INTERNATIONAL TELECOMMUNICATION UNION

Radiocommunication Bureau
(Direct Fax N°. +41 22 730 57 85)

Administrative Circular
CAR/322

12 October 2011

To Administrations of Member States of ITU

Subject: **Radiocommunication Study Group 4 (Satellite services)**

– **Proposed approval of 6 draft new Recommendations and 6 draft revised Recommendations**

At the meeting of ITU-R Study Group 4 held on 29-30 September 2011, the Study Group adopted the text of 6 draft new Recommendations and 6 draft revised Recommendations and agreed to apply the procedure of Resolution ITU-R 1-5 (see § 10.4.5) for approval of Recommendations by consultation. The titles and summaries of the draft Recommendations are given in the Annex.

Having regard to the provisions of § 10.4.5.2 of Resolution ITU-R 1-5, you are requested to inform the Secretariat (brsgd@itu.int) by 12 January 2012, whether your Administration approves or does not approve the draft Recommendations.

A Member State who indicates that a draft Recommendation should not be approved is requested to advise the Secretariat of the reason and to indicate possible changes in order to facilitate further consideration by the Study Group during the study period (§ 10.4.5.5 of Resolution ITU-R 1-5).

After the above-mentioned deadline, the results of this consultation will be notified in an Administrative Circular and arrangements made for the approved Recommendations to be published in accordance with § 10.4.7 of Resolution ITU-R 1-5.

Place des Nations
CH-1211 Geneva 20
Switzerland

Telephone +41 22 730 51 11
Telefax Gr3: +41 22 733 72 56
Gr4: +41 22 730 65 00

Telex 421 000 uit ch
Telegram ITU GENEVE

E-mail: itumail@itu.int
http://www.itu.int/

Any ITU member organization aware of a patent held by itself or others which may fully or partly cover elements of the draft Recommendation(s) mentioned in this letter is requested to disclose such information to the Secretariat as soon as possible. The Common Patent Policy for ITU-T/ITU-R/ISO/IEC is available at http://www.itu.int/ITU-T/dbase/patent/patent-policy.html.

François Rancy
Director, Radiocommunication Bureau

Annex:

Titles and summaries of the draft Recommendations

Documents attached:

Documents 4/BL/14 – 4/BL/25 on CD-ROM

Distribution:

- Administrations of Member States of the ITU
- Radiocommunication Sector Members participating in the work of Radiocommunication Study Group 4
- ITU-R Associates participating in the work of Radiocommunication Study Group 4
- ITU-R Academia

Annex

Titles and summaries of the draft Recommendations adopted by Radiocommunication Study Group 4

Draft new Recommendation ITU-R M.[RNSS_Guide] Doc. 4/BL/14

Guidance on ITU-R Recommendations related to systems and networks in the radionavigation-satellite service operating in the frequency bands 1 164-1 215 MHz, 1 215-1 300 MHz, 1 559-1 610 MHz, 5 000-5 010 MHz and 5 010-5 030 MHz

This proposed draft new Recommendation is intended to provide guidance on the other draft new Recommendations related to the technical characteristics and protection criteria of radionavigation-satellite service (RNSS) receiving earth stations and characteristics of RNSS transmitting space stations planned or operating in the frequency bands 1 164-1 215 MHz, 1 215-1 300 MHz, 1 559-1 610 MHz, 5 000-5 010 MHz and 5 010-5 030 MHz. In addition, this Recommendation gives a brief overview of those draft new Recommendations.

Draft new Recommendation ITU-R M.[1088_new] Doc. 4/BL/15

Characteristics and protection criteria for receiving earth stations in the radionavigation-satellite service (space-to-Earth) operating in the band 1 215-1 300 MHz

Characteristics and protection criteria for radionavigation-satellite service (RNSS) receiving earth stations operating in the band 1 215-1 300 MHz are presented in this draft new Recommendation. This information is intended for performing analyses of radio-frequency interference impact on RNSS (space-to-Earth) receivers operating in the band 1 215-1 300 MHz from radio sources other than in the RNSS.

Draft new Recommendation ITU-R M.[1477_new] Doc. 4/BL/16

Characteristics and protection criteria for receiving earth stations in the radionavigation-satellite service (space-to-Earth) and receivers in the aeronautical radionavigation service operating in the band 1 559-1 610 MHz

Characteristics and protection criteria for radionavigation-satellite service (RNSS) receiving earth stations and aeronautical radionavigation service (ARNS) receiving stations operating in the band 1 559-1 610 MHz are presented in this draft new Recommendation. This information is intended for performing analyses of radio-frequency interference impact on RNSS (space-to-Earth) and ARNS receivers operating in the band 1 559-1 610 MHz from radio sources other than in the RNSS.

Draft new Recommendation ITU-R M.[1479_New] Doc. 4/BL/17

Characteristics, performance requirements and protection criteria for receiving stations of the radionavigation-satellite service (space-to-space) operating in the frequency bands 1 164-1 215 MHz, 1 215-1 300 MHz and 1 559-1 610 MHz

The characteristics and protection criteria for radionavigation-satellite service (RNSS) spaceborne receivers are presented in this draft new Recommendation. This information is intended for performing analyses of radio-frequency interference impact on RNSS receivers operating space-to-space in the bands 1 164-1 215 MHz, 1 215-1 300 MHz and 1 559-1 610 MHz from emissions of non-RNSS sources.

Draft new Recommendation ITU-R M.[CHAR-RX3] Doc. 4/BL/18

Characteristics and protection criteria for receiving earth stations in the radionavigation-satellite service (space-to-Earth) operating in the band 1 164-1 215 MHz

Characteristics and protection criteria for radionavigation-satellite service (RNSS) receiving earth stations operating in the band 1 164-1 215 MHz are presented in this draft new Recommendation. This information is intended for performing analyses of radio-frequency interference impact on RNSS (space-to-Earth) receivers operating in the band 1 164-1 215 MHz from radio sources other than the RNSS.

Draft new Recommendation ITU-R M.[E-S TX+RX] Doc. 4/BL/19

Characteristics and protection criteria of receiving space stations and characteristics of transmitting earth stations in the radionavigation-satellite service (Earth-to-space) operating in the band 5 000-5 010 MHz

Characteristics and protection criteria for radionavigation-satellite service (RNSS) receiving space stations, and characteristics of RNSS transmitting earth stations, planned or operating in the band 5 000-5 010 MHz are presented in this Recommendation. This information is intended for performing analyses of radio frequency interference impact on systems and networks in the RNSS (Earth-to-space) operating in this band from radio sources other than the RNSS.

Draft revision of Recommendation ITU-R M.1854 Doc. 4/BL/20

Use of mobile-satellite service (MSS) in disaster response and relief

This Recommendation was revised in order to include information on a new geostationary-satellite system that has been brought into use at the orbital position 10°E by the satellite operator Solaris Mobile Limited in the bands 1 980-2 010 MHz (Earth-to-space) and 2 170-2 200 MHz (space-to-Earth). This Recommendation was revised in liaison with ITU-D Study Group 2.

Draft revision of Recommendation ITU-R BO.1516 Doc. 4/BL/21

Digital multiprogramme television systems for use by satellites operating in the 11/12 GHz frequency range

This revision includes changes reflecting the suppression of former Recommendation ITU-R BO.1294.

Draft revision of Recommendation ITU-R SNG.770-1 Doc. 4/BL/22

Uniform operational procedures for satellite news gathering (SNG)

This revision includes changes that make this Recommendation specific to satellite news gathering operations using digital modulation and encoding techniques.

Draft revision of Recommendation ITU-R BO.1659 Doc. 4/BL/23

Mitigation techniques for rain attenuation for broadcasting-satellite service systems in frequency bands between 17.3 GHz and 42.5 GHz

This revision of Recommendation ITU-R BO.1659 proposes a revision of Annex 2 to the Recommendation to include a new variation of hierarchical transmission scheme. Moreover, amendments are proposed to values, tables and figures of Appendix 1 to Annex 3 to take into account the updated rain attenuation model under Recommendation ITU-R P.618-10.
Also, in section 5 of Appendix 1 to Annex 3, new material is proposed to be added in order to assess the annual service availability observed in some cities in Region 1 for different values of power flux-density at the Earth’s surface.

Draft revision of Recommendation ITU-R SF.675-3 Doc. 4/BL/24

Calculation of the maximum power density (averaged over 4 kHz) of an angle modulated carrier

As its title implies, Recommendation ITU-R SF.675-3 is limited to the case of angle modulated carriers and a reference bandwidth of 4 kHz. As this Recommendation is referenced in Footnote 2 to Tables A, B, C and D of Annex 2 of Appendix **4** of the Radio Regulations, it is important that it be updated. Changes are proposed to Section 3 of Annex 1 of the Recommendation to bring this Section up to date. Additionally, in order to address the case of maximum power density averaged over a 1 MHz bandwidth, a new Annex 2 is proposed. A section is also included in each Annex to address the case of tracking, telemetry and telecommand carriers.

It was also recognized that an ambiguity may exist in Footnote 2 to Tables A, B, C and D of Annex 2 of RR Appendix **4** for the case of carriers above 15 GHz having a necessary bandwidth of less than the averaging bandwidth. This possible ambiguity has also been addressed in the revised Recommendation.

Draft revision of Recommendation ITU-R BO.1776 Doc. 4/BL/25

Reference power flux-density for the broadcasting-satellite service in the band 21.4-22.0 GHz in Regions 1 and 3

The term “Reference” is suggested to be replaced by the term “Maximum” in order to clarify the real intent of this Recommendation. In addition, several *considerings* were updated in order to take into account the WRC-07 decisions. Moreover, throughout the document it is proposed to change the term “rain attenuation” to “total link attenuation” to encompass also the other atmospheric effects that will impact on the propagation losses. A note to explain this is proposed to be inserted.

Finally, in Annex 1, availability numbers are re-calculated using the updated rain attenuation model in the revised Recommendation ITU-R P.618 and total link attenuation for each case is also proposed to be inserted in the tables. Moreover, calculations are also conducted at a few more example cities.

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