R texts related to the land mobile service. WG 5A-5 particularly reviewed a new text on Report ITU-R M.2330 “Cognitive radio systems in the land mobile service” and endorsed the new text.

WG 5A-5 also reviewed the working document towards a preliminary draft revision of Recommendation ITU-R M.1797/ new Recommendation ITU-R M.[5A/VOC] on Vocabulary of terms for the land mobile service (Annex 25 to Document [5A/79](http://www.itu.int/md/R12-WP5A-C-0079/en)). WG 5A-5 sees that there is no further terms to be included in the ITU-R vocabulary document.

# 5.7 Future work

WG 5A-5 continues the development of 1) working document towards a preliminary draft new Report ITU-R M.[ITS USAGE], and 2) working document toward a preliminary draft new
Report M.[RAIL.LINK], with regard to ITS.

WG 5A-5 will discuss a possible update of the handbook volume 4 "Intelligent Transport Systems" of the Land Mobile Handbook (LMH).

WG 5A-5 continues its work on technical and operational characteristics of the land mobile service in the frequency range 275-1 000 GHz.

Finally WG 5A-5 Chairman would like to thank Sub-Working Group Chairman Mr. Satoshi Oyama, and Drafting Group Chairman Dr. Hiroyuki Tsuji for their excellent chairmanship and all participants for their contribution to work of the group.

**Attachments:**

[Attachment 2](#att2): Work plan for the development of a new Report ITU-R M.[ITS USAGE] on the usage of intelligent transport systems in ITU-R member states.

[Attachment 3](#att3): Work plan for the development of a new Report ITU-R M.[RAIL.LINK] on Systems for [public] mobile communications with [train][railways]

Attachment 1 to Annex 3

**Summary of the course of action toward the review of Recommendations and Reports associated with work on WRC-15 agenda item 1.3 and status of work**

(Source: Attachment 4 to Annex 3 of 5A/636 + updates to reflect current status)

As part of the work under WRC-15 agenda item 1.3, Working Group 3 examined the Recommendations and Reports under its purview and identified the following courses of action related to Recommendations and Reports and took the following actions.

**Priority 1: Recommendations and Reports relevant to WRC-15 agenda item 1.3**

**Report ITU-R** [**M.2033**](http://www.itu.int/pub/R-REP-M.2033): “Radiocommunication objectives and requirements for public protection and disaster relief” (2003)

This document “identifies objectives, applications, requirements, a methodology for spectrum calculations, spectrum requirements and solutions for interoperability”

1) Relevant to WRC-15 agenda item 1.3.

2) Propose review and revision to further address broadband requirements.

3) Decision taken to develop a new Report on narrowband, wideband, and broadband PPDR with a view to suppress Report ITU-R M.2033 upon completion of the new Report.

4) Development of [preliminary] draft new Report ITU-R M.[PPDR] completed and proposed for submission to Study Group 5.

**Priority 1bis: Recommendations and Reports already under revision**

**Recommendation** [**ITU-R M.2009**](http://www.itu.int/rec/R-REC-M.2009/en): “Radio interface standards for use by public protection and disaster relief operations in some parts of the UHF band in accordance with Resolution
 **646 (WRC‑03)**” (2012)

1) Relevant to WRC-15 agenda item 1.3.

2) Revision complete and submitted to SG 5 for consideration.

3) Completed (2015).

**Recommendation** [**ITU-R M.2015**](http://www.itu.int/rec/R-REC-M.2015/en): “Frequency arrangements for public protection and disaster relief radiocommunication systems in UHF bands in accordance with Resolution  **646 (Rev.WRC‑12)**” (2012)

1) Relevant to WRC-15 agenda item 1.3.

2) Revision complete and submitted to SG5 for consideration.

3) Completed (2015).

**Report ITU-R** [**M.2014**](http://www.itu.int/pub/R-REP-M.2014): “Digital land mobile systems for dispatch traffic” (2006)

1) Not relevant to WRC-15 agenda item 1.3.

2) Revision complete and submitted to SG 5 for consideration.

3) Completed (2012).

**Priority 2: Recommendations and Reports for which consequential changes may be required based on results of technical studies**

**Recommendation** [**ITU-R M.1637**](http://www.itu.int/rec/R-REC-M.1637/en): “Global cross-border circulation of radiocommunication equipment in emergency and disaster relief situations” (2006)

The document is designed “to facilitate the global circulation of radiocommunications equipment to be used in emergency and disaster relief situations”.

1) References Resolution **646 (Rev.WRC-12)**; therefore relevant to WRC-15 agenda item 1.3.

2) Consequential changes based on WRC-15 action to be considered in next study cycle.

**Recommendation** [**ITU-R M.1826**:](http://www.itu.int/rec/R-REC-M.1826/en) “Harmonized frequency channel plan for broadband public protection and disaster relief operations at 4 940-4 990 MHz in Regions 2 and 3” (2007)

The document “addresses harmonized frequency channel plans in the band 4 940‑4 990 MHz for broadband public protection and disaster relief radiocommunications in Regions 2 and 3”

1) Relevant to WRC-15 agenda item 1.3, appears to address broadband already.

2) Suggest no further revision needed under WRC-15 agenda item 1.3; possible further review based on technical studies developed to support CPM text.

3) No requirement for revision identified at this point in time.

**Recommendation** [**ITU-R F.1105**](http://www.itu.int/rec/R-REC-F.1105/en): “Fixed wireless systems for disaster mitigation and relief operations” (2006)

This document “provides characteristics of fixed wireless systems used for disaster mitigation and relief operations”

1) Not relevant to WRC-15 agenda item 1.3.

2) Revision to address broadband characteristics based on technical studies developed to support CPM text.

3) Completed (2014).

**Priority 3: Recommendations and Reports proposed for suppression**

**Recommendation** [**ITU-R M.1222**](http://www.itu.int/rec/R-REC-M.1222/en): “Transmission of data messages on shared private land mobile radio channels” (1997)

The document standardizes “the data transmission procedures for users who share an analogue radio channel in order to minimize interference to other users who also operate on the channel”.

1) Not relevant to WRC-15 agenda item 1.3 work.

2) Proposed for suppression.

3) Suppressed by Study Group 5 (2013)

**Report ITU-R** [**M.741**](http://www.itu.int/pub/R-REP-M.741): “Multi-channel land mobile systems for dispatch traffic (with or without PSTN interconnection)” (1990)



1) Not relevant to WRC-15 agenda item 1.3.

2) Proposed for suppression.

3) Suppressed by Study Group 5 (2013)

Attachment 2 to Annex 3

Work plan for the development of a new Report ITU-R M.[ITS USAGE] on the usage of intelligent transport systems in ITU-R member states

|  |  |
| --- | --- |
| **Title** | Workplan for the development of a new Report ITU-R M.[ITS USAGE] on the usage of intelligent transport systems in ITU-R member states |
| **Document type** | Report |
| **WP 5A Lead Group** | WG 5 New Technologies  |
| **SWG Chairman** | Satoshi (Sam) Oyama |
| **Editor** | Satoshi (Sam) Oyama |
| **Focus for scope and work** | This Report addresses the usages of ITS radiocommunication applications, such as vehicle to infrastructure, vehicle to vehicle, vehicle to pedestrian communications for road safety applications and vehicular radars for collision avoidance in ITU Member States. |
| **Related Documents** |  |
| **Milestones** | **13th meeting (May 2014)**– Develop and adopt work plan– Carry forward the framework of working document toward a PDN Report **14th meeting (November 2014)**– Develop working document toward a PDN Report– Liaise as needed with concerned and interested organizations on development of the PDN Report– Update work plan as needed.**15th meeting (July 2015)**– Continue developing working document toward a PDN Report– Liaise as needed with concerned and interested organizations on development of the PDN Report– Update work plan as needed**16th meeting (May 2016)**– Continue developing working document toward a PDN Report– Liaise as needed with concerned and interested organizations on development of the PDN Report– Update work plan as needed**17th meeting (November 2016)**– Continue developing working document toward a PDN Report– Liaise as needed with concerned and interested organizations on development of the PDN Report– Update work plan as needed**18th meeting (May 2017)**– Developing a PDN Report– Liaise as needed with concerned and interested organizations on development of the PDN Report– Update work plan as needed **19th meeting (November 2017)**– Finalize Report and submit to SG 5 meeting for approval |

Attachment 3 to Annex 3

Work plan for the development of a new Report ITU-R M.[RAIL.LINK] on Systems for [public] mobile communications with [train][railways]

|  |  |
| --- | --- |
| **Title** | Workplan for the development of a new Report ITU-R M. [RAIL.LINK] on Systems for [public] mobile communications with [train/railways] |
| **Document type** | Report |
| **WP 5A Lead Group** | WG 5 New Technologies  |
| **SWG Chairman** | Satoshi (Sam) Oyama |
| **Editor** | Hiroyuki Tsuji |
| **Focus for scope and work** | This Report deals with the general principles, technical characteristics and operational features of terrestrial systems for [public] mobile communications with train. |
| **Related Documents** |  |
| **Milestones** | **14th meeting (November 2014)**– Develop and adopt work plan– Carry forward the framework of working document toward a PDN Report **15th meeting (July 2015)**– Continue developing working document toward a PDN Report– Update work plan as needed.**16th meeting (May 2016)**– Develop a PDN Report – Update work plan as needed**17th meeting (November 2016)**– Finalize Draft Report and submit to SG 5 meeting for approval  |