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|  | | CPG15(15)084 Annex IV-20 |
| Norway, Bergen, 14th - 18th September 2015 | | |  |
|  | | |  |
| Date issued: | | 18th September 2015 | |
| Source: | | Minutes CPG15-8 | |

CEPT BRIEF ON AGENDA ITEM 2

2 to examine the revised ITU-R Recommendations incorporated by reference in the Radio Regulations communicated by the Radiocommunication Assembly, in accordance with Resolution 28 (Rev.WRC-03), and to decide whether or not to update the corresponding references in the Radio Regulations; in accordance with principles contained in Annex 1 to Resolution 27 (Rev.WRC-12);

Resolution 27 (Rev.WRC‑12) - Use of incorporation by reference in the Radio Regulations.

Resolution 28 (Rev.WRC‑03), Revision of references to the text of ITU-R Recommendations incorporated by reference in the Radio Regulations.

# ISSUE

Agenda Item 2 is standing WRC agenda item which aims at examining the revised ITU-R Recommendations incorporated by reference in the Radio Regulations (Issue 1).

Additionally Agenda Item 2 covers also situations where an ITU-R Recommendation is cited using mandatory text in the resolves of a WRC Resolution, which is itself cited using mandatory text in a footnote or a provision of the Radio Regulations (Issue 2).

Any actions necessary to clarify the status of ambiguous references to ITU-R Recommendations generally fall under Agenda Item 2 as well (Issue 3).

# CEPT position

CEPT supports ITU-R studies on the revision of ITU-R Recommendations incorporated by reference.

CEPT resumes examining the compliance with the principles of Annex 1 to Resolution 27 (Rev-WRC-12) of the references to ITU-R Recommendations in the Radio Regulations.

CEPT supports update of the RR Volume 4 cross references list.

# Background

During a study period between two conferences, some of the ITU-R Recommendations incorporated by reference in the Radio Regulations and contained in Volume 4 are revised by the relevant ITU-R Study Groups. Resolution 28 (Rev. WRC-03) resolves that WRC reviews the ITU-R Recommendations that have been revised during the preceding study period and determines, based on principles contained in Annex 1 of Resolution 27 (Rev.WRC-12), whether the corresponding reference to the Recommendation in the Radio Regulations should be updated to reflect the revised version of the ITU-R Recommendation, otherwise the earlier version of the Recommendation remains valid.

An initial list of those ITU-R Recommendations that have been revised and approved since WRC-12 was delivered to CPM15-2 by the Director of the Radiocommunication Bureau. This document includes a list of the relevant provisions of the Radio Regulations containing reference to ITU-R Recommendations incorporated by reference and was considered at CPM15-2.

An analysis of the existing references as appears in Annex 1 to this Brief includes views from CEPT and other organizations. This analysis was intended as guidance for administrations and other project teams of CEPT CPG towards development of final CEPT position and ECPs.

# List of relevant do cuments

ITU-Documentation: ITU-R Recommendations, ITU-R Reports, and CPM Report

Further ITU documents: <http://www.itu.int/ITU-R/go/rcpm-wrc-15-studies>.

Radio Regulations Edition of 2012 2012, Volume 4.

# Actions to be taken

none

# Relevant information from outside CEPT (examples of these are below)

## European Union (date of proposal)

## -Regional telecommunication organisations:

APT ( August 2015)

Issue 1 - Consideration on the ITU-R Recommendations incorporated by reference in the Radio Regulations which have been revised and approved since WRC-12

APT Members propose updating the references to the following ITU-R Recommendations in Table A1 which are contained in Volume 4 of the Radio Regulations to the most recent version. The relevant texts in the RR footnotes, provisions and WRC Resolutions incorporating these Recommendations by reference, as identified in the cross-reference Table in Volume 4 of the Radio Regulations, need to be updated accordingly.

Issue 2 - Addition of “0” to the first version of the Recommendations incorporated by reference in the Radio Regulations

APT Members propose updating the references to the first version of the following ITU-R Recommendations contained in Volume 4 of the Radio Regulations to be completed with the version number “-0”. The relevant texts in the RR footnotes, provisions and WRC Resolutions incorporating these Recommendations by reference, as identified in the cross-reference Table in Volume 4 of the Radio Regulations, need to be updated accordingly.

ATU ( August 2015)

No common proposal

Countries were urged to continue studying the CPM report and the report of the Director and make proposals directly to WRC-15 or as sub-regions in good time.

Arab Group (August 2015)

ASMG (Arab Spectrum Management Group) Position: ACP: 41 proposals

CITEL ( August 2015)

Inter-American Proposals

28 proposals to update references to ITU-R Recommendations incorporated by reference in the Radio Regulations, or to clarify their status

RCC ( April 2015)

The RCC Administrations support the principles of incorporation in the Radio Regulations by reference and propose to modify the Radio Regulations with regard to Recommendations ITU-R M.625, P.526, M.690, M.1084, M.1173, BO.1443.

The RCC Administrations continue studies on this WRC-15 agenda item.

## International organisations

ITU (2 April 2015)

Relevant texts regarding AI 2 are included in Chapter 6 of CPM Report to WRC-15.

IATA (date of proposal)

-

ICAO (date of proposal)

-

IMO ( August 2015)

IMO position

1. IMO has studied the ITU-R Recommendations of relevance and commented on each one as follows:

Needed/required: M.489-2, M.541-9, M.585-6, M.690-2, M.1171, M.1173, M.1174-2,

Currently needed: M.492-6, M.625-3,

Required for specific purposes: M.1638,

Used by IMO: M.633-4, M.1084-4,

No longer needed: M.476-5

Required by maritime community: M.1172.

1. Incorporation by reference is of importance to IMO because of the close relationship between many of the ITU-R Recommendations related to GMDSS equipment and its operation, to IMO performance standards.
2. IMO requests early indication of any changes proposed by ITU to the mechanism of incorporation by reference and to the list of incorporated Recommendations.

NATO (date of proposal)

-

SFCG (date of proposal)

-

WMO and EUMETNET (date of proposal)

-

## OTHER INTERNATIONAL AND REGIONAL ORGANISATIONS

ESA (date of proposal)

-

Eurocontrol (date of proposal)

-

CRAF (16 January 2013)

CRAF urges that Recommendation ITU-R RA.769-2 is included in the list of referenced Recommendations.

Note: Based on results of PTA3 meeting this requirement cannot be solved under AI 2.

## OTHER INTERNATIONAL AND REGIONAL ORGANISATIONS

EBU (date of proposal)

-

GSMA (date of proposal)

-

1. ANALYSIS OF EXISTING REFERENCES INCLUDING CEPT VIEWS

Issue 1: Decision to update or not references in the RR to reflect revised versions of ITU-R Recommendations contained in Volume 4 of RR (i.e. incorporated by reference) since WRC-12

Agenda Item 2 is a standing WRC agenda item whose main purpose is to examine those ITU-R Recommendations incorporated by reference in the Radio Regulations, which have been revised, and then communicated by the RA in accordance with Res.28 (Rev.WRC-03) to the subsequent WRC, for a decision on whether or not to update the corresponding references in the Radio Regulations in accordance with principles contained in Annex 1 to Res.27 (Rev. WRC-12).

Res.27 (Rev.WRC-12) sets out the principles for use of incorporation by reference in the Radio Regulations and the guidance for collation and publication of cross references list.

Res.28 (Rev.WRC-03) sets out the process to revise references to the text of ITU-R Recommendations incorporated by reference in the Radio Regulations.

The following table contains the views of CEPT with regard to relevant revised ITU-R Recommendation incorporated by reference already approved through the study cycle. Next table presents cross references published in Volume 4 of the RR, Geneva, 2012, proposed for update.

|  |  |  |  |
| --- | --- | --- | --- |
| **ITU-R Recommendations incorporated in Vol. 4 RRs** | **Revised version** | **Cross-Reference between ITU-R Rec. and footnotes and/or RR provisions** | **CEPT views** |
| P.526-11 | P.526-13 (Nov. 13) | No. 5.444B (via Resolution 748 (Rev.WRC-12)) | MOD  See ECP element  EUR/9A19/2 |
| M.585-6 | M.585-7 (Mar. 15) | Nos. 19.99, 19.102, 19.111 | MOD  See ECP element  EUR/9A19/12  EUR/9A19/11  EUR/9A19/13 |
| M.625-3 | M.625-4 (Mar. 12) | Nos. 19.83, 51.41 | MOD  See ECP element  EUR/9A19/3  EUR/9A19/4 |
| M.690-1 | M.690-3 (Mar. 15) | Appendix 15 (Table 15-2) | MOD  See ECP element  EUR/9A19/1 |
| M.1084-4 | M.1084-5 (Mar. 12) | Appendix 18 (NOTE B) (prior to the table) | MOD  See ECP element  EUR/9A19/5 |
| M.1173 | M.1173-1 (Mar. 12) | Nos. 52.181, 52.229, Appendix 17 (Annex 1, Part B, Section I § 2 and § 6) | MOD  See ECP element  EUR/9A19/6  EUR/9A19/7  EUR/9A19/8 |
| M.1174-2 | M.1174-3 (Mar. 15) | Nos. 5.287, 5.288 | MOD  See ECP for AI 1.15 |
| BO.1443-2 | BO.1443-3 (Jul. 14) | TABLE 22-1D (and No. 22.5C.11) | MOD  See ECP element  EUR/9A19/9  EUR/9A19/10 |
| M.1638 | M.1638-1 (Jan 2015) | Nos. 5.447F, 5.450A | MOD  See ECP element  EUR/9A19/14  EUR/9A19/15 |
| M.1827 | M.1827-1 (Jan 2015) | No. 5.444B (via Resolution 748 (Rev.WRC-12)) | MOD  See ECP element  EUR/9A19/2 |

Cross-reference list of the regulatory provisions, including footnotes and Resolutions, incorporating ITU-R Recommendations by reference (updated extract from RR, Geneva, 2012, Vol. 4)

|  |  |  |
| --- | --- | --- |
| **Recommendation** | **ITU-R Title of the Recommendation** | **RR provisions and footnotes with ITU-R Recommendations contained in RR Volume 4** |
| TF.460-6 | Standard-frequency and time-signal emissions | No. 1.14 |
| M.476-5 | Direct-printing telegraph equipment in the maritime mobile service | Nos. 19.83, 19.96A, 51.41 |
| M.489-2 | Technical characteristics of VHF radiotelephone equipment operating in the maritime mobile service in channels spaced by 25 kHz | Nos. 51.77, 52.231, Appendix 18 (General notes e)) |
| M.492-6 | Operational procedures for the use of direct-printing telegraph equipment in the maritime mobile service | No. 56.2 |
| P.525-2 | Calculation of free-space attenuation | No. 5.444B (via Resolution 748 (Rev.WRC-12)) |
| P.526-13 | Propagation by diffraction | No. 5.444B (via Resolution 748 (Rev.WRC-12)) |
| M.541-9 | Operational procedures for the use of digital selective-calling equipment in the maritime mobile service | Nos. 51.35, 52.112, 52.149, 52.153, 54.2 |
| M.585-7 (Annex 1) | Assignment and use of identities in the maritime mobile service | Nos. 19.99, 19.102, 19.111 |
| M.625-4 | Direct-printing telegraph equipment employing automatic identification in the maritime mobile service | Nos. 19.83, 51.41 |
| M.633-4 | Transmission characteristics of a satellite emergency position-indicating radio beacon (satellite EPIRB) system operating through a satellite system in the 406 MHz band | No. 34.1 |
| S.672-4 | Satellite antenna radiation pattern for use as a design objective in the fixed-satellite service employing geostationary satellites | TABLE 22-2 (and No. 22.5D.3), TABLE 22-3 (and No. 22.5F.3) |
| M.690-3 | Technical characteristics of emergency position-indicating radio beacons (EPIRBs) operating on the carrier frequencies of 121.5 MHz and 243 MHz | Appendix 15 (Table 15-2) |
| P.838-3 | Specific attenuation model for rain for use in prediction methods | Appendix 30A (Annex 3 § 2.2 Step 6) |
| M.1084-5 | Interim solutions for improved efficiency in the use of the band 156-174 MHz by stations in the maritime mobile service | Appendix 18 (NOTE B) (prior to the table) |
| SM.1138-2 | Determination of necessary bandwidths including examples for their calculation and associated examples for the designation of emissions | Appendix 1 (§ 1 and § 2) |
| SA.1154-0 | Provisions to protect the space research (SR), space operations (SO) and Earth-exploration satellite services (EES) and to facilitate sharing with the mobile service in the 2 025-2 110 MHz and 2 200-2 290 MHz bands | No. 5.391  EUR/9A19/16 |
| M.1171-0 | Radiotelephony procedures in the maritime mobile service | Nos. 52.192, 52.195, 52.213, 52.224, 52.234, 52.240, 57.1  EUR/9A19/17, 18, 19, 20, 21, 22, 23, |
| M.1172-0 | Miscellaneous abbreviations and signals to be used for radiocommunications in the maritime mobile service | No. 19.48  EUR/9A19/24 |
| M.1173-1 | Technical characteristics of single-sideband transmitters used in the maritime mobile service for radiotelephony in the bands between 1 606.5 kHz (1 605 kHz Region 2) and 4 000 kHz and between 4 000 kHz and 27 500 kHz | Nos. 52.181, 52.229, Appendix 17 (Annex 1, Part B, Section I § 2 and § 6) |
| M.1174-3 | Technical characteristics of equipment used for on-board vessel communi­cations in the bands between 450 and 470 MHz | Nos. 5.287, 5.288 |
| M.1187-1 | A method for the calculation of the potentially affected region for a mobile-satellite service (MSS) network in the 1-3 GHz range using circular orbits | Appendix 4 (Annex 2 item C.11.b) |
| S.1256-0 | Methodology for determining the maximum aggregate power flux-density at the geostationary-satellite orbit in the band 6 700-7 075 MHz from feeder links of non-geostationary satellite systems in the mobile-satellite service in the space‑to‑Earth direction | No. 22.5A  EUR/9A19/25 |
| RS.1260-1 | Feasibility of sharing between active spaceborne sensors and other services in the range 420-470 MHz | No. 5.279A |
| BO.1293-2 | Protection masks and associated calculation methods for interference into broadcast-satellite systems involving digital emissions | Appendix 30A (Annex 3 § 3.3), Appendix 30 (Annex 5 § 3.4) |
| S.1340-0 | Sharing between feeder links for the mobile-satellite service and the aeronautical radionavigation service in the Earth-to-space direction in the band 15.4-15.7 GHz | No. 5.511C  EUR/9A19/26 |
| S.1341-0 | Sharing between feeder links for the mobile-satellite service and the aeronautical radionavigation service in the space-to-Earth direction in the band 15.4-15.7 GHz and the protection of the radio astronomy service in the band 15.35-15.4 GHz | No. 5.511A  EUR/9A19/27 |
| S.1428-1 | Reference FSS earth-station radiation patterns for use in interference assessment involving non-GSO satellites in frequency bands between 10.7 GHz and 30 GHz | TABLE 22-1A,  TABLE 22-1B,  TABLE 22-1C (and No. 22.5C.6) |
| BO.1443-3 | Reference BSS earth station antenna patterns for use in interference assessment involving non-GSO satellites in frequency bands covered by RR Appendix 30 | TABLE 22-1D (and No. 22.5C.11) |
| M.1583-1 | Interference calculations between non-geostationary mobile-satellite service or radionavigation-satellite service systems and radio astronomy telescope sites | No. 5.443B (via Resolution 741 (Rev.WRC-12)), App4 Annex 2 (item A.17.b.3) (via Resolution 741 (Rev.WRC-12)) |
| S.1586-1 | Calculation of unwanted emission levels produced by a non‑geostationary fixed-satellite service system at radio astronomy sites | No. 5.551H |
| F.1613-0 | Operational and deployment requirements for fixed wireless access systems in the fixed service in Region 3 to ensure the protection of systems in the Earth exploration-satellite service (active) and the space research service (active) in the band 5 250-5 350 MHz | No. 5.447E  EUR//28 |
| RA.1631-0 | Reference radio astronomy antenna pattern to be used for compatibility analyses between non-GSO systems and radio astronomy service stations based on the epfd concept | No. 5.208B (via Resolution 739 (Rev. WRC‑07), No. 5.443B (via Resolution 741 (Rev.WRC-12)), No. 5.551H, App4 Annex 2 (item A.17.b.3) (via Resolution 741 (Rev.WRC-12))  EUR/9A19/29, 30, 31, 32, 33, 34 |
| RS.1632-0 | Sharing in the band 5 250-5 350 MHz between the Earth exploration-satellite service (active) and wireless access systems (including radio local area networks) in the mobile service | No. 5.447F  EUR/9A19/14 |
| M.1638-1 | Characteristics of and protection criteria for sharing studies for radiolocation, aeronautical radionavigation and meteorological radars operating in the frequency bands between 5 250 and 5 850 MHz | Nos. 5.447F, 5.450A |
| M.1642-2 | Methodology for assessing the maximum aggregate equivalent power flux-density at an aeronautical radionavigation service station from all radionavigation-satellite service systems operating in the 1 164-1 215 MHz band | Nos. 5.328A (via Resolution 609 (Rev. WRC‑07)) |
| M.1643-0 | Technical and operational requirements for aircraft earth stations of aeronautical mobile-satellite service including those using fixed-satellite service network transponders in the band 14-14.5 GHz (Earth-to-space) | No. 5.504B (refers to Annex 1, Part C of Rec. ITU-R M.1643), Nos. 5.504C, 5.508A and 5.509A (refer to Annex 1, Part B of Rec. ITU-R M.1643)  EUR/9A19/35 36, 37, 38, |
| M.1652-1 (Annex 1) | Dynamic frequency selection in wireless access systems including radio local area networks for the purpose of protecting the radiodetermination service in the 5 GHz band | No. 5.446A (via Resolution 229 (Rev.WRC-12)) |
| M.1827-1 | Technical and operational requirements for stations of the aeronautical mobile (R) service (AM(R)S) limited to surface application at airports and for stations of the aeronautical mobile service (AMS) limited to aeronautical security (AS) applications in the band 5 091-5 150 MHz | No. 5.444B (via Resolution 748 (Rev.WRC-12)) |
| M.2013-0 | Technical characteristics of, and protection criteria for non-ICAO aeronautical radionavigation systems, operating around 1 GHz | No. 5.327A (via Resolution 417 (Rev.WRC-12))  EUR/9A19/39, 40 |

Issue 2: Incorporation by reference of ITU-R Recommendations mentioned in WRC Resolutions

CEPT Position on the issue

CEPT examined provisions and footnotes containing references to WRC Resolutions that contain references to ITU-R Recommendations on basis of table below. No problems were identified.

Background

Procedure to be followed by WRC-15 to incorporate by reference ITU-R Recommendations through WRC Resolutions is contained in Annex 3 of Resolution 27 (Rev.WRC-12).

Action to be taken

* None

|  |  |  |  |
| --- | --- | --- | --- |
| RR provisions or footnotes | WRC Resolution | Recommendation ITU‑R\* | Included in  RR Volume 4 |
| No. 5.547 | 75 (WRC‑2000) \*\* | SA.1157 \*\*, SA.1396 | NO (both) |
| - | 75 (Rev.WRC‑12) | SA.1157 \*\*, SA.1396, F.1760, F.1765 | NO (all) |
| No. 22.5K | 76 (WRC‑2000) | S.1428 \*\*, BO.1443 \*\* | - |
| No. 5.444A | 114 (Rev.WRC‑03) \*\* | S.1342 | NO |
| No. 5.444 | 114 (Rev.WRC‑12) | S.1342 | NO |
| Nos. 5.552A, Appendix 4 Annex 1 Table 2, items 1.14.e, 1.14.f, 1.14.g, 1.14.h | 122 (Rev.WRC‑07) | F.1500, SF.1481-1, SF.1843, F.1820 | NO (all) |
| No. 5.516B | 143 (Rev.WRC‑07) | S.524-9, S.1594, S.1783 | NO |
| Appendix 4 Annex 1 Table 2, item 1.14.d | 145 (Rev.WRC‑07) \*\* | F.1570 \*\*, F.1609 \*\*, SF.1601 \*\*, F.1612 | NO (all) |
| Nos. 5.537A, 5.543A | 145 (Rev.WRC‑12) | F.1570, F.1609 \*\*, SF.1601 \*\*, F.1612 | NO (all) |
| No. 5.457 | 150 (WRC‑12) | F.1891, F.2011 | NO (all) |
| Nos. 5.162A, 5.291A | 217 (WRC‑97) | M.1226, M.1085-1 (was suppressed by RA-07), M.1227 \*\* | NO (all) |
| No. 5.388A, Appendix 4 Annex 1 Table 2, items 1.14.b, 1.14.c | 221 (Rev.WRC‑07) | M.1456, M.1457 \*\* | NO (both) |
| Nos. 5.384A, 5.388 | 223 (Rev.WRC‑07) \*\* | M.819 \*\*, M.1308, M.1457 \*\*, M.1645 | NO (all) |
| - | 223 (Rev.WRC‑12) | M.819 \*\*, M.1308, M.1457 \*\*, M.1645, M.2012 \*\* | NO (all) |
| No. 5.286AA | 224 (Rev.WRC‑07) \*\* | M.819 \*\*, M.1645 | NO (both) |
| Nos. 5.312A, 5.316A, 5.316B, 5.317A | 224 (Rev.WRC‑12) | M.819 \*\*, M.1036 \*\*, M.1645 | NO (all) |
| Nos. 5.446A, 5.447, 5.453 | 229 (WRC‑12) | RS.1166 \*\*, S.1426, M.1450 (most recent version of), M.1454, M.1653  M.1652 \*\*  RS.1632, M.1652-1 | NO (all)  -  YES (both) |
| No. 5.312A | 232 (WRC‑12) | M.819 \*\*, M.1036 (last version of), M.1645 | NO (all) |
| No. 32.10A | 349 (WRC‑97) \*\* | - | - |
| - | 349 (Rev. WRC‑12) | M.493 (most recent version of) | NO |
| Nos. 52.101, 52.189 | 354 (WRC‑07) | M.1171, M.1172 | YES (both) |
| No. 5.197A | 413 (Rev.WRC‑07) \*\* | SM.1009 (most recent version of), BS.1114 \*\* | NO (both) |
| - | 413 (Rev.WRC‑12) | SM.1009 (most recent version of), BS.1114 \*\* | NO (both) |
| No. 5.327A | 417 (Rev.WRC‑12) | M.2013 | YES |
| Nos. 5.444B, 5.446C | 418 (Rev.WRC‑12) | M.1828, M.1829 | NO |
| Appendix 11, Part B, § 1.1 | 517 (Rev.WRC‑03) \*\* | BS.1514 \*\* | NO |
| No. 5.134 | 517 (Rev.WRC‑07) | BS.1514 \*\* | NO |
| Appendix 11, Part C, § 1.1, § 2.5 | 543 (WRC‑03) | BS.1514 \*\*, BS.1615 \*\* | NO (both) |
| No. A.9.8, Appendix 5, Table 5‑1, No. 9.7, 6bis) | 553 (WRC‑12) | BO.1900 | NO |
| No. 5.328A | 609 (Rev.WRC‑07) | M.1642-2 | YES |
| No. 21.18 | 609 (Rev.WRC‑03) \*\* | M.1642 \*\* | - |
| Nos. 5.132A, 5.145A, 5.161A, Appendix 4 Annex 1 Table 1, items 3A1, 3A2 | 612 (Rev.WRC‑12) | P.368-9, P.372-10 \*\* | NO (both) |
| No. 29A.1 | 673 (Rev.WRC‑12) | RS.1859, RS.1883 | NO (both) |
| Nos. 5.389A, 5.389C | 716 (Rev.WRC‑2000) | F.1098 \*\* | NO |
| - | 716 (Rev.WRC‑12) | F.1098 \*\*, F.1335 | NO (both) |
| No. 5.208B | 739 (Rev.WRC‑07) | RA.1513 \*\*  M.1583 \*\*, S.1586 \*\*  RA.1631 | NO  -  YES |
| Appendix 4, Annex 2, items A.17.b.1, A.17.b.3 | 741 (WRC‑03) | RA.769 \*\*, RA.1513 \*\*  M.1583 \*\*  RA.1631 | NO (both)  -  YES |
| No. 5.443B | 741 (Rev.WRC‑12) | RA.769 \*\*, RA.1513 \*\*  M.1583 \*\*  M.1583-1, RA.1631 | NO (both)  -  YES |
| No. 5.379D | 744 (Rev.WRC‑07) | M.1799 | NO |
| No. 5.444B | 748 (Rev.WRC‑12) | P.525-2, P.526-11 \*\*, M.1827 \*\*\* | YES (all) |
| Nos. 5.316A, 5.316B, 5.317A | 749 (Rev.WRC‑12) | BT.1368 \*\*, BT.1368 (most recent version of), BT.1895 (most recent version of) | NO (all) |
| No. 5.338A | 750 (Rev.WRC‑12) | RS.1029 \*\*\*\*, M.1457 \*\* | NO (both) |
| Nos. 5.457A, 5.457B, 5.506A, 5.506B | 902 (WRC‑03) | SF.1650 \*\* | NO |
| \* Numbers in bold indicate that this version of the Recommendations are incorporated by reference and included in RR Volume 4.  \*\* This is not the most recent version of this Recommendation or Resolution.  \*\*\* This Recommendation incorporated by reference has been revised and approved since WRC-12.  \*\*\*\* This Recommendation was suppressed following the approval of Recommendation ITU-R RS.2017 (see CACE/583 of 22 August 2012). | | | |