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| **World Radiocommunication Conference (WRC-15) Geneva, 2–27 November 2015** |  |
| **INTERNATIONAL TELECOMMUNICATION UNION** |  |
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| PLENARY MEETING | **Addendum 19 to Document 7-E** |
|  | **21 August 2015** |
|  | **Original: English** |
|  | |
| Member States of the Inter-American Telecommunication Commission (CITEL) | |
| Proposals for the work of the conference | |
|  | |
| 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 the principles contained in Annex 1 to Resolution **27 (Rev.WRC‑12)**;

**Background**

Resolution **28** **(Rev.WRC‑03)** urges administrations to examine any revisions of ITU-R Recommendations containing text incorporated by reference and to prepare possible updating of relevant references in the Radio Regulations.

Resolution **27 (Rev.WRC‑12)** invites administrations to submit proposals to future conferences in order to clarify the status of references, where ambiguities remain regarding the mandatory or non-mandatory status of the references in question, with a view to amending those references.

**Proposals**

ARTICLE 5

Frequency allocations

Section IV – Table of Frequency Allocations  
(See No. 2.1)

NOC IAP/7A19/1

5.447F In the band 5 250-5 350 MHz, stations in the mobile service shall not claim protection from the radiolocation service, the Earth exploration-satellite service (active) and the space research service (active). These services shall not impose on the mobile service more stringent protection criteria, based on system characteristics and interference criteria, than those stated in Recommendations ITU‑R M.1638 and ITU‑R RS.1632.     (WRC-03)

**Reasons:** Do not support updating the incorporation by reference to Recommendation ITU-R M.1638-1, as revised and approved by the ITU-R, given that RR No. **5.447F** was established based on specific system characteristics and interference criteria stated in Recommendation ITU-R M.1638.  Recommendation ITU-R M.1638-1 has added new system characteristics of certain new radars, which could potentially introduce more stringent protection criteria than as stated in Recommendation ITU-R M.1638.    In addition, Recommendation ITU-R M.1638-1 no longer describes the technical and operational characteristics or the protection criteria for ground-based meteorological radars, which was originally included in Recommendation ITU-R M.1638.

NOC IAP/7A19/2

5.450A In the band 5 470-5 725 MHz, stations in the mobile service shall not claim protection from radiodetermination services. Radiodetermination services shall not impose on the mobile service more stringent protection criteria, based on system characteristics and interference criteria, than those stated in Recommendation ITU‑R M.1638.     (WRC-03)

**Reasons:** Do not support updating the incorporation by reference to Recommendation ITU-R M.1638-1, as revised and approved by the ITU-R, given that RR No. **5.450A** was established based on specific system characteristics and interference criteria stated in Recommendation ITU-R M.1638.  Recommendation ITU-R M.1638-1 has added new system characteristics of certain new radars, which could potentially introduce more stringent protection criteria than as stated in Recommendation ITU-R M.1638.    In addition, Recommendation ITU-R M.1638-1 no longer describes the technical and operational characteristics or the protection criteria for ground-based meteorological radars, which was originally included in Recommendation ITU-R M.1638.

MOD IAP/7A19/3

5.530A Unless otherwise agreed between the administrations concerned, any station in the fixed or mobile services of an administration shall not produce a power flux-density in excess of −120.4 dB(W/(m2 · MHz)) at 3 m above the ground of any point of the territory of any other administration in Regions 1 and 3 for more than 20% of the time. In conducting the calculations, administrations should use the most recent version of Recommendation ITU‑R P.452 (see also the most recent version of Recommendation ITU‑R BO.1898).    (WRC‑15)

**Reasons:** While Recommendation ITU-R P.452 is not incorporated by reference, it appears the same intention is for Recommendation ITU-R BO.1898. Also, use of the word “see” could cause some ambiguity in the status of its reference. It is proposed to modify the linking language to clarify its status in accordance with Annex 2 to Resolution **27**.

MOD IAP/7A19/4

5.543A In Bhutan, Cameroon, Korea (Rep. of), the Russian Federation, India, Indonesia, Iran (Islamic Republic of), Iraq, Japan, Kazakhstan, Malaysia, Maldives, Mongolia, Myanmar, Uzbekistan, Pakistan, the Philippines, Kyrgyzstan, the Dem. People’s Rep. of Korea, Sudan, Sri Lanka, Thailand and Viet Nam, the allocation to the fixed service in the band 31-31.3 GHz may also be used by systems using high altitude platform stations (HAPS) in the ground-to-HAPS direction. The use of the band 31-31.3 GHz by systems using HAPS is limited to the territory of the countries listed above and shall not cause harmful interference to, nor claim protection from, other types of fixed-service systems, systems in the mobile service and systems operated under No. **5.545**. Furthermore, the development of these services shall not be constrained by HAPS. Systems using HAPS in the band 31-31.3 GHz shall not cause harmful interference to the radio astronomy service having a primary allocation in the band 31.3-31.8 GHz, taking into account the protection criterion as given in the most recent version of Recommendation ITU‑R RA.769. In order to ensure the protection of satellite passive services, the level of unwanted power density into a HAPS ground station antenna in the band 31.3-31.8  GHz shall be limited to −106 dB(W/MHz) under clear-sky conditions, and may be increased up to −100 dB(W/MHz) under rainy conditions to mitigate fading due to rain, provided the effective impact on the  passive satellite does not exceed the impact under clear-sky conditions. See Resolution **145 (Rev.WRC‑12)**.    (WRC‑15)

**Reasons:** Recommendation ITU-R RA.769 is not considered to be incorporated by reference. It is proposed to modify the linking language to clarify its status of reference in accordance with Annex 2 to Resolution **27**.

ARTICLE 16

International monitoring

MOD IAP/7A19/5

16.2 The international monitoring system comprises only those monitoring stations which have been so nominated by administrations in the information sent to the Secretary-General in accordance with Resolution ITU‑R 23‑2 and the most recent version of Recommendation ITU‑R SM.1139. These stations may be operated by an administration or, in accordance with an authorization granted by the appropriate administration, by a public or private enterprise, by a common monitoring service established by two or more countries, or by an international organization.     (WRC‑15)

**Reasons:** Recommendation ITU-R SM.1139 is not considered to be incorporated by reference. It is proposed to modify the linking language to clarify its status of reference in accordance with Annex 2 to Resolution **27**. Furthermore, Resolution ITU-R 23-2 was adopted by RA-12.

ARTICLE 19

Identification of stations

Section V − Selective call numbers in the maritime mobile service

MOD IAP/7A19/6

19.83 § 36 When stations of the maritime mobile service use selective calling devices in accordance with Recommendations ITU‑R M.476-5 and ITU‑R M.625-4, their call numbers shall be assigned by the responsible administrations in accordance with the provisions below.     (WRC‑15)

**Reason:** These ITU-R Recommendations have been revised and approved since the last conference or since the last publication of the Radio Regulations. The corresponding provisions are modified in accordance with Resolution **28 (Rev.WRC-03).**

Section VI − Identities in the maritime mobile service    (WRC‑12)

19.98 A − General

MOD IAP/7A19/7

19.99 § 39 When a station6 operating in the maritime mobile service or the maritime mobile-satellite service is required to use maritime mobile service identities, the responsible administration shall assign the identity to the station in accordance with the provisions described in Annex 1 of Recommendation ITU‑R M.585‑7. In accordance with No. **20.16**, administrations shall notify the Radiocommunication Bureau immediately when assigning maritime mobile service identities.    (WRC‑15)

**Reason:** These ITU-R Recommendations have been revised and approved since the last conference or since the last publication of the Radio Regulations. The corresponding provisions are modified in accordance with Resolution **28 (Rev.WRC-03).**

MOD IAP/7A19/8

19.102 3) The types of maritime mobile service identities shall be as described in Annex 1 of Recommendation ITU‑R M.585‑7.    (WRC‑15)

**Reason:** These ITU-R Recommendations have been revised and approved since the last conference or since the last publication of the Radio Regulations. The corresponding provisions are modified in accordance with Resolution **28 (Rev.WRC-03).**

19.108 B − Maritime identification digits (MIDs)

MOD IAP/7A19/9

19.108A § 41 The maritime identification digits M1I2D3 are an integral part of the maritime mobile service identity and denote, in principle, the administration responsible for the station so identified. In some cases, M1I2D3 may denote a geographical area under the responsibility of a specific administration. Furthermore, as indicated in the most recent version of Recommendation ITU‑R M.585, some maritime identification digits are reserved for maritime devices and do not correspond either to an administration or to a geographical area.    (WRC‑15)

**Reasons:** Recommendation ITU-R M.585 is not considered to be incorporated by reference. It is proposed to modify the linking language to clarify its status of reference in accordance with Annex 2 to Resolution **27**.

19.110 C − Maritime mobile service identities    (WRC‑07)

MOD IAP/7A19/10

19.111 § 43 1) Administrations shall follow Annex 1 of Recommendation ITU‑R M.585‑7 concerning the assignment and use of maritime mobile service identities.    (WRC‑15)

**Reason:** These ITU-R Recommendations have been revised and approved since the last conference or since the last publication of the Radio Regulations. The corresponding provisions are modified in accordance with Resolution **28 (Rev.WRC-03).**

ARTICLE 51

Conditions to be observed in the maritime services

Section I − Maritime mobile service

51.39 CA − Ship stations using narrow-band direct-printing telegraphy

MOD IAP/7A19/11

51.41 2) The characteristics of the narrow-band direct-printing equipment shall be in accordance with Recommendations ITU‑R M.476‑5 and ITU‑R M.625‑4. The characteristics should also be in accordance with the most recent version of Recommendation ITU‑R M.627.    (WRC‑15)

**Reason:** These ITU-R Recommendations have been revised and approved since the last conference or since the last publication of the Radio Regulations. The corresponding provisions are modified in accordance with Resolution **28 (Rev.WRC-03).**

ARTICLE 52

Special rules relating to the use of frequencies

Section VI − Use of frequencies for radiotelephony

52.176 A − General

MOD IAP/7A19/12

52.181 § 85 Single-sideband apparatus in radiotelephone stations of the maritime mobile service operating in the bands allocated to this service between 1 606.5 kHz and 4 000 kHz and in the bands allocated exclusively to this service between 4 000 kHz and 27 500 kHz shall satisfy the technical and operational conditions specified in Recommendation ITU‑R M.1173-1.     (WRC‑15)

**Reason:** These ITU-R Recommendations have been revised and approved since the last conference or since the last publication of the Radio Regulations. The corresponding provisions are modified in accordance with Resolution **28 (Rev.WRC-03).**

52.216 C − Bands between 4 000 kHz and 27 500 kHz

C3 − Traffic

MOD IAP/7A19/13

52.229 4) Transmitters used for radiotelephony in the bands between 4 000 kHz and 27 500 kHz shall comply with technical characteristics specified in Recommendation ITU‑R M.1173-1.     (WRC‑15)

**Reason:** These ITU-R Recommendations have been revised and approved since the last conference or since the last publication of the Radio Regulations. The corresponding provisions are modified in accordance with Resolution **28 (Rev.WRC-03).**

Section VII – Use of frequencies for data transmissions    (WRC‑12)

52.263 B – Bands between 4 000 kHz and 27 500 kHz    (WRC‑12)

B1 – Mode of operation of stations    (WRC‑12)

MOD IAP/7A19/14

52.264 The class of emissions to be used for data transmissions in this section should be in accordance with the most recent version of Recommendation ITU‑R M.1798. Coast stations as well as ship stations should use radio systems specified in the most recent version of Recommendation ITU‑R M.1798.    (WRC‑15)

**Reasons:** Recommendation ITU-R M.1798 is not incorporated by reference. It is proposed to modify the linking language in accordance with Annex 2 to Resolution **27**.

APPENDIX 5 (REV.WRC‑12)

Identification of administrations with which coordination is to be effected or  
agreement sought under the provisions of Article 9

ANNEX 1

# 1 Coordination thresholds for sharing between MSS (space-to-Earth) and terrestrial services in the same frequency bands and between non‑GSO MSS feeder links (space-to-Earth) and terrestrial services in the same frequency bands and between RDSS (space-to-Earth) and terrestrial services in the same frequency bands     (WRC‑12)

## 1.2 Between 1 and 3 GHz

MOD IAP/7A19/15

### 1.2.1 Objectives

Generally, pfd thresholds were used to determine the need for coordination between space stations of the MSS (space-to-Earth) and terrestrial services and for coordination between space stations of the RDSS (space-to-Earth) and terrestrial services. However, to facilitate sharing between digital fixed service stations and non-GSO MSS space stations, the concept of fractional degradation in performance (FDP) was adopted. This concept involves new methods described in this Annex.

As a consequence of this new concept, the need for coordination between space stations of the MSS (space-to-Earth) and terrestrial services is determined using two methods:

– simple method: FDP (simple definition of the MSS system and characteristics of reference FS stations are used in inputs) or power flux-density trigger value;

– more detailed method: system specific methodology (SSM) (specific characteristics of the MSS system and characteristics of reference fixed service stations are used in inputs) as described, for example, in Annex 1 to the most recent version of Recommendation ITU‑R M.1143.

If one of the two methods gives a result that does not exceed the criteria relevant to each method, there is no need for coordination.

If only one method is available in an administration, the result of this method must be taken into account.     (WRC‑15)

**Reasons:** Recommendation ITU-R M.1143 is not incorporated by reference. It is proposed to modify the linking language in accordance with Annex 2 to Resolution **27**.

### 1.2.3 Determination of the need for coordination between MSS and RDSS space stations (space-to-Earth) and terrestrial stations    (WRC‑12)

MOD IAP/7A19/16

#### 1.2.3.2 A system specific methodology (SSM) to be used in determining the need for detailed coordination of non‑GSO MSS (space-to-Earth) systems with fixed service systems

The purpose of the SSM is to allow a detailed assessment of the need to coordinate frequency assignments to non-GSO MSS space stations (space-to-Earth) with frequency assignments to receiving stations in a fixed service network of a potentially affected administration. The SSM takes into account specific characteristics of the non-GSO MSS system and reference fixed service characteristics.

Those administrations planning to establish the need for coordination between non-GSO MSS networks and fixed service systems are encouraged to use the most recent version of Recommendation ITU‑R M.1143. While urgent additional development work is being undertaken in the ITU‑R to facilitate the use of the methodology described in the most recent version of Recommendation ITU‑R M.1143, administrations may be able to effect coordination by applying this SSM.    (WRC‑15)

**Reasons:** Recommendation ITU-R M.1143 is not incorporated by reference. It is proposed to modify the linking language in accordance with Annex 2 to Resolution **27**.

APPENDIX 7 (REV.WRC‑12)

Methods for the determination of the coordination area around an earth  
station in frequency bands between 100 MHz and 105 GHz

ANNEX 4

Antenna gain toward the horizon for an earth station operating with  
non‑geostationary space stations

MOD IAP/7A19/17

# 1 Determination of the horizon antenna gain

…

Further information and an example of this method may be found in the most recent version of Recommendation ITU‑R SM.1448.

**Reasons:** Recommendation ITU-R SM.1448 is not incorporated by reference. It is proposed to modify the linking language in accordance with Annex 2 to Resolution **27**.

ANNEX 5

Determination of the coordination area for a transmitting earth station   
with respect to receiving earth stations operating with   
geostationary space stations in bidirectionally   
allocated frequency bands

# 2 Determination of the bidirectional coordination contour for propagation mode (1)

MOD IAP/7A19/18

## 2.1 Calculation of horizon gain for unknown receiving earth stations operating with geostationary space stations

…

Further information and an example may be found in the most recent version of Recommendation ITU‑R SM.1448.

**Reasons:** Recommendation ITU-R SM.1448 is not incorporated by reference. It is proposed to modify the linking language in accordance with Annex 2 to Resolution **27**.

ANNEX 6

Supplementary and auxiliary contours

MOD IAP/7A19/19

# 4 Determination of a supplementary contour using the time-variant gain (TVG) method

…

Further information, including examples, may be found in the most recent version of Recommendation ITU‑R SM.1448.

**Reasons:** Recommendation ITU-R SM.1448 is not incorporated by reference. It is proposed to modify the linking language in accordance with Annex 2 to Resolution **27**.

APPENDIX 15 (REV.WRC‑12)

Frequencies for distress and safety communications for the Global  
Maritime Distress and Safety System (GMDSS)

MOD IAP/7A19/20

TABLE 15-2     (WRC‑12)

Frequencies above 30 MHz (VHF/UHF)

|  |  |  |
| --- | --- | --- |
| Frequency (MHz) | Description of usage | Notes |
| \*121.5 | AERO-SAR | The aeronautical emergency frequency 121.5 MHz is used for the purposes of distress and urgency for radiotelephony by stations of the aeronautical mobile service using frequencies in the band between 117.975 MHz and 137 MHz. This frequency may also be used for these purposes by survival craft stations. Use of the frequency 121.5 MHz by emergency position-indicating radio beacons shall be in accordance with Recommendation ITU‑R M.690‑3.  Mobile stations of the maritime mobile service may communicate with stations of the aeronautical mobile service on the aeronautical emergency frequency 121.5 MHz for the purposes of distress and urgency only, and on the aeronautical auxiliary frequency 123.1 MHz for coordinated search and rescue operations, using class A3E emissions for both frequencies (see also Nos. **5.111** and **5.200**). They shall then comply with any special arrangement between governments concerned by which the aeronautical mobile service is regulated. |

**Reason:** These ITU-R Recommendations have been revised and approved since the last conference or since the last publication of the Radio Regulations. The corresponding provisions are modified in accordance with Resolution **28 (Rev.WRC-03).**

APPENDIX 17 (REV.WRC‑12)

Frequencies and channelling arrangements in the  
high-frequency bands for the maritime mobile service

Annex 2     (WRC‑12)

Frequency and channelling arrangements in the high-frequency   
bands for the maritime mobile service, which   
enter into force on 1 January 2017     (WRC‑12)

PART A  –  Table of subdivided bands     (WRC‑12)

MOD IAP/7A19/21

*p)* These sub-bands, except the frequencies referred to in Notes *i), j)*, *n)* and *o)*, are designated for digitally modulated emissions in the maritime mobile service (e.g. as described in in the most recent version of Recommendation ITU‑R M.1798). The provisions of No. **15.8** apply.

MOD IAP/7A19/22

*t)* The frequency bands 4 065-4 146 kHz, 4 351-4 438 kHz, 6 200-6 224 kHz, 6 501-6 525 kHz, 8 195-8 294 kHz, 8 707-8 815 kHz, 12 230-12 353 kHz, 13 077-13 200 kHz, 16 360-16 528 kHz, 17 242-17 410 kHz, 18 780-18 825 kHz, 19 755-19 800 kHz, 22 000-22 159 kHz, 22 696-22 855 kHz, 25 070-25 100 kHz and 26 145-26 175 kHz may be used, in accordance with the Appendix **25** allotment Plan, for digitally modulated emissions as described in in the most recent version of Recommendation ITU‑R M.1798 on the condition that it shall not cause harmful interference to, or claim protection from other stations in the maritime mobile service using radiotelephony operations. The digitally modulated emissions may be used provided that their occupied bandwidth does not exceed 2 800 Hz, it is situated wholly within one frequency channel and the peak envelope power of coast stations does not exceed 10 kW and the peak envelope power of ship stations does not exceed 1.5 kW per channel.

MOD IAP/7A19/23

*v)* The frequency bands4 146-4 152 kHz, 6 224-6 233 kHz, 8 294-8 300 kHz, 12 353-12 368 kHz, 16 528-16 549 kHz, 18 825-18 846 kHz, 22 159-22 180 and 25 100-25 121 kHz may be used for simplex digitally modulated emissions as described in in the most recent version of Recommendation ITU‑R M.1798 on condition that it shall not cause harmful interference to, or claim protection from other stations in the maritime mobile service using radiotelephony operations. The digitally modulated emissions may be used provided that their occupied bandwidth does not exceed 2 800 Hz, it is situated wholly within one frequency channel and the peak envelope power of coast stations does not exceed 10 kW and the peak envelope power of ship stations does not exceed 1.5 kW per channel.

**Reasons:** Recommendation ITU-R M.1798 is not incorporated by reference. It is proposed to modify the linking language in accordance with Annex 2 to Resolution **27**.

PART B – Channelling arrangements     (WRC‑12)

Section I – Radiotelephony

MOD IAP/7A19/24

2 The technical characteristics for single-sideband transmitters are specified in Recommendation ITU‑R M.1173-1.

MOD IAP/7A19/25

6 *a)* Maritime radiotelephone stations using single-sideband emissions in the bands between 4 000 kHz and 27 500 kHz exclusively allocated to the maritime mobile service shall operate only on the carrier frequencies shown in the Sub-Sections A and B and, in the case of analogue radiotelephony, shall be in conformity with the technical characteristics specified in Recommendation ITU‑R M.1173-1.

MOD IAP/7A19/26

*b)* Ship stations, when using frequencies for single-sideband emissions in the bands 4 000-4 063 kHz and ship and coast stations, when using frequencies for single-sideband emissions in the band 8 100-8 195 kHz should operate on the carrier frequencies indicated in Sub-Sections C‑1 and C‑2 respectively. In the case of analogue radiotelephony technical characteristics of the equipment shall be those specified in Recommendation ITU‑R M.1173-1.

**Reason:** These ITU-R Recommendations have been revised and approved since the last conference or since the last publication of the Radio Regulations. The corresponding provisions are modified in accordance with Resolution **28 (Rev.WRC-03).**

APPENDIX 18 (REV.WRC‑12)

Table of transmitting frequencies in the  
VHF maritime mobile band

(See Article 52)

MOD IAP/7A19/27

NOTE B – The Table below defines the channel numbering for maritime VHF communications based on 25 kHz channel spacing and use of several duplex channels. The channel numbering and the conversion of two-frequency channels for single-frequency operation shall be in accordance with Recommendation ITU‑R M.1084‑5 Annex 4, Tables 1 and 3. The Table below also describes the harmonized channels where the digital technologies defined in the most recent version of Recommendation ITU‑R M.1842 could be deployed.     (WRC‑15)

**Reason:** These ITU-R Recommendations have been revised and approved since the last conference or since the last publication of the Radio Regulations. The corresponding provisions are modified in accordance with Resolution **28 (Rev.WRC-03).**

MOD IAP/7A19/28

RESOLUTION 748 (REV.WRC‑15)

Compatibility between the aeronautical mobile (R) service and the fixed-satellite service (Earth-to-space) in the band 5 091-5 150 MHz

resolves

2 that any AM(R)S systems operating in the frequency band 5 091-5 150 MHz shall meet the SARPs requirements published in Annex 10 of the ICAO Convention on International Civil Aviation and the requirements of Recommendation ITU‑R M.1827-1, to ensure compatibility with FSS systems operating in that band;

3 that, in part to meet the provisions of No. **4.10**, the coordination distance with respect to stations in the FSS operating in the band 5 091-5 150 MHz shall be based on ensuring that the signal received at the AM(R)S station from the FSS transmitter does not exceed −143 dB(W/MHz), where the required basic transmission loss shall be determined using the methods described in Recommendations ITU‑R P.525‑2 and ITU‑R P.526‑13,

**Reason:** These ITU-R Recommendations have been revised and approved since the last conference or since the last publication of the Radio Regulations. The corresponding provisions are modified in accordance with Resolution **28 (Rev.WRC-03).**