# Series BO : Satellite delivery

| Number    | Approval D | Date Recommendation Title   | Status    |
|-----------|------------|---|-----------|
| BO.566-3  | 1990-06    | Terminology relating to the use of space communication techniques for broadcasting  | Withdrawn |
| BO.600-1  | 1986-07    | Standardized set of test conditions and measurement procedures for the subjective and objective determination of protection ratios for television in the terrestrial broadcasting and the broadcasting-satellite services | In force  |
| BO.650-2  | 1992-03    | Standards for conventional television systems for satellite broadcasting in the channels defined by Appendix 30 of the Radio Regulations  | In force  |
| BO.651    | 1986-07    | Digital PCM coding for the emission of high-quality sound signals in satellite broadcasting (15 kHz nominal bandwidth)  | In force  |
| BO.652-1  | 1992-03    | Reference patterns for Earth-station and satellite antennas for the broadcasting satellite service in the 12 GHz band and for the associated feeder links in the 14 GHz and 17 GHz bands                                  | In force  |
| BO.712-1  | 1992-03    | High-quality sound/data standards for the broadcasting-satellite service in the 12 GHz band   | In force  |
| BO.786    | 1992-03    | MUSE system for HDTV broadcasting-satellite services  | Withdrawn |
| BO.787    | 1992-03    | MAC/packet based system for HDTV broadcasting-satellite services  | Withdrawn |
| BO.788-1  | 1994-08    | Coding rate for virtually transparent studio quality HDTV emissions in the broadcasting-satellite service   | Withdrawn |
| BO.789-2  | 1995-10    | Service for digital sound broadcasting to vehicular, portable and fixed receivers for broadcasting-satellite service (sound) in the frequency range 1 400-2 700 MHz   | In force  |
| BO.790    | 1992-03    | Characteristics of receiving equipment and calculation of receiver figure-<br>of-merit (G/T) for the broadcasting-satellite service   | In force  |
| BO.791    | 1992-03    | Choice of polarization for the broadcasting-satellite service   | In force  |
| BO.792    | 1992-03    | Interference protection ratios for the broadcasting-satellite service (television) in the 12 GHz band   | In force  |
| BO.793    | 1992-03    | Partitioning of noise between feeder links for the broadcasting-satellite service (BSS) and BSS downlinks   | In force  |
| BO.794    | 1992-03    | Techniques for minimizing the impact on the overall BSS system performance due to rain along the feeder-link path   | In force  |
| BO.795    | 1992-03    | Techniques for alleviating mutual interference between feeder links to the BSS  | In force  |
| BO.1130-4 | 2001-04    | Systems for digital satellite broadcasting to vehicular, portable and fixed receivers in the bands allocated to BSS (sound) in the frequency range 1 400-2 700 MHz  | In force  |
| BO.1211   | 1995-10    | Digital multi-programme emission systems for television, sound and data services for satellites operating in the 11/12 GHz frequency range  | Withdrawn |
| BO.1212   | 1995-10    | Calculation of total interference between geostationary-satellite networks in the broadcasting-satellite service  | In force  |
| BO.1213-1 | 2005-11    | Reference receiving Earth station antenna pattern for the broadcasting-<br>satellite service in the 11.7-12.75 GHz band   | In force  |
|           |            |   |           |

| BO.1293-2 | 2002-04 | Protection masks and associated calculation methods for interference into broadcast-satellite systems involving digital emissions  | In force  |
|-----------|---------|--|-----------|
| BO.1294   | 1997-10 | Common functional requirements for the reception of digital multiprogramme television emissions by satellites operating in the 11/12 GHz frequency range   | Withdrawn |
| BO.1295   | 1997-10 | Reference transmit Earth station antenna off-axis e.i.r.p. patterns for planning purposes to be used in the revision of the Appendix 30A (Orb-<br>88) Plans of the Radio Regulations at 14 GHz and 17 GHz in Regions 1 and 3   | In force  |
| BO.1296   | 1997-10 | Reference receive space station antenna patterns for planning purposes to be used for elliptical beams in the revision of the Appendix 30A (Orb-<br>88) Plans of the Radio Regulations at 14 GHz and 17 GHz in Regions 1 and 3   | In force  |
| BO.1297   | 1997-10 | Protection ratios to be used for planning purposes in the revision of the Appendices 30 (Orb-85) and 30A (Orb-88) Plans of the Radio Regulations in Regions 1 and 3  | In force  |
| BO.1373-2 | 2005-07 | Use of broadcasting-satellite service assignments and of the associated feeder link assignments for fixed-satellite service transmissions in bands subject to Appendices 30 and 30A of the Radio Regulations   | In force  |
| BO.1383   | 1998-12 | Introduction of the broadcasting-satellite service (sound) in the same frequency bands as used by mobile aeronautical telemetry systems in the frequency range 1-3 GHz   | In force  |
| BO.1408-1 | 2002-04 | Transmission system for advanced multimedia services provided by integrated services digital broadcasting in a broadcasting-satellite channel  | In force  |
| BO.1443-2 | 2006-05 | Reference BSS earth station antenna patterns for use in interference assessment involving non-GSO satellites in frequency bands covered by RR Appendix 30  | In force  |
| BO.1444   | 2000-03 | Protection of the BSS in the 12 GHz band and associated feeder links in the 17 GHz band from interference caused by non-GSO FSS systems  | In force  |
| BO.1445   | 2000-03 | Improved patterns for fast roll-off satellite transmit antennas of the Regions 1 and 3 BSS plans of RR Appendix S30  | In force  |
| BO.1503-1 | 2005-04 | Functional description to be used in developing software tools for determining conformity of non-geostationary-satellite orbit fixed-satellite system networks with limits contained in Article 22 of the Radio Regulations  | Withdrawn |
| BO.1504   | 2000-07 | Effective utilization of spectrum assigned to the broadcasting-satellite service (sound)   | In force  |
| BO.1505   | 2000-07 | Coordination procedure for assignments of space operation service in the guardbands of Appendices S30 and S30A Plans of the Radio Regulations  | Withdrawn |
| BO.1506   | 2000-07 | A methodology to evaluate the impact of solar interference on GSO BSS link performance   | In force  |
| BO.1516-1 | 2012-01 | Digital multiprogramme television systems for use by satellites operating in the 11/12 GHz frequency range   | In force  |
| BO.1517   | 2001-04 | Equivalent power flux-density limits, epfddown, to protect the broadcasting-satellite service in the 12 GHz band from interference caused by non-geostationary fixed-satellite service systems   | In force  |
| BO.1597   | 2002-10 | Methodology for the calculation of the worst-case interference levels<br>between non-geostationary broadcasting-satellite service (sound)<br>systems using highly-elliptical orbit and geostationary orbit satellite<br>networks operating in the band 2 630-2 655 MHz | In force  |

| BO.1658   | 2003-12 | Continuous curves of epfddown versus the geostationary broadcasting-<br>satellite service Earth station antenna diameter to indicate the protection<br>afforded by systems complying with the limits of antennas with diameters<br>other than those in Article 22 of the Radio Regulations                 | In force |
|-----------|---------|--|----------|
| BO.1659-1 | 2012-01 | Mitigation techniques for rain attenuation for broadcasting-satellite service systems in frequency bands between 17.3 GHz and 42.5 GHz   | In force |
| BO.1696   | 2005-02 | Methodologies for determining the availability performance for digital multi-programme BSS systems, and their associated feeder links operating in the planned bands   | In force |
| BO.1697   | 2005-02 | Power flux-density values in the band 11.7-12.7 GHz and associated calculation methodology which may be used for bilateral coordination when the power flux-density values in Section 3 of Annex 1 to Appendix 30 or Annex 4 to Appendix 30 of the Radio Regulations are exceeded                          | In force |
| BO.1724-1 | 2007-01 | Interactive satellite broadcasting systems (television, sound and data)  | In force |
| BO.1773   | 2006-07 | Criterion to assess the impact of interference to the broadcasting-satellite service from emissions of devices without a corresponding frequency allocation in the Radio Regulations, that produce fundamental emissions in the frequency bands allocated to the broadcasting satellite service            | In force |
| BO.1774-1 | 2007-04 | Use of satellite and terrestrial broadcast infrastructures for public warning, disaster mitigation and relief  | In force |
| BO.1776-1 | 2012-01 | Maximum power flux-density for the broadcasting-satellite service in the band 21.4-22.0 GHz in Regions 1 and 3   | In force |
| BO.1784   | 2007-01 | Digital satellite broadcasting system with flexible configuration (television, sound and data)   | In force |
| BO.1785   | 2007-04 | Intra-service sharing criteria for GSO BSS systems in the band 21.4-22.0 GHz in Regions 1 and 3  | In force |
| BO.1834   | 2007-12 | Coordination between geostationary-satellite orbit fixed-satellite service networks and broadcasting-satellite service networks in the band 17.3-17.8 GHz and among the broadcasting-satellite service and associated feeder-link networks serving Region 2 in the bands 17.3-17.8 GHz and 24.75-25.25 GHz | In force |
| BO.1835   | 2007-12 | Sharing between broadcasting-satellite service (BSS) networks using the Region 2 17.3-17.8 GHz BSS allocation and feeder links of BSS networks using the worldwide 17.3-17.8 GHz fixed-satellite service (FSS) (Earth-to-space) allocation   | In force |
| BO.1898   | 2012-01 | Power flux-density value required for the protection of receiving earth stations in the broadcasting-satellite service in Regions 1 and 3 from emissions by a station in the fixed and/or mobile services in the band 21.4-22 GHz  | In force |
| BO.1900   | 2012-01 | Reference receive earth station antenna pattern for the broadcasting-<br>satellite service in the band 21.4-22 GHz in Regions 1 and 3  | In force |

Recommendations count: 52

### Series BR : Recording for production, archival and play-out; film for television

| Number    | Approval Da | te Recommendation Title  | Status    |
|-----------|-------------|--|-----------|
| BR.265-9  | 2004-02     | Operating practices for the international exchange of programmes on film for television use  | In force  |
| BR.407-4  | 1990-06     | International exchange of sound programmes recorded in analogue form   | Withdrawn |
| BR.408-7  | 2001-04     | International exchange of sound programmes recorded in analogue form   | In force  |
| BR.469-7  | 2002-06     | Analogue composite television tape recording   | In force  |
| BR.501-2  | 1990-06     | Appraisal of programmes on colour film intended for television use   | Withdrawn |
| BR.602-5  | 2004-02     | Exchange of standard definition television recordings for programme content evaluation   | In force  |
| BR.648    | 1986-07     | Digital recording of audio signals   | Withdrawn |
| BR.649-1  | 1992-03     | Measuring methods for analogue audio tape recordings   | In force  |
| BR.657-2  | 1992-03     | Digital television tape recording  | Withdrawn |
| BR.713-1  | 1997-10     | Recording of high definition television (HDTV) images on film  | Withdrawn |
| BR.714-2  | 2001-12     | International exchange of programmes produced by means of high-<br>definition television   | In force  |
| BR.715-1  | 2001-04     | International exchange of analogue electronic news gathering recordings  | In force  |
| BR.716-2  | 1994-08     | Area of 35 mm motion picture film used in HDTV telecines   | Withdrawn |
| BR.777-3  | 2001-04     | International exchange of two-channel digital audio recordings   | In force  |
| BR.778-1  | 1994-08     | Analogue component television tape recording. Standards for the international exchange of television programmes on magnetic tapes                                  | In force  |
| BR.779-2  | 2003-01     | Operating practices for digital television recording   | In force  |
| BR.780-2  | 2005-04     | Time and control code standards, for production applications in order to<br>facilitate the international exchange of television programmes on<br>magnetic tapes    | In force  |
| BR.781-1  | 1994-08     | HDTV telecine colour balance for film programmes   | Withdrawn |
| BR.782-1  | 1994-08     | Area of 35 mm print film used for 4:3 conventional television systems  | Withdrawn |
| BR.783-1  | 1994-08     | Area of 35 mm release print film used for conventional 16:9 television systems   | Withdrawn |
| BR.784    | 1992-03     | Exchange of television programmes on 16-mm film with two synchronous sound tracks on a separate support  | Withdrawn |
| BR.785-1  | 2001-04     | The release of programmes in a multiple release media environment  | In force  |
| BR.1214   | 1995-10     | Studio recording of sound-broadcasting programmes on magnetic tape for release on multi-programme digital channels   | Withdrawn |
| BR.1215   | 1995-10     | Handling and storage of television and sound recordings on magnetic tape   | In force  |
| BR.1216-1 | 2001-04     | Recording of television or sound programmes on magnetic tape in the<br>case when several programmes are intended for broadcasting in the<br>same digital multiplex | In force  |

Thursday, August 30, 2012

| BR.1217   | 1995-10 | Recording of pan-scan data of 16:9 recordings within the user bits of the longitudinal time code   | Withdrawn |
|-----------|---------|--|-----------|
| BR.1218-1 | 2001-04 | Recording of ancillary data on digital recorders for consumer use  | In force  |
| BR.1219   | 1995-10 | Handling and storage of cinematographic film recording   | In force  |
| BR.1220-1 | 2001-04 | Requirements for the generation, recording and presentation of high definition television programmes intended for release in the "electronic cinema" | In force  |
| BR.1287-1 | 2001-04 | Broadcasting of programmes on film with multichannel sound   | In force  |
| BR.1288   | 1997-10 | Scanned area of 16 mm and 35 mm release film used for 4:3 conventional television systems  | Withdrawn |
| BR.1289   | 1997-10 | Scanned area of 16 mm and 35 mm release film used for 16:9 conventional television systems   | Withdrawn |
| BR.1290   | 1997-10 | Use of television disk recording in broadcasters' operations   | In force  |
| BR.1291   | 1997-10 | Scanned area of Super 16 mm film for production and post-production in 16:9 television systems   | Withdrawn |
| BR.1292   | 1997-10 | Engineering guidelines for video recording in standard definition television production and post-production chains                                   | In force  |
| BR.1351   | 1998-02 | Requirements for the application of digital technology to audio archiving systems for radio broadcasting   | In force  |
| BR.1352-3 | 2007-12 | File format for the exchange of audio programme materials with metadata on information technology media  | In force  |
| BR.1353   | 1998-02 | Recording of data in the user bits of the longitudinal time code   | Withdrawn |
| BR.1354   | 1998-02 | Transfer of film programmes to video tape for programme exchange and for preservation of endangered films  | Withdrawn |
| BR.1355-2 | 2004-09 | Viewing conditions for the assessment of telecine transfers of film images on a television display   | In force  |
| BR.1356   | 1998-02 | User requirements for application of compression in mainstream standard definition television production and archival                                | In force  |
| BR.1357   | 1998-02 | Use of wrappers and metadata in television production  | Withdrawn |
| BR.1374-1 | 2001-06 | Scanned area dimensions from 16 mm and 35 mm cinematographic film used in television   | In force  |
| BR.1375-3 | 2007-01 | High-definition television (HDTV) digital recording formats  | In force  |
| BR.1376   | 1998-11 | Compression families for use in recording and networked standard definition television production  | In force  |
| BR.1384-2 | 2011-03 | Parameters for international exchange of multi-channel sound recordings with or without accompanying picture   | In force  |
| BR.1385   | 1998-12 | Exchange of sound programmes on recordable compact discs (CD-R)  | In force  |
| BR.1422   | 1999-12 | Operational practices for television use of film soundtracks encoded with noise reduction and matrix surround  | In force  |
| BR.1440   | 2000-03 | 16:9 video images transferred to 35 mm film for optical projection   | In force  |
| BR.1441   | 2000-03 | Compromise scanned area dimensions for television from 35 mm wide-<br>screen films   | In force  |

| BR.1442 | 2000-03 | User's requirements for digital HDTV tape cassette recorders   | In force |
|---------|---------|--|----------|
| BR.1515 | 2001-04 | International exchange of digital electronic news gathering recordings   | In force |
| BR.1530 | 2001-06 | Guide to Recommendations on the use of film in television  | In force |
| BR.1531 | 2001-06 | Exchange of sound programmes for broadcast use recorded as broadcast wave format files on compact and digital versatile recordable data disks                                  | In force |
| BR.1574 | 2002-06 | Archival of sound-program material in the form of files recorded on information technology media   | In force |
| BR.1575 | 2002-06 | Guide to the selection of digital video tape recording formats for studio production in the standard definition television (SDTV) environment based on production requirements | In force |
| BR.1684 | 2004-09 | Recording of 5.1-channel audio programmes on video tape recorders  | In force |
| BR.1694 | 2004-09 | Videocassette recording formats for international exchange of large-<br>screen digital imagery programmes intended for presentation in a<br>theatrical environment             | In force |
| BR.1695 | 2004-09 | Recording formats for international exchange for the evaluation of high-<br>definition television programmes   | In force |
| BR.1725 | 2005-04 | Handling, restoration and storage of programme material that broadcasters have archived in the form of cinematographic film  | In force |
| BR.1733 | 2005-08 | Broadcasters' use of digital television recording formats designed for<br>semi-professional or consumer applications   | In force |
|         |         |  |          |

Recommendations count: 61

### Series BS : Broadcasting service (sound)

| Number   | Approval Date | e Recommendation Title  | Status    |
|----------|---------------|---|-----------|
| BS.48-2  | 1986-07       | Choice of frequency for sound broadcasting in the Tropical Zone   | In force  |
| BS.80-3  | 1990-06       | Transmitting antennas in HF broadcasting  | In force  |
| BS.139-3 | 1990-06       | Transmitting antennas for sound broadcasting in the Tropical Zone   | In force  |
| BS.215-2 | 1982-07       | Maximum transmitter powers for broadcasting in the Tropical Zone  | In force  |
| BS.216-2 | 1982-07       | Protection ratio for sound broadcasting in the Tropical Zone  | In force  |
| BS.411-4 | 1990-06       | Fading allowances in HF broadcasting  | In force  |
| BS.412-9 | 1998-12       | Planning standards for terrestrial FM sound broadcasting at VHF   | In force  |
| BS.415-2 | 1986-07       | Minimum performance specifications for low-cost sound-broadcasting receivers  | In force  |
| BS.450-3 | 2001-11       | Transmission standards for FM sound broadcasting at VHF   | In force  |
| BS.467   | 1970-07       | Technical characteristics to be checked for frequency-modulation stereophonic broadcasting  | In force  |
| BS.468-4 | 1986-07       | Measurement of audio-frequency noise voltage level in sound<br>broadcasting   | In force  |
| BS.498-2 | 1990-06       | lonospheric cross-modulation in the LF and MF broadcasting bands  | In force  |
| BS.559-2 | 1990-06       | Objective measurement of radio-frequency protection ratios in LF, MF and HF broadcasting  | In force  |
| BS.560-4 | 1997-10       | Radio-frequency protection ratios in LF, MF and HF broadcasting   | In force  |
| BS.561-2 | 1986-07       | Definitions of radiation in LF, MF and HF broadcasting bands  | In force  |
| BS.562-3 | 1990-06       | Subjective assessment of sound quality  | Withdrawn |
| BS.597-1 | 1986-07       | Channel spacing for sound broadcasting in band 7 (HF)   | In force  |
| BS.598-1 | 1990-06       | Factors influencing the limits of amplitude-modulation sound-<br>broadcasting coverage in band 6 (MF)                               | In force  |
| BS.599   | 1982-07       | Directivity of antennas for the reception of sound broadcasting in band 8 (VHF) $% \left( 1,1,2,2,3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,$ | In force  |
| BS.638   | 1986-07       | Terms and definitions used in frequency planning for sound broadcasting   | In force  |
| BS.639   | 1986-07       | Necessary bandwidth of emission in LF, MF and HF broadcasting   | In force  |
| BS.640-3 | 1997-10       | Single sideband (SSB) system for HF broadcasting  | In force  |
| BS.641   | 1986-07       | Determination of radio-frequency protection ratios for frequency-<br>modulated sound broadcasting                                   | In force  |
| BS.642-1 | 1990-06       | Limiters for high-quality sound-programme signals   | In force  |
| BS.643-3 | 2011-05       | Radio data system for automatic tuning and other applications in FM radio receivers for use with pilot-tone system                  | In force  |
| BS.644-1 | 1990-06       | Audio quality parameters for the performance of a high-quality sound-<br>programme transmission chain                               | In force  |

| BS.645-2  | 1992-03 | Test signals and metering to be used on international sound programme connections  | In force  |
|-----------|---------|--|-----------|
| BS.646-1  | 1992-03 | Source encoding for digital sound signals in broadcasting studios  | In force  |
| BS.647-3  | 2011-03 | A digital audio interface for broadcasting studios   | In force  |
| BS.702-1  | 1992-03 | Synchronization and multiple frequency use per programme in HF broadcasting  | In force  |
| BS.703    | 1990-06 | Characteristics of AM sound broadcasting reference receivers for<br>planning purposes  | In force  |
| BS.704    | 1990-06 | Characteristics of FM sound broadcasting reference receivers for<br>planning purposes  | In force  |
| BS.705-1  | 1995-10 | HF transmitting and receiving antennas characteristics and diagrams  | In force  |
| BS.706-2  | 1998-02 | Data system in monophonic AM sound broadcasting (AMDS)   | In force  |
| BS.707-5  | 2005-08 | Transmission of multisound in terrestrial television systems PAL B, B1, D1, G, H and I, and SECAM D, K, K1 and L   | In force  |
| BS.708    | 1990-06 | Determination of the electro-acoustical properties of studio monitor headphones  | In force  |
| BS.773    | 1992-03 | Radio-frequency protection ratios required by FM sound broadcasting in the band between 87.5 MHz and 108 MHz against interference from D/SECAM television transmissions                | In force  |
| BS.774-3  | 2011-12 | Service requirements for digital sound broadcasting to vehicular, portable and fixed receivers using terrestrial transmitters in the VHF/UHF bands                                     | In force  |
| BS.775-2  | 2006-07 | Multichannel stereophonic sound system with and without accompanying picture   | In force  |
| BS.776    | 1992-03 | Format for user data channel of the digital audio interface  | Withdrawn |
| BS.1114-7 | 2011-12 | Systems for terrestrial digital sound broadcasting to vehicular, portable and fixed receivers in the frequency range 30-3 000 MHz  | In force  |
| BS.1115-1 | 2005-04 | Low bit-rate audio coding  | Withdrawn |
| BS.1116-1 | 1997-10 | Methods for the subjective assessment of small impairments in audio systems including multichannel sound systems   | In force  |
| BS.1194-2 | 1998-12 | System for multiplexing frequency modulation (FM) sound broadcasts with a sub-carrier data channel having a relatively large transmission capacity for stationary and mobile reception | In force  |
| BS.1195   | 1995-10 | Transmitting antenna characteristics at VHF and UHF  | In force  |
| BS.1196-2 | 2010-03 | Audio coding for digital broadcasting  | In force  |
| BS.1283-1 | 2003-12 | A guide to ITU-R Recommendations for subjective assessment of sound quality  | In force  |
| BS.1284-1 | 2003-12 | General methods for the subjective assessment of sound quality   | In force  |
| BS.1285   | 1997-10 | Pre-selection methods for the subjective assessment of small impairments in audio systems  | In force  |
| BS.1286   | 1997-10 | Methods for the subjective assessment of audio systems with accompanying picture   | In force  |
| BS.1348-2 | 2011-12 | Service requirements for digital sound broadcasting at frequencies below 30 MHz  | In force  |

| BS.1349   | 1998-02 | Implementation of digital sound broadcasting to vehicular, portable and fixed receivers using terrestrial transmitters in the LF, MF and HF bands   | In force |
|-----------|---------|---|----------|
| BS.1350-1 | 1998-12 | Systems requirements for multiplexing (FM) sound broadcasting with a sub-carrier data channel having a relatively large transmission capacity for stationary and mobile reception         | In force |
| BS.1386-1 | 2001-04 | LF and MF transmitting antennas characteristics and diagrams  | In force |
| BS.1387-1 | 2001-11 | Method for objective measurements of perceived audio quality  | In force |
| BS.1423   | 1999-12 | Guidelines for producing multichannel soundtracks using surround matrix techniques  | In force |
| BS.1514-2 | 2011-03 | System for digital sound broadcasting in the broadcasting bands below 30 MHz  | In force |
| BS.1534-1 | 2003-01 | Method for the subjective assessment of intermediate quality levels of coding systems   | In force |
| BS.1547   | 2001-11 | Terrestrial component of systems for hybrid satellite-terrestrial digital<br>sound broadcasting to vehicular, portable and fixed receivers in the<br>frequency range 1 400-2 700 MHz      | In force |
| BS.1548-2 | 2006-02 | User requirements for audio coding systems for digital broadcasting   | In force |
| BS.1596   | 2002-10 | Guide to ITU-R Recommendations for broadcast sound production   | In force |
| BS.1615-1 | 2011-05 | "Planning parameters" for digital sound broadcasting at frequencies below 30 MHz  | In force |
| BS.1657   | 2003-08 | Procedure for the performance test of automated audio identification systems  | In force |
| BS.1660-5 | 2011-12 | Technical basis for planning of terrestrial digital sound broadcasting in the VHF band  | In force |
| BS.1661   | 2003-12 | 'Signal-on-the-air' specifications of the digital system described in Annex<br>1 to Recommendation ITU-R BS.1514 for digital sound broadcasting in<br>the broadcasting bands below 30 MHz | In force |
| BS.1679   | 2004-03 | Subjective assessment of the quality of audio in large screen digital<br>imagery applications intended for presentation in a theatrical environment                                       | In force |
| BS.1688   | 2004-09 | Baseband sound system and audio source-coding at delivery interfaces of large-screen digital imagery applications   | In force |
| BS.1693   | 2004-09 | Procedure for the performance test of automated query-by-humming systems  | In force |
| BS.1698   | 2005-02 | Evaluating fields from terrestrial broadcasting transmitting systems<br>operating in any frequency band for assessing exposure to non-ionizing<br>radiation                               | In force |
| BS.1726   | 2005-04 | Signal level of digital audio accompanying television in international programme exchange   | In force |
| BS.1734   | 2005-08 | Basic performance requirements for the sound components of large-<br>screen digital imagery applications for presentation in a theatrical<br>environment                                  | In force |
| BS.1738   | 2007-09 | Identification and ordering of multiple audio channels carried on international contribution circuits   | In force |
| BS.1770-2 | 2011-03 | Algorithms to measure audio programme loudness and true-peak audio level  | In force |
| BS.1771-1 | 2012-01 | Requirements for loudness and true-peak indicating meters   | In force |
|           |         |   |          |

| BS.1786 | 2007-04 | Criterion to assess the impact of interference to the terrestrial broadcasting service (BS)                                  | In force |
|---------|---------|--|----------|
| BS.1864 | 2010-03 | Operational practices for loudness in the international exchange of digital television programmes                            | In force |
| BS.1873 | 2010-03 | Serial multichannel audio digital interface for broadcasting studios   | In force |
| BS.1892 | 2011-05 | Requirements for enhanced multimedia services for digital terrestrial<br>broadcasting in VHF Bands I and II                  | In force |
| BS.1894 | 2011-05 | Digital radio broadcast service, captioned radio   | In force |
| BS.1895 | 2011-05 | Protection criteria for terrestrial broadcasting systems   | In force |
| BS.1909 | 2012-01 | Performance requirements for an advanced multichannel stereophonic sound system for use with or without accompanying picture | In force |

Recommendations count: 81

### Series BT : Broadcasting service (television)

| Number    | Approval D | ate Recommendation Title  | Status   |
|-----------|------------|---|----------|
| BT.266-1  | 1992-03    | Phase pre-correction of television transmitters   | In force |
| BT.417-5  | 2002-10    | Minimum field strengths for which protection may be sought in planning an analogue terrestrial television service   | In force |
| BT.419-3  | 1990-06    | Directivity and polarization discrimination of antennas in the reception of television broadcasting   | In force |
| BT.470-7  | 2005-02    | Conventional analogue television systems  | In force |
| BT.471-1  | 1986-07    | Nomenclature and description of colour bar signals  | In force |
| BT.472-3  | 1990-06    | Video-frequency characteristics of a television system to be used for the international exchange of programmes between countries that have adopted 625-line colour or monochrome systems                    | In force |
| BT.500-13 | 2012-01    | Methodology for the subjective assessment of the quality of television pictures   | In force |
| BT.565    | 1978-07    | Protection ratios for 625-line television against radionavigation transmitters operating in the shared bands between 582 and 606 MHz  | In force |
| BT.601-7  | 2011-03    | Studio encoding parameters of digital television for standard 4:3 and wide screen 16:9 aspect ratios  | In force |
| BT.653-3  | 1998-02    | Teletext systems  | In force |
| BT.654    | 1986-07    | Subjective quality of television pictures in relation to the main<br>impairments of the analogue composite television signal  | In force |
| BT.655-7  | 2004-02    | Radio-frequency protection ratios for AM vestigial sideband terrestrial television systems interfered with by unwanted analogue vision signals and their associated sound signals                           | In force |
| BT.656-5  | 2007-12    | Interface for digital component video signals in 525-line and 625-line television systems operating at the 4:2:2 level of Recommendation ITU-R BT.601   | In force |
| BT.709-5  | 2002-04    | Parameter values for the HDTV standards for production and international programme exchange   | In force |
| BT.710-4  | 1998-11    | Subjective assessment methods for image quality in high-definition television   | In force |
| BT.711-1  | 1992-09    | Synchronizing reference signals for the component digital studio  | In force |
| BT.796    | 1992-03    | Parameters for enhanced compatible coding systems based on 625-line PAL and SECAM television systems  | In force |
| BT.797-1  | 1994-07    | Parameters for 4:3 enhanced television systems that are NTSC-<br>compatible   | In force |
| BT.798-1  | 1994-07    | Digital television terrestrial broadcasting in the VHF/UHF bands  | In force |
| BT.799-4  | 2007-12    | Interface for digital component video signals in 525-line and 625 line television systems operating at the 4:4:4 level of Recommendation ITU-R BT.601   | In force |
| BT.800-2  | 1995-10    | User requirements for the transmission through contribution and primary distribution networks of digital television signals defined according to the 4:2:2 standard of Recommendation ITU-R BT.601 (Part A) | Withdraw |

| BT.801-1  | 1995-10 | Test signals for digitally encoded colour television signals conforming<br>with Recommendations ITU-R BT.601 and ITU-R BT.656                       | Withdrawn |
|-----------|---------|---|-----------|
| BT.802-1  | 1994-07 | Test pictures and sequences for subjective assessments of digital<br>codecs conveying signals produced according to Recommendation ITU-R<br>BT.601  | In force  |
| BT.803    | 1992-03 | The avoidance of interference generated by digital television studio equipment  | In force  |
| BT.804    | 1992-03 | Characteristics of TV receivers essential for frequency planning with<br>PAL/SECAM/NTSC television systems  | In force  |
| BT.805    | 1992-03 | Assessment of impairment caused to television reception by a wind turbine   | In force  |
| BT.806    | 1992-03 | Common channel raster for the distribution of D-MAC, D2-MAC and HD-<br>MAC signals in collective antenna and cable distribution systems             | In force  |
| BT.807    | 1992-03 | Reference model for data broadcasting   | In force  |
| BT.808    | 1992-03 | The broadcasting of time and date information in coded form   | In force  |
| BT.809    | 1992-03 | Programme delivery control (PDC) system for video recording   | Withdrawn |
| BT.810    | 1992-03 | Conditional-access broadcasting systems   | Withdrawn |
| BT.811-1  | 1994-07 | The subjective assessment of enhanced PAL and SECAM systems   | In force  |
| BT.812    | 1992-03 | Subjective assessment of the quality of alphanumeric and graphic pictures in Teletext and similar services  | In force  |
| BT.813    | 1992-03 | Methods for objective picture quality assessment in relation to<br>impairments from digital coding of television signals                            | In force  |
| BT.814-2  | 2007-09 | Specifications and alignment procedures for setting of brightness and contrast of displays  | In force  |
| BT.815-1  | 1994-07 | Specification of a signal for measurement of the contrast ratio of displays   | In force  |
| BT.1117-2 | 1997-10 | Studio format parameters for enhanced 16:9 aspect ratio 625-line television systems (D- and D2-MAC, PALplus, enhanced SECAM)                        | Withdrawn |
| BT.1118-1 | 1997-10 | Enhanced compatible widescreen television based on conventional television systems  | In force  |
| BT.1119-2 | 1998-02 | Wide-screen signalling for broadcasting (Signalling for wide-screen and other enhanced television parameters)                                       | In force  |
| BT.1120-8 | 2012-01 | Digital interfaces for HDTV studio signals  | In force  |
| BT.1121-1 | 1995-10 | User requirements for the transmission through contribution and primary distribution networks of digital HDTV signals                               | Withdrawn |
| BT.1122-2 | 2011-03 | User requirements for codecs for emission and secondary distribution systems for SDTV and HDTV  | In force  |
| BT.1123   | 1994-07 | Planning methods for 625-line terrestrial television in VHF/UHF bands   | In force  |
| BT.1124-3 | 2001-06 | Reference signals for ghost cancelling in analogue television systems   | In force  |
| BT.1125   | 1994-07 | Basic objectives for the planning and implementation of digital terrestrial television broadcasting systems   | In force  |
| BT.1126   | 1994-07 | Data transmission protocols and transmission control scheme for data broadcasting systems using a data channel in satellite television broadcasting | Withdrawn |

| BT.1127   | 1994-07 | Relative quality requirements of television broadcast systems   | In force  |
|-----------|---------|---|-----------|
| BT.1128-2 | 1997-10 | Subjective assessment of conventional television systems  | In force  |
| BT.1129-2 | 1998-02 | Subjective assessment of standard definition digital television (SDTV) systems  | In force  |
| BT.1197-1 | 1998-02 | Enhanced wide-screen PAL TV transmission system (the PALplus system)  | Withdrawn |
| BT.1198   | 1995-10 | Stereoscopic television based on R-and L-eye two channel signals  | In force  |
| BT.1199-1 | 2010-03 | Use of bit-rate reduction in the HDTV studio environment  | In force  |
| BT.1200-1 | 1998-02 | Target standard for digital video systems for the studio and for international programme exchange   | Withdrawn |
| BT.1201-1 | 2004-03 | Extremely high resolution imagery   | In force  |
| BT.1202   | 1995-10 | Displays for future television systems  | Withdrawn |
| BT.1203-1 | 2007-01 | User requirements for generic video bit-rate reduction coding of digital TV signals for an end-to-end television system   | In force  |
| BT.1204   | 1995-10 | Measuring methods for digital video equipment with analogue input/output  | In force  |
| BT.1205   | 1995-10 | User requirements for the quality of baseband SDTV and HDTV signals when transmitted by digital Satellite News Gathering (SNG)                                  | Withdrawn |
| BT.1206   | 1995-10 | Spectrum shaping limits for digital terrestrial television broadcasting   | In force  |
| BT.1207-1 | 1997-10 | Data access methods for digital terrestrial television broadcasting   | In force  |
| BT.1208-1 | 1997-10 | Video coding for digital terrestrial television broadcasting  | Withdrawn |
| BT.1209-1 | 1997-10 | Service multiplex methods for digital terrestrial television broadcasting   | In force  |
| BT.1210-4 | 2012-01 | Test materials to be used in assessment of picture quality  | In force  |
| BT.1298   | 1997-10 | Enhanced wide-screen NTSC TV transmission system  | In force  |
| BT.1299-1 | 2010-03 | The basic elements of a worldwide common family of systems for digital terrestrial television broadcasting  | In force  |
| BT.1300-3 | 2005-08 | Service multiplex, transport, and identification methods for digital terrestrial television broadcasting  | In force  |
| BT.1301-1 | 2011-03 | Data services in digital television broadcasting  | In force  |
| BT.1302   | 1997-10 | Interfaces for digital component video signals in 525-line and 625-line television systems operating at the 4:2:2 level of Recommendation ITU-R BT.601 (Part B) | Withdrawn |
| BT.1303   | 1997-10 | Interfaces for digital component video signals in 525-line and 625-line television systems operating at the 4:4:4 level of Recommendation ITU-R BT.601 (Part B) | Withdrawn |
| BT.1304   | 1997-10 | Checksum for error detection and status information in interfaces conforming with Recommendations ITU-R BT.656 and ITU-R BT.799                                 | In force  |
| BT.1305-1 | 2010-03 | Digital audio and auxiliary data as ancillary data signals in interfaces conforming to Recommendations ITU-R BT.656 and ITU-R BT.799                            | In force  |
| BT.1306-6 | 2011-12 | Error correction, data framing, modulation and emission methods for digital terrestrial television broadcasting   | In force  |

| BT.1358-1 | 2007-09 | Studio parameters of 625 and 525 line progressive television systems   | In force  |
|-----------|---------|--|-----------|
| BT.1359-1 | 1998-11 | Relative timing of sound and vision for broadcasting   | In force  |
| BT.1360   | 1998-02 | Capture characteristics for high-definition images   | Withdrawn |
| BT.1361   | 1998-02 | Worldwide unified colorimetry and related characteristics of future television and imaging systems   | In force  |
| BT.1362   | 1998-02 | Interfaces for digital component video signals in 525- and 625-line progressive scan television systems  | Withdrawn |
| BT.1363-1 | 1998-11 | Jitter specifications and methods for jitter measurements of bit-serial signals conforming to Recommendations ITU-R BT.656, ITU-R BT.799 and ITU-R BT.1120                       | In force  |
| BT.1364-2 | 2010-03 | Format of ancillary data signals carried in digital component studio interfaces  | In force  |
| BT.1365-1 | 2010-03 | 24-bit digital audio format as ancillary data signals in HDTV serial interfaces  | In force  |
| BT.1366-2 | 2009-01 | Transmission of time code and control code in the ancillary data space of a digital television stream according to Recommendations ITU-R BT.656, ITU-R BT.799 and ITU-R BT.1120  | In force  |
| BT.1367-1 | 2007-12 | Serial digital fibre transmission system for signals conforming to Recommendations ITU-R BT.656, ITU-R BT.799 and ITU-R BT.1120  | In force  |
| BT.1368-9 | 2011-12 | Planning criteria, including protection ratios, for digital terrestrial television services in the VHF/UHF bands   | In force  |
| BT.1369   | 1998-02 | Basic principles for a worldwide common family of systems for the provision of interactive television services   | In force  |
| BT.1377   | 1998-11 | Labelling of video and audio apparatus throughput (processing) delay   | In force  |
| BT.1378   | 1998-11 | Basic requirements for multimedia-hypermedia broadcasting  | Withdrawn |
| BT.1379-2 | 2007-09 | Safe areas of wide-screen 16:9 and standard 4:3 aspect ratio productions to achieve a common format during a transition period to wide screen 16:9 broadcasting                  | In force  |
| BT.1380-1 | 2006-07 | Standards for bit rate reduction coding systems for SDTV   | In force  |
| BT.1381-3 | 2007-12 | Serial digital interface-based transport interface for compressed television signals and packetized data in networked television production based on Recommendation ITU-R BT.656 | In force  |
| BT.1382   | 1998-11 | Assessment of the picture quality of multi-programme services  | In force  |
| BT.1434   | 2000-03 | Network independent protocols for interactive systems  | In force  |
| BT.1435   | 2000-03 | Digital sound and television broadcasting interaction channel through the PSTN/ISDN  | In force  |
| BT.1436   | 2000-03 | Transmission systems for interactive cable television services   | Withdrawn |
| BT.1437   | 2000-03 | User requirements for digital coding for multi-programme television transmission   | Withdrawn |
| BT.1438   | 2000-03 | Subjective assessment of stereoscopic television pictures  | In force  |
| BT.1439-1 | 2006-02 | Measurement methods applicable in the analogue television studio and the overall analogue television system  | In force  |

| BT.1507   | 2000-10 | Interaction channel using digital enhanced cordless telecommunications (DECT) system   | In force  |
|-----------|---------|--|-----------|
| BT.1508   | 2000-10 | Interaction channel using global system for mobile communications (GSM)  | In force  |
| BT.1532   | 2001-06 | The MPEG-2 recoding data set for the preservation of picture quality in cascade of MPEG-2 codecs   | Withdrawn |
| BT.1533   | 2001-06 | Editing information for MPEG-2 video elementary streams for applications in television production  | Withdrawn |
| BT.1543   | 2001-08 | 1 280 720, 16:9 progressively-captured image format for production and international programme exchange in the 60 Hz environment                               | In force  |
| BT.1549   | 2001-11 | Data link protocol for interaction channel   | In force  |
| BT.1550   | 2001-12 | MPEG-2 recoding data set for the preservation of picture quality in<br>cascade of MPEG-2 codecs compressed stream format                                       | Withdrawn |
| BT.1551   | 2001-12 | Transport of MPEG-2 recoding data set as ancillary data packets  | Withdrawn |
| BT.1562   | 2002-04 | Consistency in the alignment of displays in production rooms and control rooms   | In force  |
| BT.1563-1 | 2011-03 | Data encoding protocol using key-length-value  | In force  |
| BT.1564   | 2002-04 | Interaction channel using local multipoint distribution systems  | In force  |
| BT.1576   | 2002-06 | Transport of alternate source formats through Recommendation ITU-R BT.1120   | Withdrawn |
| BT.1577   | 2002-06 | Serial digital interface-based transport interface for compressed television signals in networked television production based on Recommendation ITU-R BT.1120  | In force  |
| BT.1578   | 2002-06 | Content package format, elements, and metadata definition for applications in television production utilizing interfaces based on Recommendation ITU-R BT.1381 | Withdrawn |
| BT.1614-1 | 2012-01 | Payload identification data structure for digital television interfaces  | In force  |
| BT.1616   | 2003-05 | Data stream format for the exchange of DV-based audio, data and compressed video over interfaces complying with Recommendation ITU-R BT.1381                   | Withdrawn |
| BT.1617   | 2003-05 | Format for transmission of DV compressed video, audio and data over interfaces complying with Recommendation ITU-R BT.1381                                     | Withdrawn |
| BT.1618-1 | 2011-03 | Data structure for DV-based audio, data and compressed video at data rates of 25 and 50 Mbit/s   | In force  |
| BT.1619   | 2003-05 | Vertical ancillary data mapping for serial digital interface   | In force  |
| BT.1620-1 | 2010-03 | Data structure for DV-based audio, data and compressed video at a data rate of 100 Mbit/s  | In force  |
| BT.1662   | 2003-12 | General reference chain and management of post-processing headroom for programme essence in large screen digital imagery applications                          | In force  |
| BT.1663   | 2003-12 | Expert viewing methods to assess the quality of systems for the digital display of large screen digital imagery in theatres                                    | In force  |
| BT.1664   | 2003-12 | Representation of various image aspect ratios into the image of large screen digital imagery applications that use a 16:9 raster                               | In force  |
| BT.1665   | 2003-12 | Considerations for colour encoding and spatial resolution for large screen digital imagery display   | In force  |

| BT.1666   | 2003-12 | User requirements for large screen digital imagery applications intended for presentation in a theatrical environment  | In force |
|-----------|---------|--|----------|
| BT.1667   | 2003-12 | Terrestrial return channel for interactive broadcasting services operating in the VHF/UHF broadcast band based on Recommendation ITU-R BT.1306                               | In force |
| BT.1674   | 2004-02 | Metadata requirements for production and post-production in broadcasting   | In force |
| BT.1675   | 2004-02 | System design and operational practices for minimizing disturbance from loop delay in broadcast systems  | In force |
| BT.1676   | 2004-02 | Methodological framework for specifying accuracy and cross-calibration of video quality metrics  | In force |
| BT.1680   | 2004-03 | Baseband imaging format for distribution of large screen digital imagery applications intended for presentation in a theatrical environment                                  | In force |
| BT.1683   | 2004-06 | Objective perceptual video quality measurement techniques for standard definition digital broadcast television in the presence of a full reference                           | In force |
| BT.1685   | 2004-09 | Structure of inter-station control data conveyed by ancillary data packets   | In force |
| BT.1686   | 2004-09 | Methods of measurement of image presentation parameters for large screen digital imagery programme presentation in a theatrical  | In force |
| BT.1687-1 | 2006-02 | Video bit-rate reduction for real-time distribution of large-screen digital imagery applications for presentation in a theatrical environment                                | In force |
| BT.1689   | 2004-09 | Guidelines on the presentation in large-screen digital imagery<br>environments of programmes that are provided in image formats<br>conforming to Recommendation ITU-R BT.601 | In force |
| BT.1690   | 2004-09 | Assumed characteristics of venues intended for large-screen digital<br>imagery programme presentation in a theatrical environment  | In force |
| BT.1691-1 | 2009-09 | Adaptive image quality control in digital television systems   | In force |
| BT.1692-1 | 2009-09 | Optimization of the quality of colour reproduction in digital television   | In force |
| BT.1699-1 | 2009-09 | Harmonization of declarative application formats for interactive TV  | In force |
| BT.1700   | 2005-02 | Characteristics of composite video signals for conventional analogue television systems  | In force |
| BT.1701-1 | 2005-08 | Characteristics of radiated signals of conventional analogue television systems  | In force |
| BT.1702   | 2005-02 | Guidance for the reduction of photosensitive epileptic seizures caused by television   | In force |
| BT.1720   | 2005-07 | Quality of service ranking and measurement methods for digital video<br>broadcasting services delivered over broadband Internet protocol<br>networks                         | In force |
| BT.1721   | 2005-07 | Objective measurement of perceptual image quality of large screen digital imagery applications for theatrical presentation   | In force |
| BT.1722-2 | 2011-03 | Harmonization of the instruction set for the execution engine for interactive TV applications  | In force |
| BT.1727   | 2005-04 | Terrestrial and satellite delivery of programme material to large screen digital imagery venues  | In force |
| BT.1728-1 | 2010-03 | Guidance on the use of flat panel displays in television production and postproduction   | In force |
| BT.1729   | 2005-04 | Common 16 x 9/4 x 3 aspect ratio digital television reference test pattern   | In force |

Thursday, August 30, 2012

| BT.1735   | 2005-08 | Methods for objective quality coverage assessment of digital terrestrial television broadcasting signals of System B specified in Recommendation ITU-R BT.1306                  | In force |
|-----------|---------|---|----------|
| BT.1736   | 2006-02 | Broadcasting of redistribution signalling for television  | In force |
| BT.1737   | 2006-02 | Use of the ITU-T Recommendation H.264 (MPEG-4/AVC) video source-<br>coding method to transport high definition TV programme material  | In force |
| BT.1769   | 2006-07 | Parameter values for an expanded hierarchy of LSDI image formats for<br>production and international programme exchange   | In force |
| BT.1774-1 | 2007-04 | Use of satellite and terrestrial broadcast infrastructures for public warning, disaster mitigation and relief   | In force |
| BT.1775   | 2006-07 | File format with editing capability, for the exchange of metadata, audio, video, data essence and ancillary data for use in broadcasting  | In force |
| BT.1786   | 2007-04 | Criterion to assess the impact of interference to the terrestrial broadcasting service (BS)   | In force |
| BT.1788   | 2007-01 | Methodology for the subjective assessment of video quality in multimedia applications   | In force |
| BT.1789   | 2007-04 | A method to reconstruct received video using transmission error information for packet video transmission   | In force |
| BT.1790   | 2007-01 | Requirements for monitoring of broadcasting chains during operation   | In force |
| BT.1832   | 2007-12 | Digital video broadcast-return channel terrestrial (DVB-RCT) deployment scenarios and planning considerations   | In force |
| BT.1833-1 | 2011-03 | Broadcasting of multimedia and data applications for mobile reception by handheld receivers   | In force |
| BT.1845-1 | 2010-03 | Guidelines on metrics to be used when tailoring television programmes to broadcasting applications at various image quality levels, display sizes and aspect ratios             | In force |
| BT.1846   | 2008-10 | Notations for video systems   | In force |
| BT.1847   | 2009-01 | 1 280 x 720, 16:9 progressively-captured image format for production and international programme exchange in the 50 Hz environment  | In force |
| BT.1848   | 2009-05 | Safe areas of wide-screen 16:9 aspect ratio digital productions   | In force |
| BT.1852   | 2009-09 | Conditional-access systems for digital broadcasting   | In force |
| BT.1865   | 2010-03 | Metadata to monitor errors of SDTV and HDTV signals in the broadcasting chain   | In force |
| BT.1866   | 2010-03 | Objective perceptual video quality measurement techniques for<br>broadcasting applications using low definition television in the presence<br>of a full reference signal        | In force |
| BT.1867   | 2010-03 | Objective perceptual visual quality measurement techniques for<br>broadcasting applications using low definition television in the presence<br>of a reduced bandwidth reference | In force |
| BT.1868   | 2010-03 | User requirements for codecs for transmission of television signals through contribution, primary distribution, and SNG networks  | In force |
| BT.1869   | 2010-03 | Multiplexing scheme for variable-length packets in digital multimedia broadcasting systems  | In force |
| BT.1870   | 2010-03 | Video coding for digital television broadcasting emission   | In force |
| BT.1871   | 2010-03 | User requirements for wireless microphones  | In force |
|           |         |   |          |

Thursday, August 30, 2012

Page 17 of 73

| BT.1872   | 2010-03 | User requirements for digital electronic news gathering  | In force |
|-----------|---------|--|----------|
| BT.1877   | 2010-05 | Error-correction, data framing, modulation and emission methods for second generation of digital terrestrial television broadcasting systems                           | In force |
| BT.1885   | 2011-03 | Objective perceptual video quality measurement techniques for standard definition digital broadcast television in the presence of a reduced bandwidth reference        | In force |
| BT.1886   | 2011-03 | Reference electro-optical transfer function for flat panel displays used in HDTV studio production   | In force |
| BT.1887   | 2011-03 | Carriage of IP packets in MPEG 2 transport streams in multimedia<br>broadcasting   | In force |
| BT.1888-1 | 2011-09 | Basic elements of file-based broadcasting systems  | In force |
| BT.1889   | 2011-03 | Common application environment for interactive digital broadcasting services   | In force |
| BT.1893   | 2011-05 | Assessment of impairment caused to digital television reception by a wind turbine  | In force |
| BT.1895   | 2011-05 | Protection criteria for terrestrial broadcasting systems   | In force |
| BT.1907   | 2012-01 | Objective perceptual video quality measurement techniques for<br>broadcasting applications using HDTV in the presence of a full reference<br>signal                    | In force |
| BT.1908   | 2012-01 | Objective video quality measurement techniques for broadcasting applications using HDTV in the presence of a reduced reference signal                                  | In force |
| BT.2000   | 2012-01 | Use of large screen digital imagery Recommendations in video information systems applications  | In force |
| BT.2016   | 2012-04 | Error-correction, data framing, modulation and emission methods for terrestrial multimedia broadcasting for mobile reception using handheld receivers in VHF/UHF bands | In force |

Recommendations count: 181

### Series F : Fixed service

| Number  | Approval Da | ate Recommendation Title  | Status    |
|---------|-------------|---|-----------|
| F.106-2 | 1999-05     | The use of diversity for voice-frequency telegraphy on HF radio circuits  | In force  |
| F.162-3 | 1992-03     | Use of directional transmitting antennas in the fixed service operating in bands below about 30 MHz   | In force  |
| F.240-7 | 2006-02     | Signal-to-interference protection ratios for various classes of emission in the fixed service below about 30 MHz  | In force  |
| F.246-3 | 1974-07     | Frequency-shift keying  | In force  |
| F.268-1 | 1970-07     | Interconnection at audio frequencies of radio-relay systems for telephony   | Withdrawn |
| F.270-2 | 1978-07     | Interconnection at video signal frequencies of radio-relay systems for television   | Withdrawn |
| F.275-3 | 1982-07     | Pre-emphasis characteristic for frequency modulation radio-relay systems for telephony using frequency-division multiplex   | Withdrawn |
| F.276-2 | 1974-07     | Frequency deviation and the sense of modulation for analogue radio-relay systems for television   | Withdrawn |
| F.283-5 | 1990-06     | Radio-frequency channel arrangements for low and medium capacity<br>analogue or digital fixed wireless systems operating in the 2 GHz band                                      | Withdrawn |
| F.290-3 | 1978-07     | Maintenance measurements on radio-relay systems for telephony using frequency-division multiplex  | Withdrawn |
| F.302-3 | 1997-05     | Limitation of interference from trans-horizon radio-relay systems   | In force  |
| F.305   | 1959-07     | Stand-by arrangements for radio-relay systems for television and telephony  | Withdrawn |
| F.306   | 1959-07     | Procedure for the international connection of radio-relay systems with<br>different characteristics   | Withdrawn |
| F.335-2 | 1970-07     | Use of radio links in international telephone circuits  | Withdrawn |
| F.338-2 | 1970-07     | Bandwidth required at the output of a telegraph or telephone receiver   | In force  |
| F.339-7 | 2006-02     | Bandwidths, signal-to-noise ratios and fading allowances in complete systems  | In force  |
| F.342-2 | 1970-07     | Automatic error-correcting system for telegraph signals transmitted over radio circuits   | Withdrawn |
| F.345   | 1963-07     | Telegraph distortion  | Withdrawn |
| F.347   | 1963-07     | Classification of multi-channel radiotelegraph systems for long-range circuits operating at frequencies below about 30 MHz and the designation of the channels in these systems | Withdrawn |
| F.348-4 | 1990-06     | Arrangement of channels in multi-channel single-sideband and<br>independent-sideband transmitters for long-range circuits operating at<br>frequencies below about 30 MHz        | In force  |
| F.349-5 | 1999-05     | Frequency stability required for systems operating in the HF fixed service to make the use of automatic frequency control superfluous   | Withdrawn |
| F.380-4 | 1986-07     | Interconnection at baseband frequencies of radio-relay systems for<br>telephony using frequency-division multiplex  | Withdrawr |

| F.381-2  | 1970-07 | Conditions relating to line regulating and other pilots and to limits for the residues of signals outside the baseband in the interconnection of radio-<br>relay and line systems for telephony | Withdrawn |
|----------|---------|---|-----------|
| F.382-8  | 2006-04 | Radio-frequency channel arrangements for fixed wireless systems operating in the 2 and 4 GHz bands  | In force  |
| F.383-8  | 2007-09 | Radio-frequency channel arrangements for high-capacity fixed wireless systems operating in the lower 6 GHz (5 925 to 6 425 MHz) band  | In force  |
| F.384-11 | 2012-03 | Radio-frequency channel arrangements for medium- and high- capacity digital fixed wireless systems operating in the the 6 425-7 125 MHz band  | In force  |
| F.385-10 | 2012-03 | Radio-frequency channel arrangements for fixed wireless systems operating in the 7 110-7 900 MHz band   | In force  |
| F.386-8  | 2007-09 | Radio-frequency channel arrangements for fixed wireless systems operating in the 8 GHz (7 725 to 8 500 MHz) band  | In force  |
| F.387-12 | 2012-03 | Radio-frequency channel arrangements for fixed wireless systems operating in the 10.7-11.7 GHz band   | In force  |
| F.388    | 1963-07 | Radio-frequency channel arrangements for trans-horizon radio-relay systems  | Withdrawn |
| F.389-2  | 1974-07 | Preferred characteristics of auxiliary radio-relay systems operating in the 2, 4, 6 or 11 GHz bands   | Withdrawn |
| F.390-4  | 1982-07 | Definitions of terms and references concerning hypothetical reference<br>circuits and hypothetical reference digital paths for radio-relay systems  | Withdrawn |
| F.391    | 1963-07 | Hypothetical reference circuit for radio-relay systems for telephony using frequency-division multiplex with a capacity of 12 to 60 telephone channels  | Withdrawn |
| F.392    | 1963-07 | Hypothetical reference circuit for radio-relay systems for telephony using frequency-division multiplex with a capacity of more than 60 telephone channels                                      | Withdrawn |
| F.393-4  | 1982-07 | Allowable noise power in the hypothetical reference circuit for radio-relay systems for telephony using frequency-division multiplex  | Withdrawn |
| F.395-2  | 1978-07 | Noise in the radio portion of circuits to be established over real radio-relay links for FDM telephony  | Withdrawn |
| F.396-1  | 1966-07 | Hypothetical reference circuit for trans-horizon radio-relay systems for telephony using frequency-division multiplex   | Withdrawn |
| F.397-3  | 1978-07 | Allowable noise power in the hypothetical reference circuit of trans-<br>horizon radio-relay systems for telephony using frequency-division<br>multiplex  | Withdrawn |
| F.398-3  | 1974-07 | Measurements of noise in actual traffic over radio-relay systems for<br>telephony using frequency-division multiplex  | Withdrawn |
| F.399-3  | 1978-07 | Measurement of noise using a continuous uniform spectrum signal on<br>frequency-division multiplex telephony radio-relay systems  | Withdrawn |
| F.400-2  | 1970-07 | Service channels to be provided for the operation and maintenance of radio-relay systems  | Withdrawn |
| F.401-2  | 1970-07 | Frequencies and deviations of continuity pilots for frequency modulation radio-relay systems for television and telephony   | Withdrawn |
| F.402-2  | 1978-07 | The preferred characteristics of a single sound channel simultaneously transmitted with a television signal on an analogue radio-relay system   | Withdrawn |
| F.403-3  | 1978-07 | Intermediate-frequency characteristics for the interconnection of analogue radio-relay systems  | Withdrawn |
|          |         |   |           |

| F.404-2  | 1970-07 | Frequency deviation for analogue radio-relay systems for telephony using frequency-division multiplex  | Withdrawn |
|----------|---------|--|-----------|
| F.405-1  | 1970-07 | Pre-emphasis characteristics for frequency modulation radio-relay systems for television   | Withdrawn |
| F.436-5  | 1999-05 | Arrangement of voice-frequency, frequency-shift telegraph channels over HF radio circuits  | Withdrawn |
| F.444-3  | 1982-07 | Preferred characteristics for multi-line switching arrangements of<br>analogue radio-relay systems   | Withdrawn |
| F.454-1  | 1978-07 | Pilot carrier level for HF single-sideband and independent-sideband reduced-carrier systems  | In force  |
| F.455-2  | 1992-03 | Improved transmission system for HF radiotelephone circuits  | Withdrawn |
| F.463-1  | 1978-07 | Limits for the residues of signals outside the baseband of radio-relay systems for television  | Withdrawn |
| F.480    | 1974-07 | Semi-automatic operation on HF radiotelephone circuits. Devices for remote connection to an automatic exchange by radiotelephone circuits  | Withdrawn |
| F.497-7  | 2007-09 | Radio-frequency channel arrangements for fixed wireless systems operating in the 13 GHz (12.75-13.25 GHz) frequency band   | In force  |
| F.518-1  | 1994-09 | Single-channel simplex ARQ telegraph system  | Withdrawn |
| F.519    | 1978-07 | Single-channel duplex ARQ telegraph system   | Withdrawn |
| F.520-2  | 1992-03 | Use of high frequency ionospheric channel simulators   | Withdrawn |
| F.555-1  | 1997-05 | Permissible noise in the hypothetical reference circuit of radio-relay systems for television  | Withdrawn |
| F.556-1  | 1986-07 | Hypothetical reference digital path for radio-relay systems which may form part of an integrated services digital network with a capacity above the second hierarchical level  | In force  |
| F.557-4  | 1997-09 | Availability objective for radio-relay systems over a hypothetical reference circuit and a hypothetical reference digital path   | In force  |
| F.592-4  | 2007-09 | Vocabulary of terms for the fixed service  | In force  |
| F.593    | 1982-07 | Noise in real circuits of multi-channel trans-horizon FM radio-relay systems of less than 2 500 km   | Withdrawn |
| F.594-4  | 1997-09 | Error performance objectives of the hypothetical reference digital path for radio-relay systems providing connections at a bit rate below the primary rate and forming part or all of the high grade portion of an integrated services digital network | In force  |
| F.595-10 | 2012-03 | Radio-frequency channel arrangements for fixed wireless systems operating in the 17.7-19.7 GHz frequency band  | In force  |
| F.596-1  | 1994-09 | Interconnection of digital radio-relay systems   | Withdrawn |
| F.612    | 1986-07 | Measurement of reciprocal mixing in HF communication receivers in the fixed service  | In force  |
| F.613    | 1986-07 | The use of ionospheric channel sounding systems operating in the fixed service at frequencies below about 30 MHz   | In force  |
| F.634-4  | 1997-09 | Error performance objectives for real digital radio-relay links forming part<br>of the high-grade portion of international digital connections at a bit rate<br>below the primary rate within an integrated services digital network                   | In force  |

| F.635-6  | 2001-05 | Radio-frequency channel arrangements based on a homogeneous pattern for fixed wireless systems operating in the 4 GHz band   | In force  |
|----------|---------|--|-----------|
| F.636-4  | 2012-03 | Radio-frequency channel arrangements for fixed wireless systems operating in the 14.4-15.35 GHz band   | In force  |
| F.637-4  | 2012-03 | Radio-frequency channel arrangements for fixed wireless systems operating in the 21.2-23.6 GHz band  | In force  |
| F.695    | 1990-06 | Availability objectives for real digital radio-relay links forming part of a<br>high-grade circuit within an integrated services digital network   | In force  |
| F.696-2  | 1997-09 | Error performance and availability objectives for hypothetical reference digital sections forming part or all of the medium-grade portion of an ISDN connection at a bit rate below the primary rate utilizing digital radio-relay systems | In force  |
| F.697-2  | 1997-09 | Error performance and availability objectives for the local-grade portion at each end of an ISDN connection at a bit rate below the primary rate utilizing digital radio-relay systems   | In force  |
| F.698-2  | 1994-09 | Preferred frequency bands for trans-horizon radio-relay systems  | In force  |
| F.699-7  | 2006-04 | Reference radiation patterns for fixed wireless system antennas for use in coordination studies and interference assessment in the frequency range from 100 MHz to about 70 GHz  | In force  |
| F.700-2  | 1994-09 | Error performance and availability measurement algorithm for digital radio-<br>relay links at the system bit-rate interface  | Withdrawn |
| F.701-2  | 1997-09 | Radio-frequency channel arrangements for digital point-to-multipoint radio systems operating in frequency bands in the range 1 350 to 2 690 MHz (1.5, 1.8, 2.0, 2.2, 2.4 and 2.6 GHz)  | In force  |
| F.745-1  | 2002-02 | Certain ITU-R Recommendations for analogue radio-relay systems, including those which have been deleted  | Withdrawn |
| F.746-10 | 2012-03 | Radio-frequency arrangements for fixed service systems   | In force  |
| F.747-1  | 2012-03 | Radio-frequency channel arrangements for fixed wireless system operating in the 10.0-10.68 GHz band  | In force  |
| F.748-4  | 2001-05 | Radio-frequency arrangements for systems of the fixed service operating in the 25, 26 and 28 GHz bands   | In force  |
| F.749-3  | 2012-03 | Radio-frequency arrangements for systems of the fixed service operating in sub-bands in the 36-40.5 GHz band   | In force  |
| F.750-4  | 2000-05 | Architectures and functional aspects of radio-relay systems for<br>synchronous digital hierarchy (SDH)-based network   | In force  |
| F.751-2  | 1997-09 | Transmission characteristics and performance requirements of radio-<br>relay systems for SDH-based networks  | In force  |
| F.752-2  | 2006-02 | Diversity techniques for point-to-point fixed wireless systems   | In force  |
| F.753    | 1992-03 | Preferred methods and characteristics for the supervision and protection of digital radio-relay systems  | Withdrawn |
| F.754    | 1992-03 | Radio-relay systems in bands 8 and 9 for the provision of telephone trunk connections in rural areas   | Withdrawn |
| F.755-2  | 1999-05 | Point-to-multipoint systems in the fixed service   | In force  |
| F.756    | 1992-03 | TDMA point-to-multipoint systems used as radio concentrators   | Withdrawn |

| F.757-4 2011-04 Basic system requirements and performance objectives for fixed wireless access using mobili-derived technologies offering telephony and data communication services In force   F.758-5 2012-03 System parameters and considerations in the development of criteria for an systems in other services and other sources of interference In force   F.759 1992-03 The use of frequencies in the band 500 to 3 000 MHz for radio-relay withows against interference from the broadcasting-statilite service in the bands near 20 GHz Withdrawn systems   F.760-1 1992-03 Frequency sharing between the fixed service and passive sensors in the band 500 to 3 000 MHz for radio-relay systems of HF Withdrawn receiving and transmitting stations   F.761 1992-03 Frequency sharing between the fixed service and passive sensors in the band 500 to 3 2005-01 Withdrawn receiving and transmitting stations   F.762-2 1995-10 Main characteristics of remote control and monitoring systems for HF Withdrawn receiving and transmitting stations   F.763-5 2005-01 Data transmission over HF circuits using phase shift keying or quadrature in force amplitude modulation In force   F.764-1 1994-09 Minimum requirements for HF radio systems using a packet transmission in force path In force   F.1092-2 2006-04 Effects of multipath propagation on the design and operation of line-of-ight digital f   |          |         |   |           |
|---|----------|---------|---|-----------|
| standsharing or compatibility between digital fixed wireless systems in the fixedF.7591992-03The use of frequencies in the band 500 to 3 000 MHz for radio-relayWithdrawnF.760-11994-09Protection of terrestrial line-of-sight radio-relay systems against<br>interference from the broadcasting-stellite service in the bands near<br>20 GHzIn forceF.7611992-03Frequency sharing between the fixed service and passive sensors in the<br>band 18.6 to 18.8 GHzWithdrawnF.762-21995-10Main characteristics of remote control and monitoring systems for HF<br>receiving and transmitting stationsWithdrawnF.763-52005-01Data transmission over HF circuits using phase shift keying or quadrature<br>amplitude modulationIn forceF.764-11994-09Minimum requirements for HF radio systems using a packet transmission<br>protocolIn forceF.1092-11997-09Error performance objectives for constant bit rate digital path at or above<br>the primary rate carried by digital radio-relay systems which may form<br>pathWithdrawn<br>the primary rate carried by digital radio-relay systems which may form<br>pathF.1093-22006-04Effects of multipath propagation on the design and operation of line-of-<br>sight digital fixed wireless systemsIn forceF.1095-11994-09A procedure for determining coordination area between radio-relay<br>systems to a count for terran scatteringIn forceF.1096-12017-04Meximum allowable error performance and availability degradations to<br>digital fixed wireless systemsIn forceF.1096-12007-09Maximum allowable error performance ind ava  | F.757-4  | 2011-04 | access using mobile-derived technologies offering telephony and data  | In force  |
| F. 760-1 1994-09 Protection of terrestrial line-of-sight radio-relay systems against interference from the broadcasting-satellite service in the bands near 20 GHz In force   F. 761 1992-03 Frequency sharing between the fixed service and passive sensors in the band snear 20 GHz Withdrawn band 18.6 to 18.8 GHz   F. 762-2 1995-10 Main characteristics of remote control and monitoring systems for HF Withdrawn receiving and transmitting stations   F. 763-5 2005-01 Data transmitsion over HF circuits using phase shift keying or quadrature in force amplitude modulation In force   F. 764-1 1994-09 Minimum requirements for HF radio systems using a packet transmission in force partition In force   F. 1092-1 1997-09 Error performance objectives for constant bit rate digital path at or above the primary rate carried by digital radio-relay systems which may form part of the international portion of a 27 500 km hypothethical reference path In force   F. 1093-2 2006-04 Effects of multipath propagation on the design and operation of line-of-sight digital fixed wireless systems arising from radio interference from emissions and radiations from other sources In force   F. 1095 1994-09 A procedure for determining coordination area between radio-relay In force   F. 1096-1 2011-04 Methods of calculating line-of-sight interference into fixed wireless systems and digital  | F.758-5  | 2012-03 | sharing or compatibility between digital fixed wireless systems in the fixed  | In force  |
| Interference from the broadcasting-satellite service in the bands near<br>20 GHz     F.761   1992-03   Frequency sharing between the fixed service and passive sensors in the<br>band 18.6 to 18.8 GHz   Withdrawn     F.762-2   1995-10   Main characteristics of remote control and monitoring systems for HF   Withdrawn<br>receiving and transmitting stations     F.763-5   2006-01   Data transmission over HF circuits using phase shift keying or quadrature<br>amplitude modulation   In force     F.764-1   1994-09   Minimum requirements for HF radio systems using a packet transmission<br>protocol   In force     F.1082-1   1997-09   Error performance objectives for constant bit rate digital path at or above<br>the primary rate carried by digital radio-relay systems which may form<br>part of the international portion of a 27 500 km hypothetical reference<br>path   In force     F.1093-2   2006-04   Effects of multipath propagation on the design and operation of line-of-<br>sight digital fixed wireless systems arising from radio interference from<br>emissions and radiabins from other sources   In force     F.1095   1994-09   A procedure for determining coordination area between radio-relay   In force     F.1096-1   2011-04   Methods of calculating line-of-sight interference into fixed wireless<br>systems to account for terrain scattering   In force     F.1097-1   2000-05   | F.759    | 1992-03 |   | Withdrawn |
| EndBand 18.6 to 18.8 GHzF.762-21995-10Main characteristics of remote control and monitoring systems for HFWithdrawn<br>receiving and transmitting stationsF.763-52005-01Data transmitsion over HF circuits using phase shift keying or quadrature<br>amplitude modulationIn forceF.764-11994-09Minimum requirements for HF radio systems using a packet transmission<br>protocolIn forceF.1092-11997-09Error performance objectives for constant bit rate digital path at or above<br>the primary rate carried by digital radio-relay systems which may form<br>part of the international portion of a 27 500 km hypothethical reference<br>pathWithdrawn<br>the primary rate carried by digital radio-relay systemsF.1093-22006-04Effects of multipath propagation on the design and operation of line-of-<br>sight digital fixed wireless systemsIn forceF.1094-22007-09Maximum allowable error performance and availability degradations to<br>digital fixed wireless systems arising from radio interference from<br>emissions and radiations from other sourcesIn forceF.10951994-09A procedure for determining coordination area between radio-relay<br>stations of the fixed serviceIn forceF.1097-12000-05Interference mitigation options to enhance compatibility between radar<br>systems and digital radio-relay systemsIn forceF.1098-11995-10Radio-frequency channel arrangements for high- and medium-capacity<br>digital fixed wireless systems in the upper 4 GHz (4 400-5 000 MHz) band<br>in the 55 GHz bandIn forceF.11011994-09Characteristics of digital fixed wireless systems operating<br>in the 55 G                               | F.760-1  | 1994-09 | interference from the broadcasting-satellite service in the bands near  | In force  |
| F.763-52005-01Data transmitting stationsF.763-52005-01Data transmission over HF circuits using phase shift keying or quadrature<br>amplitude modulationIn forceF.764-11994-09Minimum requirements for HF radio systems using a packet transmission<br>part of the international portion of a 27 500 km hypothethical reference<br>pathIn forceF.1092-11997-09Error performance objectives for constant bit rate digital path at or above<br>the primary rate carried by digital radio-relay systems which may form<br>part of the international portion of a 27 500 km hypothethical reference<br>pathWithdrawnF.1093-22006-04Effects of multipath propagation on the design and operation of line-of-<br>sight digital fixed wireless systems<br>arising from radio interference from<br>emissions and radiations from other sourcesIn forceF.1094-22007-09Maximum allowable error performance and availability degradations to<br>digital fixed wireless systems arising from radio interference from<br>emissions and radiations from other sourcesIn forceF.10951994-09A procedure for determing coordination area between radio-relay<br>systems to account for terrain scatteringIn forceF.1096-12011-04Methods of calculating line-of-sight interference into fixed wireless<br>systems and digital radio-relay systemsIn forceF.1098-11995-10Radio-frequency channel arrangements for fixed wireless systems in the<br>1 900-2 300 MHz bandIn forceF.1099-42007-09Radio-frequency channel arrangements for radio-relay systems operating<br>digital fixed wireless systems in the upper 4 GHz (4 400-5 000 MHz) bandIn forceF.                      | F.761    | 1992-03 |   | Withdrawn |
| F.764-11994-09Minimum requirements for HF radio systems using a packet transmission<br>protocolIn forceF.1092-11997-09Error performance objectives for constant bit rate digital path at or above<br>part of the international portion of a 27 500 km hypothethical reference<br>pathWithdrawnF.1093-22006-04Effects of multipath propagation on the design and operation of line-of-<br>sight digital fixed wireless systemsIn forceF.1094-22007-09Maximum allowable error performance and availability degradations to<br>digital fixed wireless systems arising from radio interference from<br>emissions and radiations from other sourcesIn forceF.10951994-09A procedure for determining coordination area between radio-relay<br>stations of the fixed serviceIn forceF.1096-12011-04Methods of calculating line-of-sight interference into fixed wireless<br>systems and digital radio-relay systemsIn forceF.1097-12000-05Interference mitigation options to enhance compatibility between radar<br>systems and digital radio-relay systemsIn forceF.1098-11995-10Radio-frequency channel arrangements for fixed wireless systems in the<br>1 900-2 300 MHz bandIn forceF.11001994-09Radio-frequency channel arrangements for high- and medium-capacity<br>digital fixed wireless systems operatingIn forceF.11011994-09Characteristics of digital fixed wireless systems operating<br>in the 55 GHz bandIn forceF.1102-22005-01Characteristics of fixed wireless systems operating in frequency bands<br>above about 17 GHzIn forceF.1102-12007-09Basi  | F.762-2  | 1995-10 |   | Withdrawn |
| F. 1092-11997-09Error performance objectives for constant bit rate digital path at or above<br>the primary rate carried by digital radio-relay systems which may form<br>pathWithdrawnF. 1093-22006-04Effects of multipath propagation on the design and operation of line-of-<br>sight digital fixed wireless systemsIn forceF. 1094-22007-09Maximum allowable error performance and availability degradations to<br>digital fixed wireless systems arising from radio interference from<br>emissions and radiations from other sourcesIn forceF. 10951994-09A procedure for determining coordination area between radio-relay<br>stations of the fixed serviceIn forceF. 1096-12011-04Methods of calculating line-of-sight interference into fixed wireless<br>systems to account for terrain scatteringIn forceF. 1097-12000-05Interference mitigation options to enhance compatibility between radar<br>systems and digital radio-relay systemsIn forceF. 1098-11995-10Radio-frequency channel arrangements for fixed wireless systems operating<br>digital fixed wireless systems in the upper 4 GHz (4 400-5 000 MHz) bandIn forceF. 11001994-09Characteristics of digital fixed wireless systems operating<br>in the 55 GHz bandIn forceF. 1102-22005-01Characteristics of fixed wireless systems operating in frequency bands<br>above about 17 GHzIn forceF. 1103-12007-09Basic requirements and technologies for fixed wireless systemsIn forceF. 1103-12007-09Radio-frequency channel arrangements for radio-relay systems operating<br>in the 55 GHz bandIn forceF. 110   | F.763-5  | 2005-01 |   | In force  |
| the primary rate carried by digital radio-relay systems which may form<br>part of the international portion of a 27 500 km hypothethical reference<br>pathF.1093-22006-04Effects of multipath propagation on the design and operation of line-of-<br>sight digital fixed wireless systemsIn forceF.1094-22007-09Maximum allowable error performance and availability degradations to<br>digital fixed wireless systems arising from radio interference from<br>emissions and radiations from other sourcesIn forceF.10951994-09A procedure for determining coordination area between radio-relay<br>stations of the fixed serviceIn forceF.1096-12011-04Methods of calculating line-of-sight interference into fixed wireless<br>systems and digital radio-relay systemsIn forceF.1097-12000-05Interference mitigation options to enhance compatibility between radar<br>systems and digital radio-relay systemsIn forceF.1098-11995-10Radio-frequency channel arrangements for fixed wireless systems in the<br>upper digital fixed wireless systems in the upper 4 GHz (4 400-5 000 MHz) bandIn forceF.11001994-09Radio-frequency channel arrangements for radio-relay systems operating<br>withdrawn<br>in the 55 GHz bandIn forceF.11011994-09Characteristics of digital fixed wireless systems below about 17 GHzIn forceF.1103-12007-09Basic requirements and technologies for fixed wireless access systems<br>above about 17 GHzIn forceF.1103-12007-09Basic requirements and technologies for fixed wireless access systems<br>above about 17 GHzIn forceF.1103-12007-09 <t< td=""><td>F.764-1</td><td>1994-09</td><td></td><td>In force</td></t<> | F.764-1  | 1994-09 |   | In force  |
| sight digital fixed wireless systemsF.1094-22007-09Maximum allowable error performance and availability degradations to<br>digital fixed wireless systems arising from radio interference from<br>emissions and radiations from other sourcesIn forceF.10951994-09A procedure for determining coordination area between radio-relay<br>stations of the fixed serviceIn forceF.1096-12011-04Methods of calculating line-of-sight interference into fixed wireless<br>systems to account for terrain scatteringIn forceF.1097-12000-05Interference mitigation options to enhance compatibility between radar<br>systems and digital radio-relay systemsIn forceF.1098-11995-10Radio-frequency channel arrangements for fixed wireless systems in the<br>1 900-2 300 MHz bandIn forceF.1099-42007-09Radio-frequency channel arrangements for radio-relay systems operating<br>digital fixed wireless systems in the upper 4 GHz (4 400-5 000 MHz) bandIn forceF.11001994-09Radio-frequency channel arrangements for radio-relay systems operating<br>digital fixed wireless systems operating in the 55 GHz bandIn forceF.11011994-09Characteristics of digital fixed wireless systems below about 17 GHzIn forceF.1102-22005-01Characteristics of fixed wireless systems operating in frequency bands<br>above about 17 GHzIn forceF.1103-12007-09Basic requirements and technologies for fixed wireless subscriber<br>operating in bands below 3 GHz for the provision of wireless subscriber<br>connections in rural areasIn force  | F.1092-1 | 1997-09 | the primary rate carried by digital radio-relay systems which may form part of the international portion of a 27 500 km hypothethical reference | Withdrawn |
| digital fixed wireless systems arising from radio interference from<br>emissions and radiations from other sourcesF.10951994-09A procedure for determining coordination area between radio-relay<br>stations of the fixed serviceIn forceF.1096-12011-04Methods of calculating line-of-sight interference into fixed wireless<br>systems to account for terrain scatteringIn forceF.1097-12000-05Interference mitigation options to enhance compatibility between radar<br>systems and digital radio-relay systemsIn forceF.1098-11995-10Radio-frequency channel arrangements for fixed wireless systems in the<br>1 900-2 300 MHz bandIn forceF.1099-42007-09Radio-frequency channel arrangements for high- and medium-capacity<br>digital fixed wireless systems in the upper 4 GHz (4 400-5 000 MHz) bandIn forceF.11001994-09Radio-frequency channel arrangements for radio-relay systems operating<br>in the 55 GHz bandWithdrawnF.11011994-09Characteristics of digital fixed wireless systems operating in frequency bands<br>above about 17 GHzIn forceF.1102-22005-01Characteristics of fixed wireless systems operating in frequency bands<br>above about 17 GHzIn forceF.1103-12007-09Basic requirements and technologies for fixed wireless access systems<br>operating in bands below 3 GHz for the provision of wireless subscriber<br>connections in rural areasIn force   | F.1093-2 | 2006-04 |   | In force  |
| F.1096-12011-04Methods of calculating line-of-sight interference into fixed wireless<br>systems to account for terrain scatteringIn forceF.1097-12000-05Interference mitigation options to enhance compatibility between radar<br>systems and digital radio-relay systemsIn forceF.1098-11995-10Radio-frequency channel arrangements for fixed wireless systems in the<br>1 900-2 300 MHz bandIn forceF.1099-42007-09Radio-frequency channel arrangements for high- and medium-capacity<br>digital fixed wireless systems in the upper 4 GHz (4 400-5 000 MHz) bandIn forceF.11001994-09Radio-frequency channel arrangements for radio-relay systems operating<br>in the 55 GHz bandWithdrawnF.11011994-09Characteristics of digital fixed wireless systems operating in the coIn forceF.1102-22005-01Characteristics of fixed wireless systems operating in frequency bands<br>above about 17 GHzIn forceF.1103-12007-09Basic requirements and technologies for fixed wireless subscriber<br>connections in rural areasIn forceF.11041994-09Requirements for point-to-multipoint radio systems used in the localWithdrawn  | F.1094-2 | 2007-09 | digital fixed wireless systems arising from radio interference from   | In force  |
| systems to account for terrain scatteringF.1097-12000-05Interference mitigation options to enhance compatibility between radar<br>systems and digital radio-relay systemsIn forceF.1098-11995-10Radio-frequency channel arrangements for fixed wireless systems in the<br>1 900-2 300 MHz bandIn forceF.1099-42007-09Radio-frequency channel arrangements for high- and medium-capacity<br>digital fixed wireless systems in the upper 4 GHz (4 400-5 000 MHz) bandIn forceF.11001994-09Radio-frequency channel arrangements for radio-relay systems operating<br>in the 55 GHz bandWithdrawnF.11011994-09Characteristics of digital fixed wireless systems below about 17 GHzIn forceF.1102-22005-01Characteristics of fixed wireless systems operating in frequency bands<br>above about 17 GHzIn forceF.1103-12007-09Basic requirements and technologies for fixed wireless subscriber<br>connections in rural areasIn forceF.11041994-09Requirements for point-to-multipoint radio systems used in the localWithdrawn   | F.1095   | 1994-09 |   | In force  |
| systems and digital radio-relay systemsF.1098-11995-10Radio-frequency channel arrangements for fixed wireless systems in the<br>1 900-2 300 MHz bandIn forceF.1099-42007-09Radio-frequency channel arrangements for high- and medium-capacity<br>digital fixed wireless systems in the upper 4 GHz (4 400-5 000 MHz) bandIn forceF.11001994-09Radio-frequency channel arrangements for radio-relay systems operating<br>in the 55 GHz bandWithdrawnF.11011994-09Characteristics of digital fixed wireless systems below about 17 GHzIn forceF.1102-22005-01Characteristics of fixed wireless systems operating in frequency bands<br>above about 17 GHzIn forceF.1103-12007-09Basic requirements and technologies for fixed wireless subscriber<br>connections in rural areasIn forceF.11041994-09Requirements for point-to-multipoint radio systems used in the localWithdrawn   | F.1096-1 | 2011-04 |   | In force  |
| F.1099-42007-09Radio-frequency channel arrangements for high- and medium-capacity<br>digital fixed wireless systems in the upper 4 GHz (4 400-5 000 MHz) bandIn forceF.11001994-09Radio-frequency channel arrangements for radio-relay systems operating<br>in the 55 GHz bandWithdrawnF.11011994-09Characteristics of digital fixed wireless systems below about 17 GHzIn forceF.1102-22005-01Characteristics of fixed wireless systems operating in frequency bands<br>above about 17 GHzIn forceF.1103-12007-09Basic requirements and technologies for fixed wireless subscriber<br>connections in rural areasIn forceF.11041994-09Requirements for point-to-multipoint radio systems used in the localWithdrawn   | F.1097-1 | 2000-05 |   | In force  |
| digital fixed wireless systems in the upper 4 GHz (4 400-5 000 MHz) bandF.11001994-09Radio-frequency channel arrangements for radio-relay systems operating<br>in the 55 GHz bandWithdrawnF.11011994-09Characteristics of digital fixed wireless systems below about 17 GHzIn forceF.1102-22005-01Characteristics of fixed wireless systems operating in frequency bands<br>above about 17 GHzIn forceF.1103-12007-09Basic requirements and technologies for fixed wireless subscriber<br>connections in rural areasIn forceF.11041994-09Requirements for point-to-multipoint radio systems used in the localWithdrawn  | F.1098-1 | 1995-10 |   | In force  |
| in the 55 GHz bandF.11011994-09Characteristics of digital fixed wireless systems below about 17 GHzIn forceF.1102-22005-01Characteristics of fixed wireless systems operating in frequency bands<br>above about 17 GHzIn forceF.1103-12007-09Basic requirements and technologies for fixed wireless access systems<br>operating in bands below 3 GHz for the provision of wireless subscriber<br>connections in rural areasIn forceF.11041994-09Requirements for point-to-multipoint radio systems used in the localWithdrawn   | F.1099-4 | 2007-09 |   | In force  |
| F.1102-22005-01Characteristics of fixed wireless systems operating in frequency bands<br>above about 17 GHzIn forceF.1103-12007-09Basic requirements and technologies for fixed wireless access systems<br>operating in bands below 3 GHz for the provision of wireless subscriber<br>connections in rural areasIn forceF.11041994-09Requirements for point-to-multipoint radio systems used in the localWithdrawn  | F.1100   | 1994-09 |   | Withdrawn |
| above about 17 GHzF.1103-12007-09Basic requirements and technologies for fixed wireless access systems<br>operating in bands below 3 GHz for the provision of wireless subscriber<br>connections in rural areasIn forceF.11041994-09Requirements for point-to-multipoint radio systems used in the localWithdrawn   | F.1101   | 1994-09 | Characteristics of digital fixed wireless systems below about 17 GHz  | In force  |
| operating in bands below 3 GHz for the provision of wireless subscriber<br>connections in rural areasF.11041994-09Requirements for point-to-multipoint radio systems used in the localWithdrawn   | F.1102-2 | 2005-01 |   | In force  |
|   | F.1103-1 | 2007-09 | operating in bands below 3 GHz for the provision of wireless subscriber   | In force  |
|   | F.1104   | 1994-09 |   | Withdrawn |

| F.1105-2 | 2006-02 | Fixed wireless systems for disaster mitigation and relief operations   | In force  |
|----------|---------|--|-----------|
| F.1106   | 1994-09 | Effects of propagation on the design and operation of trans-horizon radio-<br>relay systems  | In force  |
| F.1107-2 | 2011-05 | Probabilistic analysis for assessing interference into the fixed service from satellites using the geostationary orbit   | In force  |
| F.1108-4 | 2005-01 | Determination of the criteria to protect fixed service receivers from the emissions of space stations operating in non-geostationary orbits in shared frequency bands  | In force  |
| F.1109   | 1994-09 | ITU-Recommendations relating to systems in the fixed service operating at frequencies below about 30 MHz which are not reprinted   | Withdrawn |
| F.1110-3 | 2003-02 | Adaptive radio systems for frequencies below about 30 MHz  | In force  |
| F.1111-1 | 1995-10 | Improved Lincompex system for HF radiotelephone circuits   | In force  |
| F.1112-1 | 1995-10 | Digitized speech transmissions for systems operating below about 30 MHz  | In force  |
| F.1113   | 1994-09 | Radio systems employing meteor-burst propagation   | In force  |
| F.1189-1 | 1997-09 | Error performance objectives for constant bit rate digital paths at or above<br>the primary rate carried by digital radio-relay systems which may form<br>part or all of the national portion of a 27 500 km hypothetical reference<br>path  | Withdrawn |
| F.1190   | 1995-10 | Protection criteria for digital radio-relay systems to ensure compatibility with radar systems in the radiodetermination service   | In force  |
| F.1191-3 | 2011-05 | Necessary and occupied bandwidths and unwanted emissions of digital fixed service systems  | In force  |
| F.1192   | 1995-10 | Traffic capacity of automatically controlled radio systems and networks in the HF fixed service  | In force  |
| F.1241   | 1997-05 | Performance degradation due to interference from other services sharing<br>the same frequency bands on a primary basis with digital radio-relay<br>systems operating at or above the primary rate and which may form part<br>of the international portion of a 27 500 km hypothetical reference path | Withdrawn |
| F.1242   | 1997-05 | Radio-frequency channel arrangements for digital radio systems operating in the range 1 350 MHz to 1 530 MHz   | In force  |
| F.1243   | 1997-05 | Radio-frequency channel arrangements for digital radio systems operating in the range 2 290-2 670 MHz  | In force  |
| F.1244   | 1997-05 | Radio local area networks (RLANs)  | Withdrawn |
| F.1245-2 | 2012-03 | Mathematical model of average and related radiation patterns for line-of-<br>sight point-to-point fixed wireless system antennas for use in certain<br>coordination studies and interference assessment in the frequency range<br>from 1 GHz to about 70 GHz   | In force  |
| F.1246   | 1997-05 | Reference bandwidth of receiving stations in the fixed service to be used in coordination of frequency assignments with transmitting space stations in the mobile-satellite service in the 1-3 GHz range   | In force  |
| F.1247-2 | 2009-06 | Technical and operational characteristics of systems in the fixed service to facilitate sharing with the space research, space operation and Earth exploration-satellite services operating in the bands 2 025-2 110 MHz and 2 200-2 290 MHz   | In force  |
| F.1248   | 1997-05 | Limiting interference to satellites in the space science services from the emissions of trans-horizon radio-relay systems in the bands 2 025-2 110 MHz and 2 200-2 290 MHz   | In force  |

| F.1249-2 | 2009-10 | Technical and operational requirements that facilitate sharing between point to point systems in the fixed service and the inter-satellite service in the band 25.25-27.5 GHz   | In force  |
|----------|---------|---|-----------|
| F.1330-2 | 2006-04 | Performance limits for bringing into service the parts of international<br>plesiochronous digital hierarchy and synchronous digital hierarchy paths<br>and sections implemented by digital fixed wireless systems   | In force  |
| F.1331   | 1997-09 | Performance degradation due to interference from other services sharing<br>the same frequency bands on a primary basis with analogue radio-relay<br>systems for television  | Withdrawn |
| F.1332-1 | 1999-05 | Radio-frequency signal transport through optical fibres   | In force  |
| F.1333-1 | 1999-05 | Estimation of the actual elevation angle from a station in the fixed service towards a space station taking into account atmospheric refraction   | In force  |
| F.1334   | 1997-09 | Protection criteria for systems in the fixed service sharing the same frequency bands in the 1 to 3 GHz range with the land mobile service  | In force  |
| F.1335   | 1997-09 | Technical and operational considerations in the phased transitional approach for bands shared between the mobile-satellite service and the fixed service at 2 GHz   | In force  |
| F.1336-3 | 2012-03 | Reference radiation patterns of omnidirectional, sectoral and other antennas in point-to multipoint systems for use in sharing studies in the frequency range from 1 GHz to about 70 GHz  | In force  |
| F.1337   | 1997-09 | Frequency management of adaptive HF radio systems and networks using FMCW oblique-incidence sounding  | In force  |
| F.1338   | 1997-10 | Threshold levels to determine the need to coordinate between particular systems in the broadcasting-satellite service (sound) in the geostationary-satellite orbit for space-to-Earth transmissions and the fixed service in the band 1 452-1 492 MHz   | In force  |
| F.1397-2 | 2002-05 | Error performance objectives for real digital radio links used in the international portion of a 27 500 km hypothetical reference path at or above the primary rate   | Withdrawn |
| F.1398   | 1999-05 | Performance degradation due to interference from other services sharing<br>the same frequency bands on a primary basis with digital radio-relay<br>systems operating at or above the primary rate and which may form part<br>of the national portion of a 27 500 km hypothetical reference path | Withdrawn |
| F.1399-1 | 2001-05 | Vocabulary of terms for wireless access   | In force  |
| F.1400   | 1999-05 | Performance and availability requirements and objectives for fixed<br>wireless access to public switched telephone network  | In force  |
| F.1401-1 | 2004-01 | Considerations for the identification of possible frequency bands for fixed wireless access and related sharing studies   | In force  |
| F.1402   | 1999-05 | Frequency sharing criteria between a land mobile wireless access system<br>and a fixed wireless access system using the same equipment type as<br>the mobile wireless access system   | In force  |
| F.1403   | 1999-05 | Power flux-density criteria in ITU-R Recommendations for protection of<br>systems in the fixed service in frequency bands shared with space<br>stations of various space services   | In force  |
| F.1404-1 | 2002-05 | Minimum propagation attenuation due to atmospheric gases for use in frequency sharing studies between systems in the fixed service and systems in the broadcasting-satellite, mobile-satellite and space science services   | In force  |

| F.1405   | 1999-05 | Guidance to facilitate coordination and use of frequency bands shared between the fixed service and mobile-satellite service in the frequency range 1-3 GHz  | Withdrawn |
|----------|---------|--|-----------|
| F.1487   | 2000-05 | Testing of HF modems with bandwidths of up to about 12 kHz using ionospheric channel simulators  | In force  |
| F.1488   | 2000-05 | Frequency block arrangements for fixed wireless access systems in the range 3 400-3 800 MHz  | In force  |
| F.1489   | 2000-05 | A methodology for assessing the level of operational compatibility between fixed wireless access and radiolocation systems when sharing the band 3.4-3.7 GHz   | In force  |
| F.1490-1 | 2007-09 | Generic requirements for fixed wireless access systems   | In force  |
| F.1491-2 | 2002-05 | Error performance objectives for real digital radio links used in the national portion of a 27 500 km hypothetical reference path at or above the primary rate   | Withdrawn |
| F.1492   | 2000-05 | Availability objectives for real digital radio-relay links forming part of international portion constant bit rate digital path at or above the primary rate   | Withdrawn |
| F.1493   | 2000-05 | Availability objectives for real digital radio-relay links forming part of national portion constant bit rate digital path at or above the primary rate  | Withdrawn |
| F.1494   | 2000-05 | Interference criteria to protect the fixed service from time varying aggregate interference from other services sharing the 10.7-12.75 GHz band on a co-primary basis  | In force  |
| F.1495-2 | 2012-03 | Interference criteria to protect the fixed service from time varying aggregate interference from other radiocommunication services sharing the 17.7-19.3 GHz band on a co-primary basis                                  | In force  |
| F.1496-1 | 2002-02 | Radio-frequency channel arrangements for fixed wireless systems operating in the band 51.4-52.6 GHz  | In force  |
| F.1497-1 | 2002-02 | Radio-frequency channel arrangements for fixed wireless systems operating in the band 55.78-59 GHz   | In force  |
| F.1498-1 | 2002-05 | Deployment characteristics of fixed service systems in the band 37-40 GHz for use in sharing studies   | In force  |
| F.1499   | 2000-05 | Radio transmission systems for fixed broadband wireless access based on cable modem standard   | In force  |
| F.1500   | 2000-05 | Preferred characteristics of systems in the fixed service using high altitude platforms operating in the bands 47.2-47.5 GHz and 47.9-48.2 GHz   | In force  |
| F.1501   | 2000-05 | Coordination distance for systems in the fixed service (FS) involving high-<br>altitude platform stations (HAPSS) sharing the frequency bands 47.2-47.5<br>GHz and 47.9-48.2 GHz with other systems in the fixed service | In force  |
| F.1502   | 2000-05 | Protection of the fixed service in the frequency band 8 025-8 400 MHz sharing with geostationary-satellite systems of the Earth exploration-satellite service (space-to-Earth)   | In force  |
| F.1509-1 | 2009-10 | Technical and operational requirements that facilitate sharing between point to multipoint systems in the fixed service and the inter-satellite service in the band 25.25-27.5 GHz                                       | In force  |
| F.1518   | 2001-05 | Spectrum requirement methodology for fixed wireless access and mobile wireless access networks using the same type of equipment, when coexisting in the same frequency band  | In force  |

| F.1519   | 2001-05 | Guidance on frequency arrangements based on frequency blocks for systems in the fixed service  | In force |
|----------|---------|--|----------|
| F.1520-3 | 2011-04 | Radio-frequency arrangements for systems in the fixed service operating in the band 31.8-33.4 GHz  | In force |
| F.1565   | 2002-05 | Performance degradation due to interference from other services sharing<br>the same frequency bands on a co-primary basis with real digital fixed<br>wireless systems used in the international and national portions of a 27<br>500 km hypothetical reference path at or above the primary rate | In force |
| F.1566-1 | 2007-01 | Performance limits for maintenance of digital fixed wireless systems operating in plesiochronous and synchronous digital hierarchy-based international paths and sections  | In force |
| F.1567   | 2002-05 | Radio-frequency channel arrangement for digital fixed wireless systems operating in the frequency band 406.1-450 MHz   | In force |
| F.1568-1 | 2005-01 | Radio-frequency block arrangements for fixed wireless access systems in the range 10.15-10.3/10.5-10.65 GHz  | In force |
| F.1569   | 2002-05 | Technical and operational characteristics for the fixed service using high altitude platform stations in the bands 27.5-28.35 GHz and 31-31.3 GHz  | In force |
| F.1570-2 | 2010-04 | Impact of uplink transmission in the fixed service using high altitude platform stations on the Earth exploration-satellite service (passive) in the 31.3-31.8 GHz band  | In force |
| F.1571   | 2002-05 | Mitigation techniques for use in reducing the potential for interference between airborne stations in the radionavigation service and stations in the fixed service in the band 31.8-33.4 GHz  | In force |
| F.1605   | 2003-02 | Error performance and availability estimation for synchronous digital<br>hierarchy terrestrial fixed wireless systems  | In force |
| F.1606   | 2003-02 | Interference criteria to protect fixed wireless systems from time varying aggregate interference produced by non-geostationary satellites operating in other services sharing the 37-40 GHz and 40.5-42.5 GHz bands on a co-primary basis  | In force |
| F.1607   | 2003-02 | Interference mitigation techniques for use by high altitude platform stations in the 27.5-28.35 GHz and 31.0-31.3 GHz bands  | In force |
| F.1608   | 2003-02 | Frequency sharing between systems in the fixed service using high altitude platform stations and conventional systems in the fixed service in the bands 47.2-47.5 and 47.9-48.2 GHz  | In force |
| F.1609-1 | 2006-04 | Interference evaluation from fixed service systems using high altitude platform stations to conventional fixed service systems in the bands 27.5-28.35 GHz and 31-31.3 GHz   | In force |
| F.1610   | 2003-02 | Planning, design and implementation of HF fixed service radio systems  | In force |
| F.1611   | 2003-02 | Prediction methods for adaptive HF system planning and operation   | In force |
| F.1612   | 2003-02 | Interference evaluation of the fixed service using high altitude platform stations to protect the radio astronomy service from uplink transmission in high altitude platform station systems in the 31.3-31.8 GHz band   | In force |
| F.1613   | 2003-02 | Operational and deployment requirements for fixed wireless access<br>systems in the fixed service in Region 3 to ensure the protection of<br>systems in the Earth exploration-satellite service(active) and the space<br>research service (active) in the band 5 250-5 350 MHz                   | In force |
| F.1668-1 | 2007-01 | Error performance objectives for real digital fixed wireless links used in 27 500 km hypothetical reference paths and connections  | In force |

| F.1669-1 | 2007-09 | Interference criteria of fixed wireless systems operating in the 37-40 GHz and 40.5-42.5 GHz bands with respect to satellites in the geostationary orbit   | In force |
|----------|---------|--|----------|
| F.1670-1 | 2006-02 | Protection of fixed wireless systems from terrestrial digital video and sound broadcasting systems in shared VHF and UHF bands   | In force |
| F.1671   | 2004-01 | Guidelines for a process to address the deployment of area-licensed fixed wireless systems operating in neighbouring countries   | In force |
| F.1703   | 2005-01 | Availability objectives for real digital fixed wireless links used in 27 500 km hypothetical reference paths and connections   | In force |
| F.1704   | 2005-01 | Characteristics of multipoint-to-multipoint fixed wireless systems with mesh network topology operating in frequency bands above about 17 GHz  | In force |
| F.1705   | 2005-01 | Analysis and optimization of the error performance of digital fixed wireless systems for the purpose of bringing into service and maintenance  | In force |
| F.1706   | 2005-01 | Protection criteria for point-to-point fixed wireless systems sharing the same frequency band with nomadic wireless access systems in the 4 to 6 GHz range   | In force |
| F.1760   | 2006-02 | Methodology for the calculation of aggregate equivalent isotropically radiated power (a.e.i.r.p.) distribution from point-to-multipoint high-density applications in the fixed service operating in bands above 30 GHz identified for such use   | In force |
| F.1761   | 2006-02 | Characteristics of HF fixed radiocommunication systems   | In force |
| F.1762   | 2006-02 | Characteristics of enhanced applications for high frequency (HF) radiocommunication systems  | In force |
| F.1763   | 2006-04 | Radio interface standards for broadband wireless access systems in the fixed service operating below 66 GHz  | In force |
| F.1764-1 | 2011-05 | Methodology to evaluate interference from user links in fixed service systems using high altitude platform stations to fixed wireless systems in the bands above 3 GHz   | In force |
| F.1765   | 2006-04 | Methodology for determining the aggregate equivalent isotropically radiated power from point-to-point high-density applications in the fixed service operating in bands above 30 GHz   | In force |
| F.1766   | 2006-04 | Methodology to determine the probability of a radio astronomy<br>observatory receiving interference based on calculated exclusion zones<br>to protect against interference from point-to-multipoint high-density<br>applications in the fixed service operating in bands around 43 GHz | In force |
| F.1777   | 2007-01 | System characteristics of television outside broadcast, electronic news gathering and electronic field production in the fixed service for use in sharing studies  | In force |
| F.1778   | 2007-01 | Channel access requirements for HF adaptive systems in the fixed service   | In force |
| F.1819   | 2007-09 | Protection of the radio astronomy service in the 48.94-49.04 GHz band from unwanted emissions from HAPS in the 47.2-47.5 GHz and 47.9-48.2 GHz bandss  | In force |
| F.1820   | 2007-09 | Power flux-density at international borders for high altitude platform stations providing fixed wireless access services to protect the fixed service in neighbouring countries in the 47.2-47.5 GHz and 47.9-48.2 GHz bands   | In force |
| F.1821   | 2007-09 | Characteristics of advanced digital high frequency (HF) radiocommunication systems   | In force |

| F.1891 | 2011-05 | Technical and operational characteristics of gateway links in the fixed service using high altitude platform stations in the band 5 850-7 075 MHz to be used in sharing studies                 | In force |
|--------|---------|---|----------|
| F.2004 | 2012-03 | Radio-frequency channel arrangements for fixed service systems operating in the 92-95 GHz range   | In force |
| F.2005 | 2012-03 | Radio-frequency channel and block arrangements for fixed wireless systems operating in the 42 GHz (40.5 to 43.5 GHz) band   | In force |
| F.2006 | 2012-03 | Radio-frequency channel and block arrangements for fixed wireless systems operating in the 71-76 and 81-86 GHz bands  | In force |
| F.2011 | 2012-01 | Evaluation of interference from high-altitude platform (HAPS) gateway links (HAPS-to-ground direction) in the fixed service to conventional fixed wireless systems in the range 5 850-7 075 MHz | In force |

Recommendations count: 211

#### Series M : Mobile, radiodetermination, amateur and related satellite services

| Number   | Approval Da | te Recommendation Title  | Status    |
|----------|-------------|--|-----------|
| M.218-2  | 1990-06     | Prevention of interference to radio reception on board ships   | Withdrawn |
| M.219-1  | 1966-07     | Alarm signal for use on the maritime radiotelephony distress frequency of 2 182 kHz  | Withdrawn |
| M.257-3  | 1995-10     | Sequential Single Frequency selective-calling system for use in the maritime mobile service  | Withdrawn |
| M.428-3  | 1990-06     | Direction-finding and/or homing in the 2 MHz band on board ships   | Withdrawn |
| M.441-1  | 1982-07     | Signal-to-interference ratios and minimum field strengths required in the aeronautical mobile (R) service above 30 MHz   | In force  |
| M.476-5  | 1995-10     | Direct-printing telegraph equipment in the maritime mobile service   | In force  |
| M.478-5  | 1995-10     | Technical characteristics of equipment and principles governing the allocation of frequency channels between 25 and 3 000 MHz for the FM land mobile service                                   | In force  |
| M.488-1  | 1990-06     | Equivalent powers of double-sideband and single-sideband radiotelephone emissions in the maritime mobile service   | Withdrawn |
| M.489-2  | 1995-10     | Technical characteristics of VHF radiotelephone equipment operating in the maritime mobile service in channels spaced by 25 kHz  | In force  |
| M.490    | 1974-07     | The introduction of direct-printing telegraph equipment in the maritime mobile service. Equivalence of terms   | Withdrawn |
| M.491-1  | 1986-07     | Translation between an identity number and identities for direct-printing telegraphy in the maritime mobile service  | Withdrawn |
| M.492-6  | 1995-10     | Operational procedures for the use of direct-printing telegraph equipment in the maritime mobile service   | In force  |
| M.493-13 | 2009-10     | Digital selective-calling system for use in the maritime mobile service  | In force  |
| M.494    | 1974-07     | Technical characteristics of single-sideband equipment in the MF and HF land mobile radiotelephone service   | Withdrawn |
| M.496-3  | 1992-03     | Limits of power flux-density of radionavigation transmitters to protect space station receivers in the fixed-satellite service in the 14 GHz band  | In force  |
| M.539-3  | 1994-09     | Technical and operational characteristics of international radio-paging systems  | Withdrawn |
| M.540-2  | 1990-06     | Operational and technical characteristics for an automated direct-printing<br>telegraph system for promulgation of navigational and meteorological<br>warnings and urgent information to ships | In force  |
| M.541-9  | 2004-05     | Operational procedures for the use of digital selective-calling equipment<br>in the maritime mobile service  | In force  |
| M.542-1  | 1982-07     | On-board communications by means of portable radiotelephone equipment  | Withdrawn |
| M.546-2  | 1990-06     | Hypothetical telephone reference circuit in the aeronautical, land and maritime mobile-satellite services  | Withdrawn |
| M.547    | 1978-07     | Noise objectives in the hypothetical reference circuit for systems in the maritime mobile-satellite service  | Withdrawn |

| M.548   | 1978-07 | Overall transmission characteristics of telephone circuits in the maritime mobile-satellite service  | Withdrawn |
|---------|---------|--|-----------|
| M.549-1 | 1982-07 | Side tone reference equivalent of handset used on board a ship in the maritime mobile-satellite service and in automated VHF/UHF maritime mobile radiotelephone systems        | Withdrawn |
| M.550-1 | 1986-07 | Use of echo suppressors in the maritime mobile-satellite service   | Withdrawn |
| M.552   | 1978-07 | Quality objectives for 50-baud start-stop telegraph transmission in the maritime mobile-satellite service  | Withdrawn |
| M.553   | 1978-07 | Interface requirements for 50-baud start-stop telegraph transmission in the maritime mobile-satellite service  | Withdrawn |
| M.584-2 | 1997-11 | Codes and formats for radio paging   | In force  |
| M.585-6 | 2012-01 | Assignment and use of identities in the maritime mobile service  | In force  |
| M.586-1 | 1986-07 | Automated VHF/UHF maritime mobile telephone system   | In force  |
| M.587-1 | 1986-07 | Coast station identities and initiation of location registration in an<br>automated VHF/UHF maritime mobile telephone system   | In force  |
| M.588   | 1982-07 | Characteristics of maritime radio beacons (Region 1)   | Withdrawn |
| M.589-3 | 2001-08 | Technical characteristics of methods of data transmission and interference protection for radionavigation services in the frequency bands between 70 and 130 kHz               | In force  |
| M.622   | 1986-07 | Technical and operational characteristics of analogue cellular systems for public land mobile telephone use  | Withdrawn |
| M.623   | 1986-07 | Data transmission bit rates and modulation techniques in the land mobile service   | Withdrawn |
| M.624   | 1986-07 | Public land mobile communication systems location registration   | Withdrawn |
| M.625-4 | 2012-03 | Direct-printing telegraph equipment employing automatic identification in the maritime mobile service  | In force  |
| M.626   | 1986-07 | Evaluation of the quality of digital channels in the maritime mobile service   | In force  |
| M.627-1 | 1995-10 | Technical characteristics for HF maritime radio equipment using narrow-<br>band phase-shift keying (NBPSK) telegraphy  | In force  |
| M.628-5 | 2012-03 | Technical characteristics for search and rescue radar transponders   | In force  |
| M.629   | 1986-07 | Use of the radionavigation service of the frequency bands 2 900-3 100 MHz, 5 470-5 650 MHz, 9 200-9 300 MHz, 9 300-9 500 MHz and 9 500-9 800 MHz                               | In force  |
| M.630   | 1986-07 | Main characteristics of two frequency shipborne interrogator transponders (SIT)  | Withdrawn |
| M.631-1 | 1992-03 | Use of hyperbolic maritime radionavigation systems in the band 283.5-315 kHz   | Withdrawn |
| M.632-3 | 1997-02 | Transmission characteristics of a satellite emergency position-indicating radio beacon (satellite EPIRB) system operating through geostationary satellites in the 1.6 GHz band | In force  |
| M.633-4 | 2010-12 | Transmission characteristics of a satellite emergency position-indicating radio beacon (satellite EPIRB) system operating through a satellite system in the 406 MHz band       | In force  |
| M.687-2 | 1997-02 | International Mobile Telecommunications-2000 (IMT-2000)  | In force  |

| M.688   | 1990-06 | Technical characteristics for a high frequency direct-printing telegraph<br>system for promulgation of high seas and NAVTEX-type maritime safety<br>information  | In force  |
|---------|---------|--|-----------|
| M.689-3 | 2012-03 | International maritime VHF radiotelephone system with automatic facilities based on DSC signalling format  | In force  |
| M.690-2 | 2012-03 | Technical characteristics of emergency position-indicating radio beacons (EPIRBs) operating on the carrier frequencies of 121.5 MHz and 243 MHz  | In force  |
| M.691-1 | 1992-03 | Technical characteristics and compatibility criteria of maritime<br>radiolocation systems operating in the medium frequency band and using<br>spread-spectrum techniques                                       | Withdrawn |
| M.692   | 1990-06 | Narrow-band direct-printing telegraph equipment using a single-frequency channel   | Withdrawn |
| M.693-1 | 2012-03 | Technical characteristics of VHF emergency position-indicating radio<br>beacons using digital selective calling  | In force  |
| M.694-1 | 2005-06 | Reference radiation pattern for ship earth station antennas  | In force  |
| M.816-1 | 1997-10 | Framework for services supported on International Mobile Telecommunications-2000 (IMT-2000)  | In force  |
| M.817   | 1992-03 | International Mobile Telecommunications-2000 (IMT-2000). Network architectures   | In force  |
| M.818-2 | 2003-06 | Satellite operation within International Mobile Telecommunications-2000 (IMT-2000)   | In force  |
| M.819-2 | 1997-02 | International Mobile Telecommunications-2000 (IMT-2000) for developing countries   | In force  |
| M.820-1 | 2012-03 | Use of 9-digit identities for narrow-band direct-printing telegraphy in the maritime mobile service  | In force  |
| M.821-1 | 1997-02 | Optional expansion of the digital selective-calling system for use in the maritime mobile service  | In force  |
| M.822-1 | 1994-09 | Calling-channel loading for digital selective calling (DSC) for the maritime mobile service  | In force  |
| M.823-3 | 2006-03 | Technical characteristics of differential transmissions for global navigation satellite systems from maritime radio beacons in the frequency band 283.5-315 kHz in Region 1 and 285-325 kHz in Regions 2 and 3 | In force  |
| M.824-3 | 2007-03 | Technical parameters of radar beacons (racons)   | In force  |
| M.825-3 | 1998-10 | Characteristics of a transponder system using digital selective calling techniques for use with vessel traffic services and ship-to-ship identification  | In force  |
| M.826   | 1992-03 | Transmission of information for updating electronic chart display and information systems (ECDIS)  | In force  |
| M.827   | 1992-03 | Hypothetical reference digital path for systems in the mobile-satellite service using feeder links   | In force  |
| M.828-2 | 2006-03 | Definition of availability for radiocommunication circuits in the mobile-<br>satellite service   | In force  |
| M.829-1 | 1994-09 | Frequency sharing in the 1 660-1 660.5 MHz band between the mobile-<br>satellite service and the radioastronomy service  | Withdrawn |
| M.830-1 | 2005-06 | Operational procedures for mobile-satellite networks or systems in the bands 1 530-1 544 MHz and 1 626.5-1 645.5 MHz which are used for distress and safety purposes as specified for the GMDSS                | In force  |

| 994-03<br>997-02 | Frequency sharing between services in the band 4-30 MHz<br>Technical and operational characteristics of land mobile systems using<br>multi-channel access techniques without a central controller  | Withdrawn<br>In force  |
|------------------|--|--|
| 997-02           |  | In force   |
|                  |  |  |
|                  | Technical and operational characteristics of cordless telephones and cordless telecommunication systems  | In force   |
|                  | Requirements for the radio interface(s) for International Mobile Telecommunications-2000 (IMT-2000)  | In force   |
|                  |  | In force   |
|                  |  | In force   |
|                  | Bit error performance objectives for aeronautical mobile-satellite (R) service (AMS(R)S) radio link  | In force   |
|                  | Efficient use of the geostationary-satellite orbit and spectrum in the 1-<br>3 GHz frequency range by mobile-satellite systems   | In force   |
|                  | Co-frequency sharing between stations in the mobile service below 1<br>GHz and mobile earth stations of non-geostationary mobile-satellite<br>systems (Earth-space) using frequency division multiple access (FDMA)                                      | In force   |
|                  | Public mobile telecommunication service with aircraft using the bands 1 670-1 675 MHz and 1 800-1 805 MHz  | Withdrawn  |
| 003-06           | Future amateur radio systems   | In force   |
| 007-03           | Disaster communications in the amateur and amateur-satellite services  | In force   |
| 003-06           | Use of the amateur and amateur-satellite services in developing countries  | In force   |
| 003-06           | Frequency sharing criteria in the amateur and amateur-satellite services   | In force   |
|                  | Interference due to intermodulation products in the land mobile service between 25 and 3 000 MHz   | In force   |
| 012-03           | Digital cellular land mobile telecommunication systems   | In force   |
| 994-09           | Integration of public mobile radiocommunication systems  | In force   |
| 994-09           | Leaky feeder systems in the land mobile services   | In force   |
| 994-09           | Wireless communication systems for persons with impaired hearing   | In force   |
|                  | Multi-transmitter radio systems using quasi-synchronous (simulcast) transmission for analogue speech   | Withdrawn  |
|                  | Security principles for International Mobile Telecommunications-2000 (IMT-2000)  | In force   |
|                  | Performance and quality of service requirements for International Mobile Telecommunications-2000 (IMT-2000) access networks  | In force   |
|                  | Digital selective calling system enhancement for multiple equipment installations  | In force   |
| 012-03           | Automatic HF facsimile and data system for maritime mobile users   | In force   |
|                  |  | In force   |
|                  | 97-02<br>94-03<br>12-03<br>94-03<br>94-03<br>06-03<br>94-03<br>03-06<br>07-03<br>03-06<br>94-09<br>94-09<br>94-09<br>94-09<br>94-09<br>94-09<br>94-09<br>94-09<br>94-09<br>94-09<br>94-09<br>94-09<br>94-09<br>94-09<br>94-09<br>94-09<br>94-09<br>94-09 | 97-02 Requirements for the radio interface(s) for International Mobile<br>Telecommunications-2000 (IMT-2000)   94-03 Framework for the radio interface(s) and radio sub-system functionality<br>for International Mobile Telecommunications-2000 (IMT-2000)   12-03 Frequency arrangements for implementation of the terrestrial component<br>of International Mobile Telecommunications (IMT) in the bands identified<br>for IMT in the Radio Regulations (RR)   94-03 Bit error performance objectives for aeronautical mobile-satellite (R)<br>service (AMS(R)S) radio link   94-03 Efficient use of the geostationary-satellite orbit and spectrum in the 1-<br>3 GHz frequency range by mobile-satellite systems   06-03 Co-frequency sharing between stations in the mobile service below 1<br>GHz and mobile earth stations of non-geostationary mobile-satellite<br>systems (Earth-space) using frequency division multiple access (FDMA)   94-03 Public mobile telecommunication service with aircraft using the bands<br>1670-1675 MHz and 1800-1805 MHz   03-06 Future amateur radio systems   07-03 Disaster communications in the amateur and amateur-satellite services   03-06 Frequency sharing criteria in the amateur and amateur-satellite services   04-09 Interference due to intermodulation products in the land mobile service<br>between 25 and 3 000 MHz   12-03 Digital cellular land mobile telecommunication systems   94-09 Leaky feeder systems in the land mobile services |

| M.1083   | 1994-09 | Interworking of maritime radiotelephone systems   | Withdrawn |
|----------|---------|---|-----------|
| M.1084-5 | 2012-03 | Interim solutions for improved efficiency in the use of the band 156-174 MHz by stations in the maritime mobile service   | In force  |
| M.1085-1 | 1997-02 | Technical and operational characteristics of wind profiler radars for bands in the vicinity of 400 MHz  | Withdrawn |
| M.1086-1 | 2006-03 | Determination of the need for coordination between geostationary mobile satellite networks sharing the same frequency bands   | In force  |
| M.1087   | 1994-09 | Methods for evaluating sharing between systems in the land mobile service and spread-spectrum low-Earth orbit (LEO) systems in the mobile-satellite service (MSS) below 1 GHz   | Withdrawn |
| M.1088   | 1994-09 | Considerations for sharing with systems of other services operating in the bands allocated to the radionavigation satellite service   | Withdrawn |
| M.1089-1 | 2002-07 | Technical considerations for the coordination of mobile-satellite systems relating to the aeronautical mobile satellite (R) service (AMS(R)S) in the bands 1 545 to 1 555 MHz and 1 646.5 to 1 656.5 MHz                  | In force  |
| M.1090   | 1994-09 | Frequency plans for satellite transmission of single channel per carrier (SCPC) carriers using non-linear transponders in the mobile-satellite service  | In force  |
| M.1091   | 1994-09 | Reference off-axis radiation patterns for mobile eath station antennas operating in the land mobile-satellite service in the frequency range 1 to 3 GHz   | In force  |
| M.1141-2 | 2005-06 | Sharing in the 1-3 GHz frequency range between non-geostationary space stations operating in the mobile-satellite service and stations in the fixed service   | In force  |
| M.1142-2 | 2005-06 | Sharing in the 1-3 GHz frequency range between geostationary space stations operating in the mobile satellite service and stations in the fixed service   | In force  |
| M.1143-3 | 2005-06 | System specific methodology for coordination of non-geostationary space stations (space-to-Earth) operating in the mobile-satellite service with the fixed service  | In force  |
| M.1167   | 1995-10 | Framework for the satellite component of International Mobile Telecommunications-2000 (IMT-2000)  | In force  |
| M.1168   | 1995-10 | Framework of International Mobile Telecommunications-2000 (IMT-2000)  | In force  |
| M.1169   | 1995-10 | Hours of service of ship stations   | Withdrawn |
| M.1170-1 | 2012-03 | Morse telegraphy procedures in the maritime mobile service  | In force  |
| M.1171   | 1995-10 | Radiotelephony procedures in the maritime mobile service  | In force  |
| M.1172   | 1995-10 | Miscellaneous abbreviations and signals to be used for radiocommunications in the maritime mobile service   | In force  |
| M.1173-1 | 2012-03 | 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 | In force  |
| M.1174-2 | 2004-05 | Technical characteristics of equipment used for on-board vessel communications in the bands between 450 and 470 MHz   | In force  |
| M.1175   | 1995-10 | Automatic receiving equipment for radiotelegraph and radiotelephone alarm signals   | In force  |
| M.1176   | 1995-10 | Technical parameters of radar target enhancers  | In force  |

Thursday, August 30, 2012

Page 34 of 73

| M.1177-4 | 2011-04 | Techniques for measurement of unwanted emissions of radar systems  | In force  |
|----------|---------|--|-----------|
| M.1178   | 1995-10 | Use of the maritime radionavigation band 283.5-315 kHz (Region 1) and 285-325 kHz (Regions 2 and 3)  | In force  |
| M.1179   | 1995-10 | Procedures for determining the interference coupling mechanisms and mitigation options for systems operating in bands adjacent to and in harmonic relationship with radar stations in the radiodetermination service | In force  |
| M.1180   | 1995-10 | Availability of communication circuits in the aeronautical mobile-satellite (R) services (AMS(R)S)   | In force  |
| M.1181   | 1995-10 | Minimum performance objectives for narrow-band digital channels using geostationary satellites to serve transportable and vehicular mobile earth stations in the 1-3 GHz range, not forming part of the ISDN         | In force  |
| M.1182-1 | 2003-06 | Integration of terrestrial and satellite mobile communication systems  | In force  |
| M.1183   | 1995-10 | Permissible levels of interference in a digital channel of a geostationary network in mobile-satellite service in 1-3 GHz caused by other networks of this service and fixed-satellite service                       | In force  |
| M.1184-2 | 2003-06 | Technical characteristics of mobile satellite systems in the frequency bands below 3 GHz for use in developing criteria for sharing between the mobile-satellite service (MSS) and other services                    | In force  |
| M.1185-1 | 1997-10 | Method for determining coordination distance between ground based mobile earth stations and terrrestrial stations operating in the 148.0-149.9 MHz band  | Withdrawn |
| M.1186-1 | 2006-03 | Technical considerations for the coordination between mobile-satellite service networks utilizing code division multiple access and other spread spectrum techniques in the 1-3 GHz band                             | In force  |
| M.1187-1 | 2006-03 | A method for the calculation of the potentially affected region for a mobile-<br>satellite service network in the 1-3 GHz range using circular orbits  | In force  |
| M.1188-1 | 2006-03 | Impact of propagation on the design of non-GSO mobile-satellite systems not employing satellite diversity which provide service to handheld equipment  | In force  |
| M.1221   | 1997-02 | Technical and operational requirements for cellular multimode mobile radio stations  | Withdrawn |
| M.1222   | 1997-02 | Transmission of data messages on shared private land mobile radio channels   | In force  |
| M.1223   | 1997-02 | Evaluation of security mechanisms for IMT-2000   | In force  |
| M.1224-1 | 2012-03 | Vocabulary of terms for International Mobile Telecommunications (IMT)  | In force  |
| M.1225   | 1997-02 | Guidelines for evaluation of radio transmission technologies for IMT-2000  | In force  |
| M.1226   | 1997-02 | Technical and operational characteristics of wind profiler radars in bands in the vicinity of 50 MHz   | In force  |
| M.1227-2 | 2001-08 | Technical and operational characteristics of wind profiler radars in bands in the vicinity of 1 000 MHz  | In force  |
| M.1228   | 1997-02 | Methodology for determining performance objectives for narrow-band channels in mobile satellite systems using geostationary satellites not forming part of the ISDN  | In force  |
| M.1229   | 1997-02 | Performance objectives for the digital aeronautical mobile-satellite service (AMSS) channels operating in the bands 1 525 to 1 559 MHz and 1 626.5 to 1 660.5 MHz not forming part of the ISDN                       | In force  |

| M.1230                                   | 1997-02                                  | Performance objectives for space-to-Earth links operating in the mobile-<br>satellite service with non-geostationary satellites in the 137-138 MHz band   | In force                                      |
|--|--|---|---|
| M.1231                                   | 1997-02                                  | Interference criteria for space-to-Earth links operating in the mobile-<br>satellite service with non-geostationary satellites in the 137-138 MHz band  | In force                                      |
| M.1232                                   | 1997-02                                  | Sharing criteria for space-to-Earth links operating in the mobile-satellite service with non-geostationary satellites in the 137-138 MHz band   | In force                                      |
| M.1233-1                                 | 2006-03                                  | Technical considerations for sharing satellite network resources between the mobile-satellite service (MSS) (other than the aeronautical mobile-satellite (R) service (AMS(R)S)) and AMS(R)S  | In force                                      |
| M.1234-1                                 | 2006-03                                  | Permissible level of interference in a digital channel of a geostationary satellite network in the aeronautical mobile-satellite (R) service (AMS(R)S) in the bands 1 545 to 1 555 MHz and 1 646.5 to 1 656.5 MHz and its associated feeder links caused by other networks of this service and the fixed-satellite service  | In force                                      |
| M.1307                                   | 1997-10                                  | Automatic determination of location and guidance in the land mobile services  | In force                                      |
| M.1308                                   | 1997-10                                  | Evolution of land mobile systems towards IMT-2000   | In force                                      |
| M.1309                                   | 1997-10                                  | Digitally coded speech in the land mobile service   | Withdrawn                                     |
| M.1310                                   | 1997-10                                  | Transport information and control systems (TICS) - Objectives and requirements  | Withdrawn                                     |
| M.1311                                   | 1997-10                                  | Framework for modularity and radio commonality within IMT-2000  | In force                                      |
| M.1312                                   | 1997-10                                  | A long-term solution for improved efficiency in the use of the band 156-<br>174 MHz by stations in the maritime mobile service  | In force                                      |
|  |  |   |   |
| M.1313-1                                 | 2000-05                                  | Technical characteristics of maritime radionavigation radars  | Withdrawn                                     |
| M.1313-1<br>M.1314-1                     | 2000-05<br>2005-06                       | Technical characteristics of maritime radionavigation radars<br>Reduction of unwanted emissions of radar systems operating above 400<br>MHz   | Withdrawn<br>In force                         |
|  |  | Reduction of unwanted emissions of radar systems operating above 400  |   |
| M.1314-1                                 | 2005-06                                  | Reduction of unwanted emissions of radar systems operating above 400 MHz<br>Methodology for evaluating interference from narrow-band mobile-satellite networks to spread-spectrum direct-sequence mobile-satellite networks operating with space stations in low-Earth orbit at frequencies below 1   | In force                                      |
| M.1314-1<br>M.1315                       | 2005-06<br>1997-10                       | Reduction of unwanted emissions of radar systems operating above 400 MHz<br>Methodology for evaluating interference from narrow-band mobile-satellite<br>networks to spread-spectrum direct-sequence mobile-satellite networks<br>operating with space stations in low-Earth orbit at frequencies below 1<br>GHz<br>Principles and a methodology for frequency sharing in the 1 610.6-1<br>613.8 MHz and 1 660-1 660.5 MHz bands between the mobile-satellite   | In force<br>In force                          |
| M.1314-1<br>M.1315<br>M.1316-1           | 2005-06<br>1997-10<br>2005-06            | Reduction of unwanted emissions of radar systems operating above 400<br>MHz<br>Methodology for evaluating interference from narrow-band mobile-satellite<br>networks to spread-spectrum direct-sequence mobile-satellite networks<br>operating with space stations in low-Earth orbit at frequencies below 1<br>GHz<br>Principles and a methodology for frequency sharing in the 1 610.6-1<br>613.8 MHz and 1 660-1 660.5 MHz bands between the mobile-satellite<br>service (Earth-to-space) and the radio astronomy service<br>Considerations for sharing between systems of other services operating<br>in bands allocated to the radionavigation-satellite and aeronautical<br>radionavigation services and the global navigation satellite system   | In force<br>In force<br>In force              |
| M.1314-1<br>M.1315<br>M.1316-1<br>M.1317 | 2005-06<br>1997-10<br>2005-06<br>1997-10 | Reduction of unwanted emissions of radar systems operating above 400<br>MHz<br>Methodology for evaluating interference from narrow-band mobile-satellite<br>networks to spread-spectrum direct-sequence mobile-satellite networks<br>operating with space stations in low-Earth orbit at frequencies below 1<br>GHz<br>Principles and a methodology for frequency sharing in the 1 610.6-1<br>613.8 MHz and 1 660-1 660.5 MHz bands between the mobile-satellite<br>service (Earth-to-space) and the radio astronomy service<br>Considerations for sharing between systems of other services operating<br>in bands allocated to the radionavigation-satellite and aeronautical<br>radionavigation services and the global navigation satellite system<br>(GLONASS-M)<br>Evaluation model for continuous interference from radio sources other<br>than in the radionavigation-satellite service to the radionavigation-satellite<br>service systems and networks operating in the 1 164-1 215 MHz, 1 215-1 | In force<br>In force<br>In force<br>Withdrawn |

| M.1371-4  | 2010-04 | Technical characteristics for an automatic identification system using time-division multiple access in the VHF maritime mobile band  | In force  |
|-----------|---------|---|-----------|
| M.1372-1  | 2003-06 | Efficient use of the radio spectrum by radar stations in the radiodetermination service   | In force  |
| M.1388    | 1999-01 | Threshold levels to determine the need to coordinate between space stations in the broadcasting-satellite service (sound) and particular systems in the land mobile service in the band 1 452-1 492 MHz   | In force  |
| M.1389    | 1999-01 | Methods for achieving coordinated use of spectrum by multiple non-<br>geostationary mobile-satellite service systems below 1 GHz and sharing<br>with other services in existing mobile-satellite service allocations  | In force  |
| M.1390    | 1999-01 | Methodology for the calculation of IMT-2000 terrestrial spectrum requirements   | In force  |
| M.1391-1  | 2006-03 | Methodology for the calculation of IMT-2000 satellite spectrum requirements   | In force  |
| M.1450-4  | 2010-04 | Characteristics of broadband radio local area networks  | In force  |
| M.1451    | 2000-05 | Transport information and control systems: functionalities  | Withdrawn |
| M.1452-2  | 2012-05 | Millimetre wave vehicular collision avoidance radars and radiocommunication systems for intelligent transport system applications   | In force  |
| M.1453-2  | 2005-06 | Intelligent transport systems - Dedicated short range communications at 5.8 GHz   | In force  |
| M.1454    | 2000-05 | E.i.r.p. density limit and operational restrictions for RLANS or other wireless access transmitters in order to ensure the protection of feeder links of non-geostationary systems in the mobile-satellite service in the frequency band 5 150-5 250 MHz        | In force  |
| M.1455-2  | 2003-06 | Key characteristics for the International Mobile Telecommunications-2000 (IMT-2000) radio interfaces  | Withdrawn |
| M.1456    | 2000-05 | Minimum performance characteristics and operational conditions for high altitude platform stations providing IMT-2000 in the bands 1 885-1 980 MHz, 2 010-2 025 MHz and 2 110-2 170 MHz in Regions 1 and 3 and 1 885-1 980 MHz and 2 110-2 160 MHz in Region 2  | In force  |
| M.1457-10 | 2011-06 | Detailed specifications of the terrestrial radio interfaces of International Mobile Telecommunications-2000 (IMT-2000)  | In force  |
| M.1458    | 2000-05 | Use of the frequency bands between 2.8-22 MHz by the aeronautical mobile (R) service for data transmission using class of emission J2D  | In force  |
| M.1459    | 2000-05 | Protection criteria for telemetry systems in the aeronautical mobile service and mitigation techniques to facilitate sharing with geostationary broadcasting-satellite and mobile-satellite services in the frequency bands 1 452-1 525 MHz and 2 310-2 360 MHz | In force  |
| M.1460-1  | 2006-03 | Technical and operational characteristics and protection criteria of radiodetermination radars in the 2 900-3 100 MHz band  | In force  |
| M.1461-1  | 2003-06 | Procedures for determining the potential for interference between radars operating in the radiodetermination service and systems in other services  | In force  |
| M.1462    | 2000-05 | Characteristics of and protection criteria for radars operating in the radiolocation service in the frequency range 420-450 MHz   | In force  |
| M.1463-1  | 2007-03 | Characteristics of and protection criteria for radars operating in the radiodetermination service in the frequency band 1 215-1 400 MHz   | In force  |

| M.1464-1 | 2003-06 | Characteristics of radiolocation radars, and characteristics and protection criteria for sharing studies for aeronautical radionavigation and meteorological radars in the radiodetermination service operating in the frequency band 2 700-2 900 MHz   | In force  |
|----------|---------|---|-----------|
| M.1465-1 | 2007-03 | Characteristics of and protection criteria for radars operating in the radiodetermination service in the frequency band 3 100-3 700 MHz   | In force  |
| M.1466   | 2000-05 | Characteristics of and protection criteria for radars operating in the radionavigation service in the frequency band 31.8-33.4 GHz  | In force  |
| M.1467-1 | 2006-03 | Prediction of sea area A2 and NAVTEX ranges and protection of the A2 global maritime distress and safety system distress watch channel  | In force  |
| M.1468   | 2000-05 | Technical characteristics and sharing scenarios of satellite systems offering multiple services   | Withdrawn |
| M.1469-2 | 2010-01 | Methodology for evaluating potential for interference from time division<br>multiple access/frequency division multiple access (TDMA/FDMA) mobile<br>satellite service (MSS) Earth-to-space transmissions into line-of-sight<br>(LoS) fixed service receivers in the frequency range 1-3 GHz  | In force  |
| M.1470   | 2000-05 | Methodology of sharing between MSS systems (Earth-to-space) and existing RNSS systems (space-to-Earth) in frequency bands 149.9-150.05 MHz and 399.9-400.05 MHz   | In force  |
| M.1471-1 | 2010-01 | Guide to the application of the methodologies to facilitate coordination<br>and use of frequency bands shared between the mobile-satellite service<br>and the fixed service in the frequency range 1-3 GHz  | In force  |
| M.1472-1 | 2010-01 | Methodology to evaluate the impact of interference from time division<br>multiple access/frequency division multiple access (TDMA/FDMA) mobile-<br>satellite service (MSS) space-to-Earth transmissions on baseband<br>performance in frequency division multiplexing-frequency modulation<br>(FDM-FM) analogue line-of-sight (LoS) fixed service receivers in the<br>frequency range 1-3 GHz | In force  |
| M.1473-1 | 2010-01 | Methodology to evaluate the impact of interference from time division multiple access/frequency division multiple access (TDMA/FDMA) mobile-<br>satellite service (MSS) space-to-Earth transmissions on video baseband performance in TV-FM analogue line-of-sight fixed service receivers in the frequency range 1-3 GHz   | In force  |
| M.1474-1 | 2010-01 | Methodology to evaluate the impact of interference from time division multiple access/frequency division multiple access (TDMA/FDMA) mobile-<br>satellite service (MSS) systems on baseband performance in digital line-<br>of-sight fixed service receivers based on statistics of radio-frequency interference in the frequency range 1-3 GHz   | In force  |
| M.1475   | 2000-05 | Methodology for derivation of performance objectives of non-<br>geostationary mobile-satellite service systems operating in the 1-3 GHz band not using satellite diversity  | In force  |
| M.1476   | 2000-05 | Performance objectives for narrow-band digital channels using geostationary satellites to serve transportable and mobile Earth stations in the 1-3 GHz range forming part of the integrated services digital network  | In force  |
| M.1477   | 2000-05 | Technical and performance characteristics of current and planned radionavigation-satellite service (space-to-Earth) and aeronautical radionavigation service receivers to be considered in interference studies in the band 1 559-1 610 MHz   | Withdrawn |
| M.1478-2 | 2012-01 | Protection criteria for Cospas-Sarsat search and rescue instruments in the band 406-406.1 MHz   | In force  |

| M.1479   | 2000-05 | Technical characteristics and performance requirements of current and planned radionavigation-satellite service (space-to-space) receivers to be considered in interference studies in the frequency bands 1 215-1 260 MHz and 1 559-1 610 MHz                               | Withdrawn |
|----------|---------|--|-----------|
| M.1480   | 2000-05 | Essential technical requirements of mobile Earth stations of geostationary mobile-satellite systems that are implementing the Global mobile personal communications by satellite (GMPCS) - Memorandum of understanding arrangements in parts of the frequency band 1-3 GHz   | In force  |
| M.1544   | 2001-08 | Minimum qualifications of radio amateurs   | In force  |
| M.1545   | 2001-08 | Measurement uncertainty as it applies to test limits for the terrestrial component of International Mobile Telecommunications-2000   | In force  |
| M.1579-1 | 2012-03 | Global circulation of IMT-2000 terrestrial terminals   | In force  |
| M.1580-3 | 2009-10 | Generic unwanted emission characteristics of base stations using the terrestrial radio interfaces of IMT- 2000   | In force  |
| M.1581-3 | 2009-10 | Generic unwanted emission characteristics of mobile stations using the terrestrial radio interfaces of IMT 2000  | In force  |
| M.1582   | 2002-07 | Method for determining coordination distances, in the 5 GHz band,<br>between the international standard microwave landing system stations<br>operating in the aeronautical radionavigation service and stations of the<br>radionavigation-satellite service (Earth-to-space) | In force  |
| M.1583-1 | 2007-10 | Interference calculations between non-geostationary mobile-satellite service or radionavigation-satellite service systems and radio astronomy telescope sites  | In force  |
| M.1584   | 2002-07 | Methodology for computation of separation distances between earth stations of the radionavigation-satellite service (Earth-to-space) and radars of the radiolocation service and the aeronautical radionavigation service in the frequency band 1 300-1 350 MHz              | In force  |
| M.1634   | 2003-06 | Interference protection of terrestrial mobile service systems using Monte Carlo simulation with application to frequency sharing   | In force  |
| M.1635   | 2003-06 | General methodology for assessing the potential for interference between IMT-2000 or systems beyond IMT-2000 and other services  | In force  |
| M.1636   | 2003-06 | Basic reference models and performance parameters of Internet Protocol packet network transmission in the mobile-satellite service   | In force  |
| M.1637   | 2003-06 | Global cross-border circulation of radiocommunication equipment in<br>emergency and disaster relief situations   | In force  |
| M.1638   | 2003-06 | 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  | In force  |
| M.1639-1 | 2005-06 | Protection criterion for the aeronautical radionavigation service with respect to aggregate emissions from space stations in the radionavigation-satellite service in the band 1 164-1 215 MHz   | In force  |
| M.1640   | 2003-06 | Characteristics of, and protection criteria for sharing studies for radars operating in the radiodetermination service in the frequency band 33.4-36 GHz   | In force  |
| M.1641-1 | 2006-03 | A methodology for co-channel interference evaluation to determine separation distance from a system using high-altitude platform stations to a cellular system to provide IMT-2000 service   | In force  |

| M.1642-2 | 2007-10 | Methodology for assessing the maximum aggregate equivalent power flux-<br>density at an aeronautical radionavigation service station from all<br>radionavigation-satellite service systems operating in the 1 164-1 215<br>MHz band  | In force |
|----------|---------|--|----------|
| M.1643   | 2003-06 | Technical and operational requirements for aircraft earth stations of<br>aeronautical mobile-satellite service including those using fixed-satellite<br>service network transponders in the band 14-14.5 GHz (Earth-to-space)  | In force |
| M.1644   | 2003-06 | Technical and operational characteristics, and criteria for protecting the mission of radars in the radiolocation and radionavigation service operating in the frequency band 13.75-14 GHz   | In force |
| M.1645   | 2003-06 | Framework and overall objectives of the future development of IMT-2000 and systems beyond IMT-2000   | In force |
| M.1646   | 2003-06 | Parameters to be used in co-frequency sharing and pfd threshold studies between terrestrial IMT-2000 and BSS (sound) in the 2 630-2 655 MHz band   | In force |
| M.1651   | 2003-06 | A method for assessing the required spectrum for broadband nomadic wireless access systems including radio local area networks using the 5 GHz band  | In force |
| M.1652-1 | 2011-05 | 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  | In force |
| M.1653   | 2003-06 | Operational and deployment requirements for wireless access systems including radio local area networks in the mobile service to facilitate sharing between these systems and systems in the Earth exploration-satellite service (active) and the space research service (active) in the band 5 470-5 570 MHz within the 5 460 5 725 MHz range | In force |
| M.1654   | 2003-06 | A methodology to assess interference from broadcasting-satellite service (sound) into terrestrial IMT-2000 systems intending to use the band 2 630-2 655 MHz   | In force |
| M.1677-1 | 2009-10 | International Morse code   | In force |
| M.1678   | 2004-05 | Adaptive antennas for mobile systems   | In force |
| M.1730-1 | 2009-10 | Characteristics of and protection criteria for the radiolocation service in the frequency band 15.4-17.3 GHz   | In force |
| M.1731-2 | 2012-01 | Protection criteria for Cospas-Sarsat local user terminals in the band 1 544-1 545 MHz   | In force |
| M.1732-1 | 2012-03 | Characteristics of systems operating in the amateur and amateur-satellite services for use in sharing studies  | In force |
| M.1739   | 2006-03 | Protection criteria for wireless access systems, including radio local area networks, operating in the mobile service in accordance with Resolution 229 (WRC-03) in the bands 5 150-5 250 MHz, 5 250-5 350 MHz and 5 470-5 725 MHz   | In force |
| M.1740   | 2006-03 | Guide to the application of ITU-R texts related to the amateur and amateur-satellite services  | In force |
| M.1741   | 2006-03 | Methodology for deriving performance objectives and its optimization for IP packet applications in the mobile-satellite service  | In force |
| M.1746   | 2006-03 | Harmonized frequency channel plans for the protection of property using data communication   | In force |
|          |         |  |          |

| M.1747   | 2006-03 | Protection of the Earth exploration-satellite service (passive) in the band 1 400-1 427 MHz from unwanted emissions of mobile satellite service feeder links that may operate in the bands 1 390-1 392 MHz (Earth-to-space) and 1 430-1 432 MHz (space-to-Earth) | In force |
|----------|---------|--|----------|
| M.1748   | 2006-03 | Protection of the radio astronomy service in the band 1 400-1 427 MHz from unwanted emissions of MSS feeder links that may operate in the bands 1 390-1 392 MHz (Earth-to-space) and 1 430-1 432 MHz (space-to-Earth)  | In force |
| M.1767   | 2006-03 | Protection of land mobile systems from terrestrial digital video and audio<br>broadcasting systems in the VHF and UHF shared bands allocated on a<br>primary basis   | In force |
| M.1768   | 2006-03 | Methodology for calculation of spectrum requirements for the future development of the terrestrial component of IMT-2000 and systems beyond IMT-2000   | In force |
| M.1787-1 | 2012-01 | Description of systems and networks in the radionavigation-satellite service (space-to-Earth and space-to-space) and technical characteristics of transmitting space stations operating in the bands 1 164-1 215 MHz,1 215-1 300 MHz and 1 559-1 610 MHz         | In force |
| M.1795   | 2007-03 | Technical and operational characteristics of land mobile MF/HF systems   | In force |
| M.1796-1 | 2012-03 | Characteristics of and protection criteria for terrestrial radars operating in the radiodetermination service in the frequency band 8 500-10 680 MHz   | In force |
| M.1797   | 2007-03 | Vocabulary of terms for the land mobile service  | In force |
| M.1798-1 | 2010-04 | Characteristics of HF radio equipment for the exchange of digital data and electronic mail in the maritime mobile service  | In force |
| M.1799   | 2007-03 | Sharing between the mobile service and the mobile-satellite service in the band 1 668.4-1 675 MHz  | In force |
| M.1800   | 2007-03 | Protection of the fixed, mobile and radiolocation services from MSS feeder links that may operate in the bands 1 390-1 392 MHz (Earth-to-space) and 1 430-1 432 MHz (space-to-Earth)   | In force |
| M.1801-1 | 2010-04 | Radio interface standards for broadband wireless access systems, including mobile and nomadic applications, in the mobile service operating below 6 GHz  | In force |
| M.1802-1 | 2010-04 | Characteristics and protection criteria for radars operating in the radiolocation service in the frequency band 30-300 MHz   | In force |
| M.1808   | 2007-06 | Technical and operational characteristics of conventional and trunked land mobile systems operating in the mobile service allocations below 869 MHz to be used in sharing studies  | In force |
| M.1822   | 2007-10 | Framework for services supported by IMT  | In force |
| M.1823   | 2007-10 | Technical and operational characteristics of digital cellular land mobile systems for use in sharing studies   | In force |
| M.1824   | 2007-10 | System characteristics of television outside broadcast, electronic news gathering and electronic field production in the mobile service for use in sharing studies   | In force |
| M.1825   | 2007-10 | Guidance on technical parameters and methodologies for sharing studies related to systems in the land mobile service   | In force |
| M.1826   | 2007-10 | Harmonized frequency channel plan for broadband public protection and disaster relief operations at 4 940-4 990 MHz in Regions 2 and 3   | In force |
|          |         |  |          |

| M.1827   | 2007-10 | 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  | In force |
|----------|---------|--|----------|
| M.1828   | 2007-10 | Technical and operational requirements for aircraft stations of<br>aeronautical mobile service limited to transmissions of telemetry for flight<br>testing in the bands around 5 GHz   | In force |
| M.1829   | 2007-10 | Method for determining the necessary geographical separation distances,<br>in the 5 GHz band, between the international standard microwave landing<br>system (MLS) stations operating in the aeronautical radionavigation<br>service and transmitters operating in the aeronautical mobile service<br>(AMS) to support telemetry | In force |
| M.1830   | 2007-10 | Technical characteristics and protection criteria of aeronautical radionavigation service systems in the 645-862 MHz frequency band  | In force |
| M.1831   | 2007-10 | A coordination methodology for RNSS inter-system interference estimation   | In force |
| M.1841   | 2008-01 | Compatibility between FM sound-broadcasting in the band of about 87-<br>108 MHz and the aeronautical ground-based augmentation system in the<br>band about 108-117.975 MHz   | In force |
| M.1842-1 | 2009-06 | Characteristics of VHF radio systems and equipment for the exchange of data and electronic mail in the maritime mobile service RR Appendix 18 channels   | In force |
| M.1849   | 2009-06 | Technical and operational aspects of ground-based meteorological radars  | In force |
| M.1850   | 2010-01 | Detailed specifications of the radio interfaces for the satellite component of International Mobile Telecommunications-2000 (IMT-2000)   | In force |
| M.1851   | 2009-06 | Mathematical models for radiodetermination radar systems antenna patterns for use in interference analyses   | In force |
| M.1854-1 | 2012-01 | Use of mobile-satellite service in disaster response and relief  | In force |
| M.1874   | 2010-04 | Technical and operational characteristics of oceanographic radars operating in sub-bands within the frequency range 3-50 MHz   | In force |
| M.1890   | 2011-04 | Intelligent transport systems - Guidelines and objectives  | In force |
| M.1901   | 2012-01 | 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   | In force |
| M.1902   | 2012-01 | 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   | In force |
| M.1903   | 2012-01 | 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   | In force |
| M.1904   | 2012-01 | 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   | In force |
| M.1905   | 2012-01 | 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   | In force |

| M.1906 | 2012-01 | 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 | In force |
|--------|---------|--|----------|
| M.2002 | 2012-03 | Objectives, characteristics and functional requirements of wide-area sensor and/or actuator network (WASN) systems   | In force |
| M.2003 | 2012-03 | Multiple gigabit wireless systems in frequencies around 60 GHz   | In force |
| M.2007 | 2012-03 | Characteristics of and protection criteria for radars operating in the aeronautical radionavigation service in the frequency band 5 150-5 250 MHz  | In force |
| M.2008 | 2012-03 | Characteristics and protection criteria for radars operating in the aeronautical radionavigation service in the frequency band 13.25-13.40 GHz   | In force |
| M.2009 | 2012-03 | 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)   | In force |
| M.2010 | 2012-03 | Characteristics of a digital system, named Navigational Data for<br>broadcasting maritime safety and security related information from shore-<br>to-ship in the 500 kHz band   | In force |
| M.2012 | 2012-01 | Detailed specifications of the terrestrial radio interfaces of International<br>Mobile Telecommunications Advanced (IMT-Advanced)  | In force |
| M.2013 | 2012-01 | Technical characteristics of, and protection criteria for non-ICAO aeronautical radionavigation systems, operating around 1 GHz  | In force |
| M.2014 | 2012-03 | Global circulation of IMT-2000 satellite terminals   | In force |
| M.2015 | 2012-03 | Frequency arrangements for public protection and disaster relief radiocommunication systems in UHF bands in accordance with Resolution 646 (Rev.WRC-12)  | In force |

#### Series P : Radiowave propagation

| Number   | Approval D | Date Recommendation Title   | Status    |
|----------|------------|---|-----------|
| P.310-9  | 1994-08    | Definitions of terms relating to propagation in non-ionized media   | In force  |
| P.311-13 | 2009-10    | Acquisition, presentation and analysis of data in studies of tropospheric propagation   | In force  |
| P.313-11 | 2012-02    | Exchange of information for short-term forecasts and transmission of ionospheric disturbance warnings                                   | In force  |
| P.341-5  | 1999-10    | The concept of transmission loss for radio links  | In force  |
| P.368-9  | 2007-02    | Ground-wave propagation curves for frequencies between 10 kHz and 30 MHz  | In force  |
| P.369-6  | 1994-08    | Reference atmosphere for refraction   | Withdrawn |
| P.370-7  | 1995-10    | VHF and UHF propagation curves for the frequency range from 30 MHz to 1 000 MHz. Broadcasting services                                  | Withdrawn |
| P.371-8  | 1999-07    | Choice of indices for long-term ionospheric predictions   | In force  |
| P.372-10 | 2009-10    | Radio noise   | In force  |
| P.373-8  | 2007-01    | Definitions of maximum and minimum transmission frequencies   | In force  |
| P.434-6  | 1995-10    | ITU-R reference ionospheric characteristics and methods of basic MUF, operational MUF and ray-path prediction                           | Withdrawn |
| P.452-14 | 2009-10    | Prediction procedure for the evaluation of interference between stations on the surface of the Earth at frequencies above about 0.1 GHz | In force  |
| P.453-10 | 2012-02    | The radio refractive index: its formula and refractivity data   | In force  |
| P.525-2  | 1994-08    | Calculation of free-space attenuation   | In force  |
| P.526-12 | 2012-02    | Propagation by diffraction  | In force  |
| P.527-3  | 1992-03    | Electrical characteristics of the surface of the Earth  | In force  |
| P.528-3  | 2012-02    | Propagation curves for aeronautical mobile and radionavigation services using the VHF, UHF and SHF bands                                | In force  |
| P.529-3  | 1999-10    | Prediction methods for the terrestrial land mobile service in the VHF and UHF bands   | Withdrawn |
| P.530-14 | 2012-02    | Propagation data and prediction methods required for the design of terrestrial line-of-sight systems                                    | In force  |
| P.531-11 | 2012-02    | lonospheric propagation data and prediction methods required for the design of satellite services and systems                           | In force  |
| P.532-1  | 1992-03    | lonospheric effects and operational considerations associated with artificial modification of the ionosphere and the radio-wave channel | In force  |
| P.533-11 | 2012-02    | Method for the prediction of the performance of HF circuits   | In force  |
| P.534-5  | 2012-02    | Method for calculating sporadic-E field strength  | In force  |
| P.581-2  | 1990-06    | The concept of "worst month"  | In force  |
|          |            |   |           |

| P.616    | 1986-07 | Propagation data for terrestrial maritime mobile services operating at frequencies above 30 MHz                              | Withdrawn |
|----------|---------|--|-----------|
| P.617-2  | 2012-02 | Propagation prediction techniques and data required for the design of trans-horizon radio-relay systems                      | In force  |
| P.618-10 | 2009-10 | Propagation data and prediction methods required for the design of Earth-<br>space telecommunication systems                 | In force  |
| P.619-1  | 1992-03 | Propagation data required for the evaluation of interference between stations in space and those on the surface of the Earth | In force  |
| P.620-6  | 2005-03 | Propagation data required for the evaluation of coordination distances in the frequency range 100 MHz to 105 GHz             | In force  |
| P.676-9  | 2012-02 | Attenuation by atmospheric gases   | In force  |
| P.678-1  | 1992-03 | Characterization of the natural variability of propagation phenomena   | In force  |
| P.679-3  | 2001-02 | Propagation data required for the design of broadcasting-satellite systems   | In force  |
| P.680-3  | 1999-10 | Propagation data required for the design of Earth-space maritime mobile telecommunication systems                            | In force  |
| P.681-7  | 2009-10 | Propagation data required for the design of Earth-space land mobile telecommunication systems                                | In force  |
| P.682-3  | 2012-02 | Propagation data required for the design of Earth-space aeronautical mobile telecommunication systems                        | In force  |
| P.684-6  | 2012-02 | Prediction of field strength at frequencies below about 150 kHz  | In force  |
| P.832-3  | 2012-02 | World Atlas of Ground Conductivities   | In force  |
| P.833-7  | 2012-02 | Attenuation in vegetation  | In force  |
| P.834-6  | 2007-01 | Effects of tropospheric refraction on radiowave propagation  | In force  |
| P.835-5  | 2012-02 | Reference Standard Atmospheres   | In force  |
| P.836-4  | 2009-10 | Water vapour: surface density and total columnar content   | In force  |
| P.837-6  | 2012-02 | Characteristics of precipitation for propagation modelling   | In force  |
| P.838-3  | 2005-03 | Specific attenuation model for rain for use in prediction methods  | In force  |
| P.839-3  | 2001-02 | Rain height model for prediction methods   | In force  |
| P.840-5  | 2012-02 | Attenuation due to clouds and fog  | In force  |
| P.841-4  | 2005-03 | Conversion of annual statistics to worst-month statistics  | In force  |
| P.842-4  | 2007-02 | Computation of reliability and compatibility of HF radio systems   | In force  |
| P.843-1  | 1997-08 | Communication by meteor-burst propagation  | In force  |
| P.844-1  | 1994-08 | lonospheric factors affecting frequency sharing in the VHF and UHF bands (30 MHz-3 GHz)                                      | In force  |
| P.845-3  | 1997-08 | HF field-strength measurement  | In force  |
| P.846-1  | 1995-10 | Measurements of ionospheric and related characteristics  | In force  |
| P.1057-2 | 2007-08 | Probability distributions relevant to radiowave propagation modelling  | In force  |

| P.1058-2 | 1999-10 | Digital topographic databases for propagation studies  | In force  |
|----------|---------|--|-----------|
| P.1060   | 1994-08 | Propagation factors affecting frequency sharing in HF terrestrial systems  | In force  |
| P.1144-6 | 2012-02 | Guide to the application of the propagation methods of Radiocommunication Study Group 3  | In force  |
| P.1145   | 1995-10 | Propagation data for the terrestrial land mobile service in the VHF and UHF bands  | Withdrawn |
| P.1146   | 1995-10 | The prediction of field strength for land mobile and terrestrial broadcasting services in the frequency range from 1 to 3 GHz  | Withdrawn |
| P.1147-4 | 2007-08 | Prediction of sky-wave field strength at frequencies between about 150 and 1 700 kHz   | In force  |
| P.1148-1 | 1997-05 | Standardized procedure for comparing predicted and observed HF sky-<br>wave signal intensities and the presentation of such comparisons  | In force  |
| P.1238-7 | 2012-02 | Propagation data and prediction methods for the planning of indoor radiocommunication systems and radio local area networks in the frequency range 900 MHz to 100 GHz              | In force  |
| P.1239-3 | 2012-02 | ITU-R reference ionospheric characteristics  | In force  |
| P.1240-1 | 2007-02 | ITU-R methods of basic MUF, operational MUF and ray-path prediction  | In force  |
| P.1321-3 | 2009-10 | Propagation factors affecting systems using digital modulation techniques at LF and MF   | In force  |
| P.1322   | 1997-08 | Radiometric estimation of atmospheric attenuation  | In force  |
| P.1406-1 | 2007-08 | Propagation effects relating to terrestrial land mobile and broadcasting services in the VHF and UHF bands   | In force  |
| P.1407-4 | 2009-10 | Multipath propagation and parameterization of its characteristics  | In force  |
| P.1409-1 | 2012-02 | Propagation data and prediction methods for systems using high altitude platform stations and other elevated stations in the stratosphere at frequencies greater than about 1 GHz  | In force  |
| P.1410-5 | 2012-02 | Propagation data and prediction methods required for the design of terrestrial broadband radio access systems operating in a frequency range from 3 to 60 GHz                      | In force  |
| P.1411-6 | 2012-02 | Propagation data and prediction methods for the planning of short-range outdoor radiocommunication systems and radio local area networks in the frequency range 300 MHz to 100 GHz | In force  |
| P.1412   | 1999-10 | Propagation data for the evaluation of coordination between Earth stations working in the bidirectionally allocated frequency bands  | In force  |
| P.1510   | 2001-02 | Annual mean surface temperature  | In force  |
| P.1511   | 2001-02 | Topography for Earth-to-space propagation modelling  | In force  |
| P.1546-4 | 2009-10 | Method for point-to-area predictions for terrestrial services in the frequency range 30 MHz to 3 000 MHz   | In force  |
| P.1621-1 | 2005-03 | Propagation data required for the design of Earth-space systems operating between 20 THz and 375 THz   | In force  |
| P.1622   | 2003-04 | Prediction methods required for the design of Earth-space systems operating between 20 THz and 375 THz   | In force  |
| P.1623-1 | 2005-03 | Prediction method of fade dynamics on Earth-space paths  | In force  |
|          |         |  |           |

| P.1791   | 2007-01 | Propagation prediction methods for assessment of the impact of ultra-<br>wideband devices                     | In force |
|----------|---------|---|----------|
| P.1812-2 | 2012-02 | A path-specific propagation prediction method for point-to-area terrestrial services in the VHF and UHF bands | In force |
| P.1814   | 2007-08 | Prediction methods required for the design of terrestrial free-space optical links                            | In force |
| P.1815-1 | 2009-10 | Differential rain attenuation   | In force |
| P.1816-1 | 2012-02 | The prediction of the time and the spatial profile for broadband land mobile services using UHF and SHF bands | In force |
| P.1817-1 | 2012-02 | Propagation data required for the design of terrestrial free-space optical links                              | In force |
| P.1853-1 | 2012-02 | Tropospheric attenuation time series synthesis  | In force |
| P.2001   | 2012-02 | A general purpose wide-range terrestrial propagation model in the frequency range 30 MHz to 50 GHz            | In force |

#### Series RA : Radio astronomy

| Number    | Approval Date | Recommendation Title  | Status   |
|-----------|---------------|---|----------|
| RA.314-10 | 2003-06       | Preferred frequency bands for radio astronomical measurements   | In force |
| RA.479-5  | 2003-05       | Protection of frequencies for radioastronomical measurements in the shielded zone of the Moon   | In force |
| RA.517-4  | 2006-05       | Protection of the radio astronomy service from transmitters operating in adjacent bands   | In force |
| RA.611-4  | 2006-03       | Protection of the radio astronomy service from spurious emissions   | In force |
| RA.769-2  | 2003-05       | Protection criteria used for radio astronomical measurements  | In force |
| RA.1031-2 | 2007-06       | Protection of the radio astronomy service in frequency bands shared with other services   | In force |
| RA.1237-2 | 2010-01       | Protection of the radio astronomy service from unwanted emissions resulting from applications of wideband digital modulation  | In force |
| RA.1272-1 | 2002-02       | Protection of radio astronomy measurements above 60 GHz from ground based interference  | In force |
| RA.1417   | 1999-10       | A radio-quiet zone in the vicinity of the L2 Sun-Earth Lagrange point   | In force |
| RA.1513-1 | 2003-05       | Levels of data loss to radio astronomy observations and percentage-of-<br>time criteria resulting from degradation by interference for frequency<br>bands allocated to the radio astronomy on a primary basis | In force |
| RA.1630   | 2003-05       | Technical and operational characteristics of ground-based astronomy systems for use in sharing studies with active services between 10 THz and 1 000 THz  | In force |
| RA.1631   | 2003-05       | Reference radio astronomy antenna pattern to be used for compatibility<br>analyses between non-GSO systems and radio astronomy service<br>stations based on the epfd concept                                  | In force |
| RA.1750   | 2006-03       | Mutual planning between the Earth exploration-satellite service (active) and the radio astronomy service in the 94 GHz and 130 GHz bands  | In force |
| RA.1860   | 2010-01       | Preferred frequency bands for radio astronomical measurements in the range 1-3 THz  | In force |

#### Series RS : Remote sensing systems

| RS.515-4<br>RS.516-1<br>RS.577-7 | 2003-05<br>1994-03<br>2009-02 | Frequency bands and bandwidths used for satellite passive sensing<br>Feasibility of sharing between active sensors used on Earth exploration<br>and meteorological satellites and the radiolocation service | In force<br>Withdrawn |
|----------------------------------|-------------------------------|---|-----------------------|
|                                  |                               |   | Withdrawn             |
| RS.577-7                         | 2009-02                       |   |                       |
|                                  |                               | Frequency bands and required bandwidths used for spaceborne active<br>sensors operating in the Earth exploration-satellite (active) and space<br>research (active) services                                 | In force              |
| RS.1028-2                        | 2003-05                       | Performance criteria for satellite passive remote sensing   | In force              |
| RS.1029-2                        | 2003-05                       | Interference criteria for satellite passive remote sensing  | In force              |
| RS.1165-2                        | 2006-03                       | Technical characteristics and performance criteria for systems in the meteorological aids service in the 403 MHz and 1 680 MHz bands  | In force              |
| RS.1166-4                        | 2009-02                       | Performance and interference criteria for active spaceborne sensors   | In force              |
| RS.1259                          | 1997-06                       | Feasibility of sharing between spaceborne passive sensors and the fixed service from 50 to 60 GHz   | In force              |
| RS.1260-1                        | 2003-05                       | Feasibility of sharing between active spaceborne sensors and other services in the range 420-470 MHz  | In force              |
| RS.1261                          | 1997-06                       | Feasibility of sharing between spaceborne cloud radars and other services in the range of 92-95 GHz   | In force              |
| RS.1262                          | 1997-06                       | Sharing and coordination criteria for meteorological aids in the 400.15-406 MHz and 1 668.4-1 700 MHz bands   | Withdrawn             |
| RS.1263-1                        | 2010-01                       | Interference criteria for meteorological aids operated in the 400.15-406 MHz and 1 668.4-1 700 MHz bands  | In force              |
| RS.1264-1                        | 2003-05                       | Feasibility of frequency sharing between the meteorological aids service<br>and the mobile-satellite service (Earth-to-space) in the 1 668.4-1 700<br>MHz band  | In force              |
| RS.1279                          | 1997-10                       | Spectrum sharing between spaceborne passive sensors and inter-<br>satellite links in the range 50.2-59.3 GHz  | In force              |
| RS.1280                          | 1997-10                       | Selection of active spaceborne sensor emission characteristics to<br>mitigate the potential for interference to terrestrial radars operating in<br>frequency bands 1-10 GHz                                 | In force              |
| RS.1281                          | 1997-10                       | Protection of stations in the radiolocation service from emissions from active spaceborne sensors in the band 13.4-13.75 GHz  | In force              |
| RS.1282                          | 1997-10                       | Feasibility of sharing between wind profiler radars and active spaceborne sensors in the vicinity of 1 260 MHz  | In force              |
| RS.1346                          | 1998-02                       | Sharing between the meteorological aids service and medical implant communication systems (MICS) operating in the mobile service in the frequency band 401-406 MHz  | In force              |
| RS.1347                          | 1998-02                       | Feasibility of sharing between radionavigation-satellite service receivers<br>and the Earth exploration-satellite (active) and space research (active)<br>services in the 1 215-1 260 MHz band              | In force              |
| RS.1416                          | 1999-10                       | Sharing between spaceborne passive sensors and the inter-satellite service operating near 118 and 183 GHz   | In force              |

| RS.1449   | 2000-05 | Feasibility of sharing between the FSS (space-to-Earth) and the Earth exploration-satellite (passive) and space research (passive) services in the band 18.6-18.8 GHz   | In force |
|-----------|---------|---|----------|
| RS.1624   | 2003-05 | Sharing between the Earth exploration satellite (passive) and airborne altimeters in the aeronautical radionavigation service in the band 4 200-4 400 MHz   | In force |
| RS.1628   | 2003-05 | Feasibility of sharing in the band 35.5 36 GHZ between the Earth exploration-satellite service (active) and space research service (active), and other services allocated in this band                                | In force |
| RS.1632   | 2003-06 | Sharing in the band 5 250-5 350 MHz between the Earth exploration-<br>satellite service (active) and wireless access systems (including radio<br>local area networks) in the mobile service                           | In force |
| RS.1744   | 2006-03 | Technical and operational characteristics of ground-based meteorological aids systems operating in the frequency range 272-750 THz  | In force |
| RS.1745   | 2006-03 | Use of the band 1 668.4 1 710 MHz by the meteorological aids service and meteorological-satellite service (space-to-Earth)  | In force |
| RS.1749   | 2006-03 | Mitigation technique to facilitate the use of the 1 215-1 300 MHz band by the Earth exploration-satellite service (active) and the space research service (active)  | In force |
| RS.1803   | 2007-06 | Technical and operational characteristics for passive sensors in the Earth exploration-satellite (passive) service to facilitate sharing of the 10.6-10.68 GHz and 36-37 GHz bands with the fixed and mobile services | In force |
| RS.1804   | 2007-06 | Technical and operational characteristics of Earth exploration-satellite service (EESS) systems operating above 3 000 GHz   | In force |
| RS.1813-1 | 2011-02 | Reference antenna pattern for passive sensors operating in the Earth exploration-satellite service (passive) to be used in compatibility analyses in the frequency range 1.4-100 GHz                                  | In force |
| RS.1858   | 2010-01 | Characterization and assessment of aggregate interference to the Earth exploration-satellite service (passive) sensor operations from multiple sources of man made emissions  | In force |
| RS.1859   | 2010-01 | Use of remote sensing systems for data collection to be used in the event of natural disasters and similar emergencies  | In force |
| RS.1861   | 2010-01 | Typical technical and operational characteristics of Earth exploration-<br>satellite service (passive) systems using allocations between 1.4 and 275<br>GHz   | In force |
| RS.1881   | 2011-02 | Protection criteria for arrival time difference receivers operating in the meteorological aids service in the frequency band 9-11.3 kHz   | In force |
| RS.1883   | 2011-02 | Use of remote sensing systems in the study of climate change and the effects thereof  | In force |
| RS.1884   | 2011-02 | Methodology for determining terrestrial and space-to-Earth sharing and coordination criteria for meteorological aids in the 400.15-406 MHz and 1 668 1 700 MHz bands  | In force |

#### Series S : Fixed-satellite service

| Number  | Approval Dat | e Recommendation Title  | Status   |
|---------|--------------|---|----------|
| S.352-4 | 1982-07      | Hypothetical reference circuit for systems using analogue transmission in the fixed-satellite service   | In force |
| S.353-8 | 1994-09      | Allowable noise power in the hypothetical reference circuit for frequency-<br>division multiplex telephony in the fixed-satellite service   | In force |
| S.354-2 | 1974-07      | Video bandwidth and permissible noise level in the hypothetical reference circuit for the fixed-satellite service   | In force |
| S.446-4 | 1993-04      | Carrier energy dispersal for systems employing angle modulation by analogue signals or digital modulation in the fixed-satellite service  | In force |
| S.464-2 | 1992-03      | Pre-emphasis characteristics for frequency-modulation systems for<br>frequency-division multiplex telephony in the fixed-satellite service  | In force |
| S.465-6 | 2010-01      | Reference radiation pattern of earth station antennas in the fixed-satellite service for use in coordination and interference assessment in the frequency range from 2 to 31 GHz  | In force |
| S.466-6 | 1992-03      | Maximum permissible level of interference in a telephone channel of a geostationary-satellite network in the fixed-satellite service employing frequency modulation with frequency-division multiplex, caused by other networks of this service   | In force |
| S.481-2 | 1986-07      | Measurement of noise in actual traffic for systems in the fixed-satellite service for telephony using frequency-division multiplex  | In force |
| S.482-2 | 1986-07      | Measurement of performance by means of a signal of a uniform spectrum<br>for systems using frequency-division multiplex telephony in the fixed-<br>satellite service  | In force |
| S.483-3 | 1997-05      | Maximum permissible level of interference in a television channel of a geostationary-satellite network in the fixed-satellite service employing frequency modulation, caused by other networks of this service  | In force |
| S.484-3 | 1992-03      | Station-keeping in longitude of geostationary satellites in the fixed-<br>satellite service   | In force |
| S.521-4 | 2000-01      | Hypothetical reference digital paths for systems using digital transmission in the fixed-satellite service  | In force |
| S.522-5 | 1994-09      | Allowable bit error ratios at the output of the hypothetical reference digital path for systems in the fixed-satellite service using pulse-code modulation for telephony  | In force |
| S.523-4 | 1992-03      | Maximum permissible levels of interference in a geostationary-satellite network in the fixed-satellite service using 8-bit PCM encoded telephony, caused by other networks of this service  | In force |
| S.524-9 | 2006-01      | Maximum permissible levels of off-axis e.i.r.p. density from earth stations in geostationary-satellite orbit networks operating in the fixed-satellite service transmitting in the 6 GHz, 13 GHz, 14 GHz and 30 GHz frequency bands   | In force |
| S.579-6 | 2005-04      | Availability objectives for a hypothetical reference circuits and<br>hypothetical reference digital paths when used for telephony using pulse<br>code modulation, or as part of an integrated services digital network<br>hypothetical reference connection, in the fixed-satellite service operating<br>below 15 GHz | In force |
| S.580-6 | 2004-01      | Radiation diagrams for use as design objectives for antennas of earth stations operating with geostationary satellites  | In force |

| S. 614-4   2005-02   Allowable error performance for a satellite hypothetical reference digital path in the fixed-satellite service operating below 15 GHz when forming part of an integrated services digital network.     S. 670-1   1992-03   Flexibility in the positioning of satellites as a design objective   In force     S. 670-1   1992-03   Flexibility in the positioning of satellites as a design objective   In force     S. 672-4   1997-09   Satellite antenna radiation pattern for use as a design objective in the fixed-satellite service employing geostationary satellites   In force     S. 672-4   1997-09   Satellite antenna radiation pattern for use as a design objective in the fixed-satellite service employing geostationary satellites   In force     S. 725   1992-03   Terms and definitions relating to space radiocommunications   In force     S. 726-1   1993-04   Maximum permissible level of spurious emissions from very small aperture terminals (VSATs)   In force     S. 727-2   2007-01   Cross-polarization isolation from very small aperture terminals (VSATs)   In force     S. 728-1   1995-10   Maximum permissible level of aprious emissions from very small aperture terminals (VSATs)   In force     S. 731   2005-04   Reference earth-station crose-spolarization aplaterut terminals (VSATs)   |         |         |  |           |
|---|---------|---------|--|-----------|
| S.671-3   1994-09   Necessary protection ratios for narrow-band single channel-per-carrier<br>transmissions interfered with by analogue television carriers   In force     S.672-4   1997-09   Satellite antenna radiation pattern for use as a design objective in the<br>fixed-satellite service employing geostationary satellites   In force     S.673-2   2002-03   Terms and definitions relating to space radiocommunications   In force     S.725   1992-03   Technical characteristics for very small aperture terminals (VSATs)   In force     S.726-1   1993-04   Maximum permissible level of spurious emissions from very small<br>aperture terminals (VSATs)   Withdrawn     S.727-2   2007-01   Cross-polarization isolation from very small aperture terminals (VSATs)   In force     S.728-1   1995-10   Maximum permissible level of of very small aperture terminals (VSATs)   In force     S.730   1982-03   Control and monitoring function of very small aperture terminals (VSATs)   In force     S.731-1   2005-04   Reference earth-station cross-polarized radiation pattern for use in<br>frequency coordination and interference assessment in the frequency<br>range from 2 to about 30 GHz   In force     S.732   1992-03   Method for statistical processing of earth-station antenna side-lobe peaks   In force   | S.614-4 | 2005-02 | path in the fixed-satellite service operating below 15 GHz when forming    | In force  |
| 5.672-4 1997-09 Satellite antenna radiation pattern for use as a design objective in the<br>fixed-satellite service employing geostationary satellities In force   5.673-2 2002-03 Terms and definitions relating to space radiocommunications In force   5.725 1992-03 Technical characteristics for very small aperture terminals (VSATs) In force   5.726 1993-04 Maximum permissible level of spurious emissions from very small<br>aperture terminals (VSATs) Withdrawn   5.727-2 2007-01 Cross-polarization isolation from very small aperture terminals (VSATs) Withdrawn   5.728-1 1996-10 Maximum permissible level of of saxis e.i.r.p. density from very small<br>aperture terminals (VSATs) In force   5.729 1992-03 Control and monitoring function of very small aperture terminals (VSATs) In force   5.730 1992-03 Compensation of the effects of switching discontinuities for voice band<br>data and of dopler frequency-shifts in the fixed-satellite service In force   5.731 2005-04 Reference earth-station cross-polarized radiation pattern for use in<br>frequency coordination and interference assessment in the frequency<br>range from 2 to about 30 GHz In force   5.734 1992-03 The application of interference in a geostationary-satellite<br>network for an HRDP when forming part of the ISON in the fixed-satellite   | S.670-1 | 1992-03 | Flexibility in the positioning of satellites as a design objective         | In force  |
| fixed-satellite service employing geostationary satellites5.673-22002-03Terms and definitions relating to space radiocommunicationsIn force5.7251992-03Technical characteristics for very small aperture terminals (VSATs)In force5.726-11993-04Maximum permissible level of spurious emissions from very smallIn forceaperture terminals (VSATs)Cross-polarization isolation from very small aperture terminals (VSATs)Withdrawn5.727-22007-01Cross-polarization isolation from very small aperture terminals (VSATs)Withdrawn5.728-11995-10Maximum permissible level of off-axis e.ir.p. density from very smallIn force5.7291992-03Control and monitoring function of very small aperture terminals (VSATs)In force5.7301992-03Control and monitoring function of very small aperture terminals (VSATs)In force5.731.12005-04Reference earth-station cross-polarized radiation pattern for use in<br>range from 2 to about 30 GHzIn force5.7321992-03Method for statistical processing of earth-station antenna side-lobe peaksIn force5.7341992-03The application of interference cancellers in the fixed-satellite serviceIn force5.735-11993-04Maximum permissible levels of interference in a geostationary-satellite<br>network for an HRDP when forming part of the ISDN in the fixed-satellite<br>service caused by other networks in the fixed-satellite<br>serviceIn force5.7361992-03Relationship of technical coordination is neguried between<br>geostationary-satellite networks in the fixed-sate  | S.671-3 | 1994-09 |  | In force  |
| S.725 1992-03 Technical characteristics for very small aperture terminals (VSATs) In force   S.726-1 1993-04 Maximum permissible level of spurious emissions from very small aperture terminals (VSATs) In force   S.727-2 2007-01 Cross-polarization isolation from very small aperture terminals (VSATs) Withdrawn   S.727-1 1995-10 Maximum permissible level of off-axis e.ir.p. density from very small aperture terminals (VSATs) In force   S.729 1992-03 Control and monitoring function of very small aperture terminals (VSATs) In force   S.730 1992-03 Compensation of the effects of switching discontinuities for voice band data and of doppler frequency-shifts in the fixed-satellite service In force   S.731-1 2005-04 Reference earth-station cross-polarized radiation pattern for use in frequency coordination and interference assessment in the frequency range from 2 to about 30 GHz In force   S.732 1992-03 Method for statistical processing of earth-station antenna side-lobe peaks In force   S.734 1992-03 The application of interference cancellers in the fixed-satellite service In force   S.736-3 1992-03 The application discrimination in calculations of interference assessment in the fixed-satellite service In force   S.737 19  | S.672-4 | 1997-09 |  | In force  |
| S.726-1 1993-04 Maximum permissible level of spurious emissions from very small aperture terminals (VSATs) In force aperture terminals (VSATs)   S.727-2 2007-01 Cross-polarization isolation from very small aperture terminals (VSATs) Withdrawn   S.728-1 1995-10 Maximum permissible level of off-axis e.i.r.p. density from very small aperture terminals (VSATs) In force   S.729 1992-03 Control and monitoring function of very small aperture terminals (VSATs) In force   S.730 1992-03 Compensation of the effects of switching discontinuities for voice band data and of doppler frequency-shifts in the fixed-satellite service In force   S.731-1 2005-04 Reference earth-sitation cross-polarized radiation pattern for use in frequency coordination and interference assessment in the frequency range from 2 to about 30 GHz In force   S.732 1992-03 Method for statistical processing of earth-station antenna side-lobe peaks In force   S.734 1992-03 The application of interference in a geostationary-satellite network for an HRDP when forming part of the ISDN in the fixed-satellite service In force   S.737 1992-03 Relationship of technical coordination in calculations of interference in a geostationary-satellite service In force   S.736-3 1997-05 Estimation of polarization discrimination in calc  | S.673-2 | 2002-03 | Terms and definitions relating to space radiocommunications                | In force  |
| aperture terminals (VSATs)S.727-22007-01Cross-polarization isolation from very small aperture terminals (VSATs)WithdrawnS.728-11995-10Maximum permissible level of off-axis e.i.r.p. density from very small<br>aperture terminals (VSATs)In forceS.7291992-03Control and monitoring function of very small aperture terminals (VSATs)In forceS.7301992-03Compensation of the effects of switching discontinuities for voice band<br>data and of doppler frequency-shifts in the fixed-satellite serviceIn forceS.7312005-04Reference earth-station cross-polarized radiation pattern for use in<br>frequency coordination and interference assessment in the frequency<br>range from 2 to about 30 GHzIn forceS.7321992-03Method for statistical processing of earth-station antenna side-lobe peaksIn forceS.733-22000-01Determination of the G/T ratio for Earth stations operating in the fixed-<br>satellite serviceIn forceS.7341992-03The application of interference cancellers in the fixed-satellite<br>service caused by other networks of this service blow both SGHzIn forceS.736-31997-05Estimation of polarization discrimination in calculations of interference<br>between geostationary-satellite networks in the fixed-satellite<br>serviceIn forceS.7381992-03Procedure for determining if coordination is required between<br>geostationary-satellite networks in the fixed-satellite<br>serviceIn forceS.7371992-03Technical coordination wethods for fixed-satellite serviceIn forceS.7381992-03Teccedure for determining  | S.725   | 1992-03 | Technical characteristics for very small aperture terminals (VSATs)        | In force  |
| S.728-11995-10Maximum permissible level of off-axis e.i.r.p. density from very small aperture terminals (VSATs)In force aperture terminals (VSATs)S.7291992-03Control and monitoring function of very small aperture terminals (VSATs)In forceS.7301992-03Compensation of the effects of switching discontinuities for voice band data and of doppler frequency-shifts in the fixed-satellite serviceIn forceS.7312005-04Reference earth-station cross-polarized radiation pattern for use in frequency coordination and interference assessment in the frequency range from 2 to about 30 GHzIn forceS.7321992-03Method for statistical processing of earth-station antenna side-lobe peaksIn forceS.7341992-03Determination of the G/T ratio for Earth stations operating in the fixed-satellite serviceIn forceS.7341992-03The application of interference in a geostatellite serviceIn forceS.735-11993-04Maximum permissible levels of interference in a geostatellite serviceIn forceS.7371992-03Relationship of technical coordination in calculations of interference between geostationary-satellite networks in the fixed-satellite serviceIn forceS.7371992-03Procedure for determining if coordination is required between geostationary-satellite networks in the fixed-satellite serviceIn forceS.7381992-03Procedure for determining if detailed coordination is necessary between geostationary-satellite networks in the fixed-satellite service sharing the same frequency bandsIn forceS.7391992-03Carrier-to-interference calculations between networks i                                   | S.726-1 | 1993-04 |  | In force  |
| aperture terminals (VSATs)S.7291992-03Control and monitoring function of very small aperture terminals (VSATs)In forceS.7301992-03Compensation of the effects of switching discontinuities for voice band<br>data and of doppler frequency-shifts in the fixed-satellite serviceIn forceS.731-12005-04Reference earth-station cross-polarized radiation pattern for use in<br>frequency coordination and interference assessment in the frequency<br>range from 2 to about 30 GHzIn forceS.7321992-03Method for statistical processing of earth-station antenna side-lobe peaksIn forceS.733-22000-01Determination of the G/T ratio for Earth stations operating in the fixed-<br>satellite serviceIn forceS.7341992-03The application of interference cancellers in the fixed-satellite serviceIn forceS.735-11993-04Maximum permissible levels of interference in a geostationary-satellite<br>network for an HRDP when forming part of the ISDN in the fixed-satellite<br>service caused by other networks of this service below 15 GHzIn forceS.7371997-05Estimation of polarization discrimination in calculations of interference<br>between geostationary-satellite networks in the fixed-satelliteIn forceS.7381992-03Relationship of technical coordination is required between<br>geostationary-satellite networks in the fixed-satelliteIn forceS.7391992-03Relationship of technical coordination is required between<br>geostationary-satellite networks in the fixed-satellite serviceIn forceS.7401992-03Technical coordination methods for fixed-satellite networks                             | S.727-2 | 2007-01 | Cross-polarization isolation from very small aperture terminals (VSATs)    | Withdrawn |
| S.7301992-03Compensation of the effects of switching discontinuities for voice band<br>data and of doppler frequency-shifts in the fixed-satellite serviceIn forceS.731-12005-04Reference earth-station cross-polarized radiation pattern for use in<br>frequency coordination and interference assessment in the frequency<br>range from 2 to about 30 GHzIn forceS.7321992-03Method for statistical processing of earth-station antenna side-lobe peaksIn forceS.7322000-01Determination of the G/T ratio for Earth stations operating in the fixed-<br>satellite serviceIn forceS.7341992-03The application of interference cancellers in the fixed-satellite serviceIn forceS.735-11993-04Maximum permissible levels of interference in a geostationary-satellite<br>service caused by other networks of this service below 15 GHzIn forceS.7371992-03Relationship of technical coordination in calculations of interference<br>between geostationary-satellite<br>serviceIn forceS.7381992-03Procedure for determining if coordination is required between<br>geostationary-satellite networks in the fixed-satellite<br>serviceIn forceS.7391992-03Additional methods for determining if detailed coordination is necessary<br>between geostationary-satellite networks in the fixed-satellite serviceIn forceS.7401992-03Technical coordination methods for fixed-satellite serviceIn forceS.741-21994-09Carrier-to-interference calculations between networks in the fixed-satellite serviceIn forceS.742-11992-03Technical coordination methods for fixed-   | S.728-1 | 1995-10 |  | In force  |
| data and of doppler frequency-shifts in the fixed-satellite serviceS.731-12005-04Reference earth-station cross-polarized radiation pattern for use in<br>frequency coordination and interference assessment in the frequency<br>range from 2 to about 30 GHzIn forceS.7321992-03Method for statistical processing of earth-station antenna side-lobe peaksIn forceS.733-22000-01Determination of the G/T ratio for Earth stations operating in the fixed-<br>satellite serviceIn forceS.7341992-03The application of interference cancellers in the fixed-satellite serviceIn forceS.735-11993-04Maximum permissible levels of interference in a geostationary-satellite<br>service caused by other networks of this service below 15 GHzIn forceS.736-31997-05Estimation of polarization discrimination in calculations of interference<br>between geostationary-satellite networks in the fixed-satellite serviceIn forceS.7381992-03Relationship of technical coordination methods within the fixed-satellite<br>serviceIn forceS.7391992-03Additional methods for determining if detailed coordination is necessary<br>between geostationary-satellite networks in the fixed-satellite serviceIn forceS.7401992-03Technical coordination methods of fixed-satellite networksIn forceS.741-21994-09Carrier-to-interference calculations between networks in the fixed-satelliteIn forceS.742-11993-04Spectrum utilization methods of fixed-satellite networks in the fixed-<br>satellite serviceIn forceS.741-21994-09Carrier-to-interference ca   | S.729   | 1992-03 | Control and monitoring function of very small aperture terminals (VSATs)   | In force  |
| frequency coordination and interference assessment in the frequency<br>range from 2 to about 30 GHzS.7321992-03Method for statistical processing of earth-station antenna side-lobe peaksIn forceS.733-22000-01Determination of the G/T ratio for Earth stations operating in the fixed-<br>satellite serviceIn forceS.7341992-03The application of interference cancellers in the fixed-satellite serviceIn forceS.735-11993-04Maximum permissible levels of interference in a geostationary-satellite<br>network for an HRDP when forming part of the ISDN in the fixed-satellite<br>service caused by other networks of this service below 15 GHzIn forceS.736-31997-05Estimation of polarization discrimination in calculations of interference<br>between geostationary-satellite networks in the fixed-satellite serviceIn forceS.7371992-03Relationship of technical coordination methods within the fixed-satellite<br>serviceIn forceS.7381992-03Procedure for determining if coordination is required between<br>geostationary-satellite networks in the fixed-satellite service<br>sharing the same frequency bandsIn forceS.7401992-03Technical coordination methods for fixed-satellite service<br>sharing the same frequency bandsIn forceS.741-21994-09Carrier-to-interference calculations between networks in the fixed-<br>satellite serviceIn forceS.742-11993-04Spectrum utilization methodologiesIn forceS.741-21994-09Carrier-to-interference calculations between networks in the fixed-<br>satellite serviceIn forceS.742-1 <td>S.730</td> <td>1992-03</td> <td></td> <td>In force</td> | S.730   | 1992-03 |  | In force  |
| S.733-22000-01Determination of the G/T ratio for Earth stations operating in the fixed-satellite<br>satellite serviceIn forceS.7341992-03The application of interference cancellers in the fixed-satellite serviceIn forceS.735-11993-04Maximum permissible levels of interference in a geostationary-satellite<br>network for an HRDP when forming part of the ISDN in the fixed-satellite<br>service caused by other networks of this service below 15 GHzIn forceS.736-31997-05Estimation of polarization discrimination in calculations of interference<br>between geostationary-satellite networks in the fixed-satellite serviceIn forceS.7371992-03Relationship of technical coordination methods within the fixed-satellite<br>serviceIn forceS.7381992-03Procedure for determining if coordination is required between<br>geostationary-satellite networks sharing the same frequency bandsIn forceS.7391992-03Additional methods for determining if detailed coordination is necessary<br>between geostationary-satellite networks in the fixed-satellite serviceIn forceS.7401992-03Technical coordination methods for fixed-satellite networksIn forceS.741-21994-09Carrier-to-interference calculations between networks in the fixed-<br>satellite serviceIn forceS.742-11993-04Spectrum utilization methodologiesIn forceS.743-11994-09The coordination between satellite networks andIn force   | S.731-1 | 2005-04 | frequency coordination and interference assessment in the frequency        | In force  |
| S.7341992-03The application of interference cancellers in the fixed-satellite serviceIn forceS.735-11993-04Maximum permissible levels of interference in a geostationary-satellite<br>network for an HRDP when forming part of the ISDN in the fixed-satellite<br>service caused by other networks of this service below 15 GHzIn forceS.736-31997-05Estimation of polarization discrimination in calculations of interference<br>between geostationary-satellite networks in the fixed-satellite serviceIn forceS.7371992-03Relationship of technical coordination methods within the fixed-satellite<br>serviceIn forceS.7381992-03Procedure for determining if coordination is required between<br>geostationary-satellite networks sharing the same frequency bandsIn forceS.7391992-03Additional methods for determining if detailed coordination is necessary<br>between geostationary-satellite networks in the fixed-satellite serviceIn forceS.7401992-03Technical coordination methods for fixed-satellite networksIn forceS.741-21994-09Carrier-to-interference calculations between networks in the fixed-<br>satellite serviceIn forceS.742-11993-04Spectrum utilization methodologiesIn forceS.743-11994-09The coordination between satellite networks using slightly inclined<br>geostationary-satellite orbits (GSOs) and between such networks andIn force   | S.732   | 1992-03 | Method for statistical processing of earth-station antenna side-lobe peaks | In force  |
| S.735-11993-04Maximum permissible levels of interference in a geostationary-satellite<br>network for an HRDP when forming part of the ISDN in the fixed-satellite<br>service caused by other networks of this service below 15 GHzIn forceS.736-31997-05Estimation of polarization discrimination in calculations of interference<br>between geostationary-satellite networks in the fixed-satellite<br>serviceIn forceS.7371992-03Relationship of technical coordination methods within the fixed-satellite<br>serviceIn forceS.7381992-03Procedure for determining if coordination is required between<br>geostationary-satellite networks sharing the same frequency bandsIn forceS.7391992-03Additional methods for determining if detailed coordination is necessary<br>between geostationary-satellite networks in the fixed-satellite serviceIn forceS.7401992-03Technical coordination methods for fixed-satellite networksIn forceS.741-21994-09Carrier-to-interference calculations between networks in the fixed-<br>satellite serviceIn forceS.743-11994-09The coordination methodologiesIn force   | S.733-2 | 2000-01 |  | In force  |
| network for an HRDP when forming part of the ISDN in the fixed-satellite<br>service caused by other networks of this service below 15 GHzS.736-31997-05Estimation of polarization discrimination in calculations of interference<br>between geostationary-satellite networks in the fixed-satellite serviceIn forceS.7371992-03Relationship of technical coordination methods within the fixed-satellite<br>serviceIn forceS.7381992-03Relationship of technical coordination is required between<br>geostationary-satellite networks sharing the same frequency bandsIn forceS.7391992-03Procedure for determining if coordination is necessary<br>between geostationary-satellite networks in the fixed-satellite serviceIn forceS.7391992-03Additional methods for determining if detailed coordination is necessary<br>between geostationary-satellite networks in the fixed-satellite serviceIn forceS.7401992-03Technical coordination methods for fixed-satellite networksIn forceS.741-21994-09Carrier-to-interference calculations between networks in the fixed-<br>satellite serviceIn forceS.742-11993-04Spectrum utilization methodologiesIn forceS.743-11994-09The coordination between satellite networks using slightly inclined<br>geostationary-satellite orbits (GSOs) and between such networks andIn force   | S.734   | 1992-03 | The application of interference cancellers in the fixed-satellite service  | In force  |
| S.7371992-03Relationship of technical coordination methods within the fixed-satelliteIn forceS.7371992-03Relationship of technical coordination methods within the fixed-satelliteIn forceS.7381992-03Procedure for determining if coordination is required between<br>geostationary-satellite networks sharing the same frequency bandsIn forceS.7391992-03Additional methods for determining if detailed coordination is necessary<br>between geostationary-satellite networks in the fixed-satellite service<br>sharing the same frequency bandsIn forceS.7401992-03Technical coordination methods for fixed-satellite networksIn forceS.741-21994-09Carrier-to-interference calculations between networks in the fixed-<br>satellite serviceIn forceS.742-11993-04Spectrum utilization methodologiesIn forceS.743-11994-09The coordination between satellite networks using slightly inclined<br>geostationary-satellite orbits (GSOs) and between such networks andIn force  | S.735-1 | 1993-04 | network for an HRDP when forming part of the ISDN in the fixed-satellite   | In force  |
| S.7381992-03Procedure for determining if coordination is required between<br>geostationary-satellite networks sharing the same frequency bandsIn forceS.7391992-03Additional methods for determining if detailed coordination is necessary<br>between geostationary-satellite networks in the fixed-satellite service<br>sharing the same frequency bandsIn forceS.7401992-03Technical coordination methods for fixed-satellite networksIn forceS.741-21994-09Carrier-to-interference calculations between networks in the fixed-<br>satellite serviceIn forceS.742-11993-04Spectrum utilization methodologiesIn forceS.743-11994-09The coordination between satellite networks using slightly inclined<br>geostationary-satellite orbits (GSOs) and between such networks andIn force  | S.736-3 | 1997-05 |  | In force  |
| geostationary-satellite networks sharing the same frequency bandsS.7391992-03Additional methods for determining if detailed coordination is necessary<br>between geostationary-satellite networks in the fixed-satellite service<br>sharing the same frequency bandsIn forceS.7401992-03Technical coordination methods for fixed-satellite networksIn forceS.741-21994-09Carrier-to-interference calculations between networks in the fixed-<br>satellite serviceIn forceS.742-11993-04Spectrum utilization methodologiesIn forceS.743-11994-09The coordination between satellite networks using slightly inclined<br>geostationary-satellite orbits (GSOs) and between such networks andIn force   | S.737   | 1992-03 |  | In force  |
| between geostationary-satellite networks in the fixed-satellite service<br>sharing the same frequency bandsS.7401992-03Technical coordination methods for fixed-satellite networksIn forceS.741-21994-09Carrier-to-interference calculations between networks in the fixed-<br>satellite serviceIn forceS.742-11993-04Spectrum utilization methodologiesIn forceS.743-11994-09The coordination between satellite networks using slightly inclined<br>geostationary-satellite orbits (GSOs) and between such networks andIn force  | S.738   | 1992-03 |  | In force  |
| S.741-21994-09Carrier-to-interference calculations between networks in the fixed-<br>satellite serviceIn forceS.742-11993-04Spectrum utilization methodologiesIn forceS.743-11994-09The coordination between satellite networks using slightly inclined<br>geostationary-satellite orbits (GSOs) and between such networks andIn force  | S.739   | 1992-03 | between geostationary-satellite networks in the fixed-satellite service    | In force  |
| S.742-11993-04Spectrum utilization methodologiesIn forceS.743-11994-09The coordination between satellite networks using slightly inclined<br>geostationary-satellite orbits (GSOs) and between such networks andIn force  | S.740   | 1992-03 | Technical coordination methods for fixed-satellite networks                | In force  |
| S.743-1 1994-09 The coordination between satellite networks using slightly inclined In force geostationary-satellite orbits (GSOs) and between such networks and  | S.741-2 | 1994-09 |  | In force  |
| geostationary-satellite orbits (GSOs) and between such networks and   | S.742-1 | 1993-04 | Spectrum utilization methodologies   | In force  |
|   | S.743-1 | 1994-09 | geostationary-satellite orbits (GSOs) and between such networks and        | In force  |

| S.744    | 1992-03 | Orbit/spectrum improvement measures for satellite networks having more than one service in one or more frequency bands   | In force  |
|----------|---------|--|-----------|
| S.1001-2 | 2010-01 | Use of systems in the fixed-satellite service in the event of natural disasters and similar emergencies for warning and relief operations  | In force  |
| S.1002   | 1993-04 | Orbit management techniques for the fixed-satellite service  | In force  |
| S.1003-2 | 2010-12 | Environmental protection of the geostationary-satellite orbit  | In force  |
| S.1061-1 | 2007-01 | Utilization of fade countermeasure strategies and techniques in the fixed-<br>satellite service  | In force  |
| S.1062-4 | 2007-01 | Allowable error performance for a satellite hypothetical reference digital path operating below 15 GHz   | In force  |
| S.1063   | 1994-09 | Criteria for sharing between BSS feeder links and other Earth-to-space or space-to-Earth links of the FSS  | In force  |
| S.1064-1 | 1995-10 | Pointing accuracy as a design objective for earthward antennas on board geostationary satellites in the fixed-satellite service  | In force  |
| S.1065   | 1994-09 | Power flux-density values to facilitate the application of RR Article 14 for the FSS in Region 2 in relation to the BSS in the band 11.7-12.2 GHz  | Withdrawn |
| S.1066   | 1994-09 | Ways of reducing the interference from the broadcasting-satellite service of one Region into the fixed-satellite service of another Region around 12 GHz   | Withdrawn |
| S.1067   | 1994-09 | Ways of reducing the interference from the broadcasting-satellite service into the fixed-satellite service in adjacent frequency bands around 12 GHz   | Withdrawn |
| S.1068   | 1994-09 | Fixed-satellite and radiolocation/radionavigation services sharing in the band 13.75-14 GHz  | In force  |
| S.1069   | 1994-09 | Compatibility between the fixed-satellite service and the space science services in the band 13.75-14 GHz  | In force  |
| S.1149-2 | 2005-02 | Network architecture and equipment functional aspects of digital satellite systems in the fixed-satellite service forming part of synchronous digital hierarchy transport networks                                   | In force  |
| S.1150   | 1995-10 | Technical criteria to be used in examinations relating to the probability of harmful interference between frequency assignments in the fixed-satellite service as required in No. S11.32A.1 of the Radio Regulations | In force  |
| S.1151   | 1995-10 | Sharing between the inter-satellite service involving geostationary satellites in the fixed-satellite service and the radionavigation service at 33 GHz  | In force  |
| S.1250   | 1997-05 | Network management architecture for digital satellite systems forming part of SDH transport networks in the fixed-satellite service  | In force  |
| S.1251   | 1997-07 | Network management - Performance management object class definitions for satellite systems network elements forming part of SDH transport networks in the fixed-satellite service                                    | In force  |
| S.1252   | 1997-05 | Network management - Payload configuration object class definitions for<br>satellite system network elements forming part of SDH transport<br>networks in the fixed-satellite service                                | In force  |
| S.1253   | 1997-05 | Technical options to facilitate coordination of fixed-satellite service networks in certain orbital arc segments and frequency bands   | In force  |
| S.1254   | 1997-05 | Best practices to facilitate the coordination process of fixed-satellite service satellite networks  | In force  |

| S.1255   | 1997-05 | Use of adaptive uplink power control to mitigate codirectional interference<br>between geostationary satellite orbit/fixed-satellite service (GSO/FSS)<br>networks and feeder links of non-geostationary satellite orbit/mobile<br>satellite service (non-GSO/MSS) networks and between GSO/FSS<br>networks and non-GSO/FSS networks                                  | In force |
|----------|---------|---|----------|
| S.1256   | 1997-05 | Methodology for determining the maximum aggregate power flux-density<br>at the geostationary-satellite orbit in the band 6 700-7 075 MHz from<br>feeder links of non-geostationary satellite systems in the mobile-satellite<br>service in the space-to-Earth direction   | In force |
| S.1257-3 | 2002-03 | Analytical method to calculate short-term visibility and interference statistics for non-geostationary satellite orbit satellites as seen from a point on the Earth's surface   | In force |
| S.1323-2 | 2002-09 | Maximum permissible levels of interference in a satellite network<br>(GSO/FSS; non-GSO/FSS; non-GSO/MSS feeder links) in the fixed-<br>satellite service caused by other codirectional FSS networks below 30<br>GHz   | In force |
| S.1324   | 1997-09 | Analytical method for estimating interference between non-geostationary mobile-satellite feeder links and geostationary fixed-satellite networks operating co-frequency and codirectionally   | In force |
| S.1325-3 | 2003-10 | Simulation methodologies for determining statistics of short-term<br>interference between co-frequency, codirectional non-geostationary-<br>satellite orbit fixed-satellite service systems in circular orbits and other<br>non-geostationary fixed-satellite service systems in circular orbits or<br>geostationary-satellite orbit fixed-satellite service networks | In force |
| S.1326   | 1997-09 | Feasibility of sharing between the inter-satellite service and the fixed-<br>satellite service in the frequency band 50.4-51.4 GHz  | In force |
| S.1327   | 1997-09 | Requirements and suitable bands for operation of the inter-satellite service within the range 50.2-71 GHz   | In force |
| S.1328-4 | 2002-09 | Satellite system characteristics to be considered in frequency sharing<br>analyses within the fixed-satellite service   | In force |
| S.1329   | 1997-09 | Frequency sharing of the bands 19.7-20.2 GHz and 29.5-30.0 GHz between systems in the mobile-satellite service and systems in the fixed-satellite service   | In force |
| S.1339-1 | 1999-11 | Sharing between spaceborne passive sensors of the Earth exploration-<br>satellite service and inter-satellite links of geostationary-satellite networks<br>in the range 54.25 to 59.3 GHz   | In force |
| S.1340   | 1997-10 | 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  | In force |
| S.1341   | 1997-10 | 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   | In force |
| S.1342   | 1997-10 | Method for determining coordination distances, in the 5 GHz band,<br>between the international standard microwave landing system stations<br>operating in the aeronautical radionavigation service and non-<br>geostationary mobile-satellite service stations providing feeder uplink<br>services  | In force |
| S.1418   | 1999-11 | Method for calculating single entry carrier-to-interference ratios for links in inter-satellite service using geostationary orbit   | In force |

| S.1419   | 1999-11 | Interference mitigation techniques to facilitate coordination between non-<br>geostationary-satellite orbit mobile-satellite service feeder links and<br>geostationary-satellite orbit fixed-satellite service networks in the bands<br>19.3-19.7 GHz and 29.1-29.5 GHz | In force |
|----------|---------|---|----------|
| S.1420   | 1999-11 | Performance for broadband integrated services digital network asynchronous transfer mode via satellite  | In force |
| S.1424   | 2000-01 | Availability objectives for a hypothetical reference digital path when used<br>for the transmission of B-ISDN asynchronous transfer mode in the fixed-<br>satellite service by geostationary orbit satellite systems using frequencies<br>below 15 GHz                  | In force |
| S.1425   | 2000-01 | Transmission considerations for digital carriers using higher levels of modulation on satellite circuits  | In force |
| S.1426   | 2000-01 | Aggregate power flux-density limits, at the FSS satellite orbit for radio local area network (RLAN) transmitters operating in the 5 150-5 250 MHz band sharing frequencies with the FSS (RR No. S5.447A)  | In force |
| S.1427-1 | 2006-01 | Methodology and criterion to assess interference from terrestrial wireless access system/radio local area network transmitters to non-geostationary-satellite orbit mobile-satellite service feeder links in the band 5 150-5 250 MHz                                   | In force |
| S.1428-1 | 2001-02 | 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   | In force |
| S.1429   | 2000-01 | Error performance objectives due to internetwork interference between GSO and non-GSO FSS systems for hypothetical reference digital paths operating at or above the primary rate carried by systems using frequencies below 15 GHz                                     | In force |
| S.1430   | 2000-01 | Determination of the coordination area for Earth stations operating with<br>non-geostationary space stations with respect to Earth stations operating<br>in the reverse direction in frequency bands allocated bidirectionally to the<br>fixed-satellite service        | In force |
| S.1431   | 2000-01 | Methods to enhance sharing between non-GSO FSS systems (except MSS feeder links) in the frequency bands between 10-30 GHz   | In force |
| S.1432-1 | 2006-01 | Apportionment of the allowable error performance degradations to fixed-<br>satellite service (FSS) hypothetical reference digital paths arising from<br>time invariant interference for systems operating below 30 GHz  | In force |
| S.1433   | 2000-01 | Uplink and inter-satellite equivalent power flux-density radiated by non-GSO FSS Systems  | In force |
| S.1503-1 | 2005-04 | Functional description to be used in developing software tools for determining conformity of non-geostationary-satellite orbit fixed-satellite system networks with limits contained in Article 22 of the Radio Regulations   | In force |
| S.1512   | 2001-02 | Measurement procedure for determining non-geostationary satellite orbit satellite equivalent isotropically radiated power and antenna discrimination  | In force |
| S.1521-1 | 2010-01 | Allowable error performance for a hypothetical reference digital path based on synchronous digital hierarchy  | In force |
| S.1522-1 | 2005-02 | Impact of loss of synchronization recovery time on availability in hypothetical reference digital paths   | In force |
| S.1523   | 2001-06 | Methodology for performing parametric evaluation studies of interference sensitivity for geostationary-satellite orbit fixed-satellite service systems sharing spectrum in bands above 10 GHz   | In force |

| S.1524   | 2001-06 | Coordination identification between geostationary-satellite orbit fixed-<br>satellite service networks  | In force |
|----------|---------|---|----------|
| S.1525-1 | 2002-09 | Impact of interference from the Sun into a geostationary-satellite orbit fixed-satellite service link   | In force |
| S.1526-1 | 2002-09 | Methodology to assess the interference environment in relation to Nos. 9.12, 9.12A and 9.13 of the Radio Regulations when non-geostationary-satellite orbit fixed-satellite service systems are involved  | In force |
| S.1527   | 2001-06 | Procedure for the identification of non-geostationary-satellite orbit satellites causing interference into an operating geostationary-satellite orbit earth station   | In force |
| S.1528   | 2001-06 | Satellite antenna radiation patterns for non-geostationary orbit satellite antennas operating in the fixed-satellite service below 30 GHz   | In force |
| S.1529   | 2001-06 | Analytical method for determining the statistics of interference between<br>non-geostationary-satellite orbit fixed-satellite service systems and other<br>non-geostationary-satellite orbit fixed-satellite service systems or<br>geostationary-satellite orbit fixed-satellite service networks | In force |
| S.1553   | 2002-03 | A possible method to account for environmental and other effects on satellite antenna patterns  | In force |
| S.1554   | 2002-03 | Methodology for determining the overall accuracy of epfddown measurements   | In force |
| S.1555   | 2002-03 | Aggregate interference levels between closely spaced dual circularly and dual linearly polarized geostationary-satellite networks in the fixed-satellite service operating in the 6/4 GHz frequency bands   | In force |
| S.1556   | 2002-03 | Methodology to determine the epfddown level corresponding to the loss<br>of synchronization in geostationary fixed satellite service networks<br>caused by interference from non-geostationary-satellite systems  | In force |
| S.1557   | 2002-03 | Operational requirements and characteristics of fixed-satellite service systems operating in the 50/40 GHz bands for use in sharing studies between the fixed-satellite service and the fixed service   | In force |
| S.1558   | 2002-03 | Methodologies for measuring epfddown caused by a non-geostationary-<br>satellite orbit space station to verify compliance with operational epfdown<br>limits  | In force |
| S.1559   | 2002-03 | Methodology for computing the geographical distribution of maximum<br>downlink equivalent power flux-density levels generated by non-<br>geostationary fixed-satellite service systems using circular orbits  | In force |
| S.1560   | 2002-03 | Methodology for the calculation of the worst-case interference levels from<br>a particular type of non-geostationary fixed-satellite service system using<br>highly-elliptical orbits into geostationary fixed-satellite service satellite<br>networks operating in the 4/6 GHz frequency bands   | In force |
| S.1586-1 | 2007-01 | Calculation of unwanted emission levels produced by a non geostationary fixed-satellite service system at radio astronomy sites   | In force |
| S.1587-2 | 2007-10 | Technical characteristics of earth stations on board vessels<br>communicating with FSS satellites in the frequency bands 5 925-6 425<br>MHz and 14-14.5 GHz which are allocated to the fixed-satellite service  | In force |
| S.1588   | 2002-09 | Methodologies for calculating aggregate downlink equivalent power flux-<br>density produced by multiple non-geostationary fixed-satellite service<br>systems into a geostationary fixed-satellite service network   | In force |

| S.15 | 589   | 2002-09 | Continuous curves of epfddown versus geostationary fixed-satellite<br>service earth station antenna diameter and epfdup versus geostationary<br>fixed-satellite service space station antenna beamwidth to indicate the<br>protection afforded by systems complying with the limits to antennas with<br>diameters other than those in Article 22 of the Radio Regulations | In force |
|------|-------|---------|---|----------|
| S.15 | 590   | 2002-09 | Technical and operational characteristics of satellites operating in the range 20-375 THz   | In force |
| S.15 | 591   | 2002-09 | Sharing of inter-satellite link bands around 23, 32.5 and 64.5 GHz between non-geostationary/geostationary inter-satellite links and geostationary/geostationary inter-satellite links  | In force |
| S.15 | 592   | 2002-09 | Methodology to assess compliance of non-geostationary fixed-satellite<br>service satellite systems in circular orbits with the additional operational<br>limits on downlink equivalent power flux-density in Article 22 of the Radio<br>Regulations   | In force |
| S.15 | 593   | 2002-09 | Methodology for frequency sharing between certain types of homogeneous highly-elliptical orbit non-geostationary fixed-satellite service systems in the 4/6 GHz and 11/14 GHz frequency bands   | In force |
| S.15 | 594   | 2002-09 | Maximum emission levels and associated requirements of high density fixed-satellite service earth stations transmitting towards geostationary fixed-satellite service space stations in the 30 GHz range  | In force |
| S.15 | 595   | 2002-09 | Interference mitigation techniques to facilitate coordination between non-<br>geostationary fixed-satellite service systems in highly elliptical orbit and<br>non-geostationary fixed-satellite service systems in low and medium<br>Earth orbit  | In force |
| S.16 | 647   | 2004-01 | Methodology to determine the worst-case interference among certain types of non-GSO FSS systems in situations where no in-line interference exists  | In force |
| S.16 | 655   | 2003-10 | Interference mitigation techniques and frequency sharing in the bands 37.5-42.5 GHz and 47.2-50.2 GHz between geostationary-satellite fixed-satellite service networks and non-geostationary-satellite fixed-satellite service systems  | In force |
| S.16 | 56    | 2004-01 | Outline of a software specification for automating the examination of satellite network filings for compliance with Article 5 of the Radio Regulations  | In force |
| S.16 | 672   | 2004-01 | Guidelines to be used in the event of non-compliance with single-entry operational and/or additional operational limits in Section II of Article 22 of the Radio Regulations  | In force |
| S.16 | 673-1 | 2010-01 | Methodologies for the calculation of the worst-case interference levels<br>from a non geostationary HEO-type fixed-satellite service system into<br>geostationary fixed-satellite service satellite networks operating in the 10<br>to 30 GHz frequency bands   | In force |
| S.17 | 709-1 | 2007-01 | Technical characteristics of air interfaces for global broadband satellite systems  | In force |
| S.17 | '11-1 | 2010-01 | Performance enhancements of transmission control protocol over<br>satellite networks  | In force |
| S.17 | '12   | 2005-04 | Methodologies for determining whether an FSS earth station at a given location could transmit in the band 13.75-14 GHz without exceeding the pfd limits in No. 5.502 of the Radio Regulations, and guidelines to mitigate excesses  | In force |
| S.17 | '13-1 | 2007-01 | Methodology to calculate the minimum separation angle at the Earth's<br>surface between a non-geostationary HEO-type FSS satellite in its<br>"active" arc and a geostationary satellite   | In force |

| S.1714 | 2005-04 | Static methodology for calculating epfddown to facilitate coordination of very large antennas under Nos. 9.7A and 9.7B of the Radio Regulations   | In force |
|--------|---------|---|----------|
| S.1715 | 2005-04 | Guidelines developed in response to the studies requested in Resolution 140 (WRC-03)  | In force |
| S.1716 | 2005-02 | Performance and availability objectives for fixed-satellite service telemetry, tracking and command systems   | In force |
| S.1717 | 2005-02 | Electronic data file format for earth station antenna patterns  | In force |
| S.1718 | 2005-02 | Power flux-density values in the band 11.7-12.7 GHz and associated calculation methodology which may be used when the power flux-density values in § 6 of Annex 1 to Appendix 30 of the Radio Regulations are exceeded                        | In force |
| S.1758 | 2006-01 | Characterization of HEO-type systems in the fixed-satellite service   | In force |
| S.1759 | 2006-01 | Analysis of interference from HEO system space operation transmissions<br>in FSS bands into GSO networks and corresponding guidelines to be<br>used for designing and operating TT&C for HEO-type FSS system                                  | In force |
| S.1779 | 2007-01 | Characteristics of fixed-satellite service systems using wideband spreading signals   | In force |
| S.1780 | 2007-01 | Coordination between geostationary-satellite orbit fixed satellite service networks and broadcasting-satellite service networks in the band 17.3-17.8 GHz   | In force |
| S.1781 | 2007-01 | Possible methodology for frequency sharing between bidirectional geostationary fixed-satellite service networks comprising ubiquitously deployed earth stations   | In force |
| S.1782 | 2007-01 | Possibilities for global broadband Internet access by fixed-satellite service systems   | In force |
| S.1783 | 2007-01 | Technical and operational features characterizing high-density applications in the fixed-satellite service  | In force |
| S.1806 | 2008-08 | Availability objectives for hypothetical reference digital paths in the fixed-<br>satellite service operating below 15 GHz  | In force |
| S.1844 | 2009-02 | Cross-polarization reference gain pattern for linearly polarized very small aperture terminals (VSAT) for frequencies in the range 2 to 31 GHz  | In force |
| S.1855 | 2010-01 | Alternative reference radiation pattern for earth station antennas used with satellites in the geostationary-satellite orbit for use in coordination and/or interference assessment in the frequency range from 2 to 31 GHz                   | In force |
| S.1856 | 2010-01 | Methodologies for determining whether an IMT station at a given location operating in the band 3 400-3 600 MHz would transmit without exceeding the power flux-density limits in the Radio Regulations Nos. 5.430A, 5.432A, 5.432B and 5.433A | In force |
| S.1857 | 2010-01 | Methodologies to estimate the off-axis e.i.r.p. density levels and to assess the interference towards adjacent satellites resulting from pointing errors of vehicle mounted earth stations in the 14 GHz frequency band                       | In force |
| S.1878 | 2010-12 | Multi-carrier based transmission techniques for satellite systems   | In force |
| S.1897 | 2012-01 | Cross-layer QoS provisioning in IP-based hybrid satellite-terrestrial networks  | In force |
| S.1899 | 2012-01 | Protection criteria and interference assessment methods for non-GSO inter-satellite links in the 23.183-23.377 GHz band with respect to the space research service  | In force |

#### Series SA : Space applications and meteorology

| Number    | Approval De | ate Recommendation Title  | Status    |
|-----------|-------------|---|-----------|
| SA.362-2  | 1982-07     | Frequencies technically suitable for meteorological satellites  | Withdrawn |
| SA.363-5  | 1994-03     | Space operation systems   | In force  |
| SA.364-5  | 1992-03     | Preferred frequencies and bandwidths for manned and unmanned near-<br>Earth research satellites   | In force  |
| SA.509-2  | 1998-02     | Space research earth station and radio astronomy reference antenna radiation pattern for use in interference calculations, including coordination procedures                  | In force  |
| SA.510-2  | 1997-10     | Feasibility of frequency sharing between the space research service and other services in bands near 14 and 15 GHz - Potential interference from data relay satellite systems | In force  |
| SA.513-1  | 1986-07     | Preferred frequency bands for spacecraft transmitters used as beacons   | Withdrawn |
| SA.514-3  | 1997-10     | Interference criteria for command and data transmission systems<br>operating in the Earth exploration-satellite and meteorological-satellite<br>services                      | In force  |
| SA.578    | 1982-07     | Protection criteria and sharing considerations relating to deep-space research  | Withdrawn |
| SA.609-2  | 2006-03     | Protection criteria for radiocommunication links for manned and unmanned near-Earth research satellites   | In force  |
| SA.1012   | 1994-03     | Preferred frequency bands for deep-space research in the 1-40 GHz range   | Withdrawn |
| SA.1013   | 1994-03     | Preferred frequency bands for deep-space research in the 40-120 GHz range   | Withdrawn |
| SA.1014-2 | 2011-02     | Telecommunication requirements for manned and unmanned deep-space research  | In force  |
| SA.1015-1 | 2007-06     | Bandwidth requirements for deep-space research  | In force  |
| SA.1016   | 1994-03     | Sharing considerations relating to deep-space research  | In force  |
| SA.1017   | 1994-03     | Preferred method for calculating link performance in the space research service   | Withdrawn |
| SA.1018   | 1994-03     | Hypothetical reference system for systems comprising data relay<br>satellites in the geostationary orbit and user spacecraft in low Earth-orbits                              | In force  |
| SA.1019   | 1994-03     | Preferred frequency bands and transmission directions for data relay<br>satellite systems   | In force  |
| SA.1020   | 1994-03     | Hypothetical reference system for the Earth exploration-satellite and meteorological satellite services   | In force  |
| SA.1021   | 1994-03     | Methodology for determining performance objectives for systems in the Earth exploration-satellite and meteorological-satellite services                                       | In force  |
| SA.1022-1 | 1999-10     | Methodology for determining interference criteria for systems in the Earth exploration-satellite and meteorological-satellite services  | In force  |
| SA.1023   | 1994-03     | Methodology for determining sharing and coordination criteria for systems<br>in the Earth exploration-satellite and meteorological-satellite services                         | In force  |

| SA.1024-1 | 1997-06 | Necessary bandwidths and preferred frequency bands for data<br>transmission from Earth exploration satellites (not including<br>meteorological satellites)  | In force  |
|-----------|---------|---|-----------|
| SA.1025-3 | 1999-10 | Performance criteria for space-to-Earth data transmission systems<br>operating in the Earth exploration-satellite and meteorological-satellite<br>services using satellites in low-Earth orbit                          | In force  |
| SA.1026-4 | 2009-02 | Aggregate interference criteria for space-to-Earth data transmission<br>systems operating in the Earth exploration-satellite and meteorological-<br>satellite services using satellites in low-Earth orbit              | In force  |
| SA.1027-4 | 2009-02 | Sharing criteria for space-to-Earth data transmission systems in the Earth exploration-satellite and meteorological-satellite services using satellites in low-Earth orbit  | In force  |
| SA.1030   | 1994-03 | Telecommunication requirements of satellite systems for geodesy and geodynamics   | In force  |
| SA.1071   | 1994-07 | Use of the 13.75 to 14.0 GHz band by the space science services and the fixed satellite service   | Withdrawn |
| SA.1154   | 1995-10 | Provisions to protect the space research (SR), space operations (SO) and Earth exploration-satellite services (EESS) and to facilitate sharing with the mobile service in the 2 025-2 110 MHz and 2 200-2 290 MHz bands | In force  |
| SA.1155   | 1995-10 | Protection criteria related to the operation of data relay satellite systems  | In force  |
| SA.1156   | 1995-10 | Methods of calculating low-orbit satellite visibility statistics  | Withdrawn |
| SA.1157-1 | 2006-03 | Protection criteria for deep-space research   | In force  |
| SA.1158-3 | 2003-05 | Feasibility of frequency sharing in the 1 670-1 710 MHz band between the meteorological-satellite service (space-to-Earth) and the mobile-satellite service (Earth-to-space)  | In force  |
| SA.1159-3 | 2006-03 | Performance criteria for data dissemination, data collection and direct data readout systems in the Earth exploration-satellite service and meteorological-satellite service  | In force  |
| SA.1160-2 | 1999-10 | Interference criteria for data dissemination and direct data readout systems in the earth exploration-satellite and meteorological-satellite services using satellites in the geostationary orbit                       | In force  |
| SA.1161-1 | 1999-10 | Sharing and coordination criteria for data dissemination and direct data readout systems in the Earth exploration-satellite and meteorological-satellite services using satellites in geostationary orbit               | In force  |
| SA.1162-2 | 2003-05 | Performance criteria for service links in data collection and platform<br>location systems in the Earth exploration- and meteorological-satellite<br>services   | In force  |
| SA.1163-2 | 1999-10 | Interference criteria for service links in data collection systems in the Earth exploration-satellite and meteorological-satellite services   | In force  |
| SA.1164-2 | 1999-10 | Sharing and coordination criteria for service links in data collection systems in the Earth exploration-satellite and meteorological-satellite services   | In force  |
| SA.1236   | 1997-02 | Frequency sharing between space research service extra-vehicular activity (EVA) links and fixed and mobile service links in the 410-420 MHz band  | Withdrawn |
| SA.1258-1 | 1999-10 | Sharing of the frequency band 401-403 MHz between the meteorological-<br>satellite service, Earth exploration-satellite service and meteorological<br>Aids service  | In force  |

| SA.1273   | 1997-10 | Power flux-density levels from the space research, space operation and Earth exploration-satellite services at the surface of the Earth required to protect the fixed service in the bands 2 025-2 110 MHz and 2 200-2 290 MHz | In force  |
|-----------|---------|--|-----------|
| SA.1274   | 1997-10 | Criteria for data relay satellite networks to facilitate sharing with systems in the fixed service in the bands 2 025-2 110 MHz and 2 200-2 290 MHz  | In force  |
| SA.1275-3 | 2011-02 | Orbital locations of data relay satellites to be protected from the emissions of fixed service systems operating in the band 2 200-2 290 MHz   | In force  |
| SA.1276-3 | 2011-02 | Orbital locations of data relay satellites to be protected from the emissions of fixed service systems operating in the band 25.25-27.5 GHz  | In force  |
| SA.1277   | 1997-10 | Sharing in the 8 025-8 400 MHz frequency band between the Earth exploration-satellite service and the fixed, fixed-satellite, meteorological-satellite and mobile services in Regions 1, 2 and 3                               | In force  |
| SA.1278   | 1997-10 | Feasibility of sharing between the Earth exploration-satellite service (space-to-Earth) and the fixed, inter-satellite, and mobile services in the band 25.5-27.0 GHz  | Withdrawn |
| SA.1344-1 | 2009-02 | Preferred frequency bands and bandwidths for the transmission of space VLBI data within existing space research service (SRS) allocations  | In force  |
| SA.1345-1 | 2010-01 | Methods for predicting radiation patterns of large antennas used for space research and radio astronomy  | In force  |
| SA.1396   | 1999-04 | Protection criteria for the space research service in the 37-38 and 40-40.5 GHz bands  | In force  |
| SA.1414   | 1999-10 | Characteristics of data relay satellite systems  | In force  |
| SA.1415   | 1999-10 | Sharing between inter-satellite service systems in the frequency band 25.25-27.5 GHz   | In force  |
| SA.1625   | 2003-05 | Feasibility of sharing between the space research service (space-to-<br>Earth) and the fixed, inter-satellite, and mobile services in the band 25.5-<br>27 GHz   | Withdrawn |
| SA.1626   | 2003-05 | Feasibility of sharing between the space research service (space-to-<br>Earth) and the fixed and mobile services in the band 14.8-15.35 GHz  | In force  |
| SA.1627   | 2003-05 | Telecommunication requirements and characteristics of EESS and MetSat service systems for data collection and platform location  | In force  |
| SA.1629   | 2003-05 | Sharing between command links in the space research and space operation services with the fixed, mobile and mobile-satellite services in the frequency band 257-262 MHz  | In force  |
| SA.1742   | 2006-03 | Technical and operational characteristics of interplanetary and deep-<br>space systems operating in the space-to-Earth direction around 283 THz  | In force  |
| SA.1743   | 2006-03 | Maximum allowable degradation to radiocommunication links of the space research and space operation services arising from interference from emissions and radiations from other radio sources                                  | In force  |
| SA.1745   | 2006-03 | Use of the band 1 668.4 1 710 MHz by the meteorological aids service and meteorological-satellite service (space-to-Earth)   | In force  |
| SA.1805   | 2007-06 | Technical and operational characteristics of space-to-space telecommunication systems operating around 354 THz and 366 THz   | In force  |
| SA.1807   | 2007-06 | System characteristics and interference criteria for meteorological satellite systems operating around 18 GHz  | In force  |
| SA.1810   | 2007-06 | System design guidelines for Earth exploration-satellites operating in the band 8 025-8 400 MHz  | In force  |

| SA.1811 | 2007-06 | Reference antenna patterns of large-aperture space research service<br>earth stations to be used for compatibility analyses involving a large<br>number of distributed interference entries in the bands 31.8-32.3 GHz<br>and 37.0-38.0 GHz | In force |
|---------|---------|---|----------|
| SA.1862 | 2010-01 | Guidelines for efficient use of the band 25.5-27.0 GHz by the Earth exploration-satellite service (space-to-Earth) and space research service (space-to-Earth)  | In force |
| SA.1863 | 2010-01 | Radiocommunications used for emergency in manned space flight   | In force |
| SA.1882 | 2011-02 | Technical and operational characteristics of space research service (Earth-to-space) systems for use in the 22.55-23.15 GHz band  | In force |

# Series SF : Frequency sharing and coordination between fixed-satellite and fixed service systems

| Number    | Approval D | ate Recommendation Title   | Status    |
|-----------|------------|--|-----------|
| SF.355-4  | 1992-03    | Frequency sharing between systems in the fixed-satellite service and radio-relay systems in the same frequency bands   | Withdrawn |
| SF.356-4  | 1978-07    | Maximum allowable values of interference from line-of-sight radio-relay systems in a telephone channel of a system in the fixed-satellite service employing frequency modulation, when the same frequency bands are shared by both systems | In force  |
| SF.357-4  | 1997-05    | Maximum allowable values of interference in a telephone channel of an<br>analogue angle-modulated radio-relay system sharing the same<br>frequency bands as systems in the fixed-satellite service   | In force  |
| SF.358-5  | 1995-10    | Maximum permissible values of power flux-density at the surface of the Earth produced by satellites in the fixed-satellite service using the same frequency bands above 1 GHz as line-of-sight radio-relay systems                         | Withdrawn |
| SF.406-8  | 1993-04    | Maximum equivalent isotropically radiated power of radio-relay system<br>transmitters operating in the frequency bands shared with the fixed-<br>satellite service   | Withdrawn |
| SF.558-2  | 1986-07    | Maximum allowable values of interference from terrestrial radio links to<br>systems in the fixed-satellite service employing 8-bit PCM encoded<br>telephony and sharing the same frequency bands   | Withdrawn |
| SF.615-1  | 1997-05    | Maximum allowable values of interference from the fixed-satellite service into terrestrial radio-relay systems which may form part of an ISDN and share the same frequency band below 15 GHz   | Withdrawn |
| SF.674-2  | 2002-05    | Determination of the impact on the fixed service operating in the 11.7-<br>12.2 GHz band when geostationary fixed-satellite service networks in<br>Region 2 exceed power flux-density thresholds in Resolution 77 (WRC-<br>2000)           | In force  |
| SF.675-4  | 2012-01    | Calculation of the maximum power density (averaged over 4 kHz or 1 MHz) of angle-modulated and digital carriers  | In force  |
| SF.765-1  | 2003-02    | Intersection of radio-relay antenna beams with orbits used by space stations in the fixed-satellite service  | In force  |
| SF.766    | 1992-03    | Methods for determining the effects of interference on the performance<br>and the availability of terrestrial radio-relay systems and systems in the<br>fixed-satellite service  | In force  |
| SF.1004   | 1993-04    | Maximum equivalent isotropically radiated power transmitted towards the horizon by earth stations of the fixed-satellite service sharing frequency bands with the fixed service  | Withdrawn |
| SF.1005   | 1993-04    | Sharing between the fixed service and the fixed-satellite service with<br>bidirectional usage in bands above 10 GHz currently unidirectionally<br>allocated  | Withdrawn |
| SF.1006   | 1993-04    | Determination of the interference potential between earth stations of the fixed-satellite service and stations in the fixed service  | In force  |
| SF.1008-1 | 1995-10    | Possible use by space stations in the fixed-satellite service of orbits<br>slightly inclined with respect to the geostationary-satellite orbit in bands<br>shared with the fixed service   | Withdrawn |
| SF.1193   | 1995-10    | Carrier-to-interference calculations between earth stations in the fixed-<br>satellite service and radio-relay systems   | Withdrawn |

| SF.1320   | 1997-08 | Maximum allowable values of power flux-density at the surface of the<br>Earth produced by non-geostationary satellites in the fixed-satellite<br>service used in feeder links for the mobile-satellite service and sharing<br>the same frequency bands with radio-relay systems | Withdrawn |
|-----------|---------|---|-----------|
| SF.1395   | 1999-03 | Minimum propagation attenuation due to atmospheric gases for use in frequency sharing studies between the fixed-satellite service and the fixed service   | In force  |
| SF.1481-1 | 2002-02 | Frequency sharing between systems in the fixed service using high-<br>altitude platform stations and satellite systems in the geostationary orbit<br>in the fixed-satellite service in the bands 47.2-47.5 and 47.9-48.2 GHz  | In force  |
| SF.1482   | 2000-05 | Maximum allowable values of power flux-density (pfd) produced at the Earth's surface by non-GSO satellites in the fixed-satellite service (FSS) operating in the 10.7-12.75 GHz band  | In force  |
| SF.1483   | 2000-05 | Maximum allowable values of power flux-density (pfd) produced at the Earth's surface by non-GSO satellites in the fixed-satellite service (FSS) operating in the 17.7-19.3 GHz band   | In force  |
| SF.1484-1 | 2002-05 | Maximum allowable values of power flux-density at the surface of the Earth produced by non-geostationary satellites in the fixed-satellite service operating in the 37.5-42.5 GHz band to protect the fixed service   | Withdrawn |
| SF.1485   | 2000-05 | Determination of the coordination area for earth stations operating with<br>non-geostationary space stations in the fixed-satellite service in<br>frequency bands shared with the fixed service   | In force  |
| SF.1486   | 2000-05 | Sharing methodology between fixed wireless access systems in the fixed service and very small aperture terminals in the fixed-satellite service in the 3 400-3 700 MHz band   | In force  |
| SF.1572   | 2002-05 | Methodology to evaluate the impact of space-to-Earth interference from<br>the fixed-satellite service to the fixed service in frequency bands where<br>precipitation is the predominant fade mechanism  | In force  |
| SF.1573   | 2002-05 | Maximum allowable values of power flux-density at the surface of the Earth by geostationary satellites in the fixed-satellite service operating in the 37.5-42.5 GHz band to protect the fixed service  | Withdrawn |
| SF.1585   | 2002-09 | Example approach for determination of the composite area within which interference to fixed service stations from earth stations on board vessels when operating in motion near a coastline would need to be evaluated  | In force  |
| SF.1601-2 | 2007-02 | Methodologies for interference evaluation from the downlink of the fixed service using high altitude platform stations to the uplink of the fixed-satellite service using the geostationary satellites within the band 27.5-28.35 GHz   | In force  |
| SF.1602   | 2003-02 | Methodology for determining power flux-density statistics for use in<br>sharing studies between fixed wireless systems and multiple fixed-<br>satellite service satellites  | In force  |
| SF.1648   | 2003-06 | Use of frequencies by earth stations on board vessels transmitting in certain bands allocated to the fixed-satellite service  | In force  |
| SF.1649-1 | 2008-08 | Guidance for determination of interference from earth stations on board vessels to stations in the fixed service when the earth station on board vessels is within the minimum distance   | In force  |
| SF.1650-1 | 2005-02 | The minimum distance from the baseline beyond which in-motion earth stations located on board vessels would not cause unacceptable interference to the terrestrial service in the bands 5 925-6 425 MHz and 14-14.5 GHz   | In force  |
| SF.1707   | 2005-04 | Methods to facilitate the implementation of large numbers of earth stations in the FSS in areas where terrestrial services are also deployed  | In force  |

| SF.1719 | 2005-02 | Sharing between point-to-point and point-to-multipoint fixed service and transmitting earth stations of GSO and non-GSO FSS systems in the 27.5-29.5 GHz band                                    | In force |
|---------|---------|--|----------|
| SF.1843 | 2007-10 | Methodology for determining the power level for high altitude platform stations ground terminals to facilitate sharing with space station receivers in the bands 47.2-47.5 GHz and 47.9-48.2 GHz | In force |

#### Series SM : Spectrum management

| Number    | Approval D | ate Recommendation Title  | Status    |
|-----------|------------|---|-----------|
| SM.182-5  | 2007-02    | Automatic monitoring of occupancy of the radio-frequency spectrum   | Withdrawn |
| SM.239-2  | 1978-07    | Spurious emissions from sound and television broadcast receivers  | Withdrawn |
| SM.326-7  | 1998-11    | Determination and measurement of the power of amplitude-modulated radio transmitters  | In force  |
| SM.328-11 | 2006-05    | Spectra and bandwidth of emissions  | In force  |
| SM.329-11 | 2011-01    | Unwanted emissions in the spurious domain   | In force  |
| SM.331-4  | 1978-07    | Noise and sensitivity of receivers  | In force  |
| SM.332-4  | 1978-07    | Selectivity of receivers  | In force  |
| SM.337-6  | 2008-10    | Frequency and distance separations  | In force  |
| SM.377-4  | 2007-02    | Accuracy of frequency measurements at stations for international monitoring   | In force  |
| SM.378-7  | 2007-02    | Field-strength measurements at monitoring stations  | In force  |
| SM.433-5  | 1992-03    | Methods for the measurement of radio interference and the determination of tolerable levels of interference                         | Withdrawn |
| SM.443-4  | 2007-02    | Bandwidth measurement at monitoring stations  | In force  |
| SM.508    | 1978-07    | Use of radio-noise data in spectrum utilization studies   | Withdrawn |
| SM.575-1  | 2007-02    | Protection of fixed monitoring stations against interference  | In force  |
| SM.667    | 1990-06    | National spectrum management data   | Withdrawn |
| SM.668-1  | 1997-03    | Electronic exchange of information for spectrum management purposes   | In force  |
| SM.669-1  | 1994-07    | Protection ratios for spectrum sharing investigations   | Withdrawn |
| SM.851-1  | 1993-04    | Sharing between the broadcasting service and the fixed and/or mobile services in the VHF and UHF bands                              | In force  |
| SM.852    | 1992-03    | Sensitivity of radio receivers for class of emissions F3E   | In force  |
| SM.853-1  | 1997-10    | Necessary bandwidth   | In force  |
| SM.854-3  | 2011-09    | Direction finding and location determination at monitoring stations   | In force  |
| SM.855-1  | 1997-10    | Multi-service telecommunication systems   | In force  |
| SM.856-1  | 1997-03    | New spectrally efficient techniques and systems   | In force  |
| SM.1009-1 | 1995-10    | Compatibility between the sound-broadcasting service in the band of about 87-108 MHz and the aeronautical services in the band 108- | In force  |
| SM.1045-1 | 1997-07    | Frequency tolerance of transmitters   | In force  |
| SM.1046-2 | 2006-05    | Definition of spectrum use and efficiency of a radio system   | In force  |
| SM.1047-1 | 2001-07    | National spectrum management  | In force  |
|           |            |   |           |

Thursday, August 30, 2012

| SM.1048   | 1994-07 | Design guidelines for a basic automated spectrum management system (BASMS)  | Withdrawn |
|-----------|---------|---|-----------|
| SM.1049-1 | 1995-10 | A method of spectrum management to be used for aiding frequency assignment for terrestrial services in border areas   | In force  |
| SM.1050-2 | 2004-01 | Tasks of a monitoring service   | In force  |
| SM.1051-2 | 1997-07 | Priority of identifying and eliminating harmful interference in the band 406-406.1 MHz  | In force  |
| SM.1052   | 1994-07 | Automatic identification of radio stations  | In force  |
| SM.1053   | 1994-07 | Methods of improving HF direction-finding accuracy at fixed stations  | Withdrawn |
| SM.1054   | 1994-07 | Monitoring of radio emissions from spacecraft at monitoring stations  | In force  |
| SM.1055   | 1994-07 | The use of spread spectrum techniques   | In force  |
| SM.1056-1 | 2007-04 | Limitation of radiation from industrial, scientific and medical (ISM) equipment   | In force  |
| SM.1131   | 1995-10 | Factors to consider in allocating spectrum on a worldwide basis   | In force  |
| SM.1132-2 | 2001-07 | General principles and methods for sharing between radiocommunication services or between radio stations  | In force  |
| SM.1133   | 1995-10 | Spectrum utilization of broadly defined services  | In force  |
| SM.1134-1 | 2007-02 | Intermodulation interference calculations in the land-mobile service  | In force  |
| SM.1135   | 1995-10 | SINPO and SINPFEMO codes  | In force  |
| SM.1138-2 | 2008-10 | Determination of necessary bandwidths including examples for their calculation and associated examples for the designation of emissions   | In force  |
| SM.1139   | 1995-10 | International monitoring system   | In force  |
| SM.1140   | 1995-10 | Test procedures for measuring aeronautical receiver characteristics used for determining compatibility between the sound-broadcasting service in the band of about 87-108 MHz and the aeronautical services in the band 108-118 MHz | In force  |
| SM.1235   | 1997-03 | Performance functions for digital modulation systems in an interference environment   | In force  |
| SM.1265-1 | 2001-07 | National alternative allocation methods   | In force  |
| SM.1266   | 1997-07 | Adaptive MF/HF systems  | In force  |
| SM.1267   | 1997-07 | Collection and publication of monitoring data to assist frequency assignment for geostationary satellite systems  | In force  |
| SM.1268-2 | 2011-02 | Method of measuring the maximum frequency deviation of FM broadcast emissions at monitoring stations  | In force  |
| SM.1269   | 1997-07 | Classification of direction finding bearings  | Withdrawn |
| SM.1270   | 1997-07 | Additional information for monitoring purposes related to classification and designation of emission  | In force  |
| SM.1271   | 1997-10 | Efficient spectrum utilization using probabilistic methods  | In force  |
| SM.1370-1 | 2001-07 | Design guidelines for developing advanced automated spectrum management systems   | In force  |

| SM.1392-2                | 2011-02 | Essential requirements for a spectrum monitoring system for developing countries  | In force  |
|--------------------------|---------|---|-----------|
| SM.1393                  | 1999-01 | Common formats for the exchange of information between monitoring stations  | In force  |
| SM.1394                  | 1999-01 | Common format for Memorandum of Understanding between the agreeing countries regarding cooperation in spectrum monitoring matters                     | In force  |
| SM.1413-2                | 2005-06 | Radiocommunication Data Dictionary for notification and coordination purposes   | In force  |
| SM.1446                  | 2000-04 | Definition and measurement of intermodulation products in transmitter using frequency, phase, or complex modulation techniques                        | In force  |
| SM.1447                  | 2000-04 | Monitoring of the radio coverage of land mobile networks to verify compliance with a given licence  | In force  |
| SM.1448<br>Corrigendum 1 | 2000-05 | Corrigendum to Rec. ITU-R.SM.1448   | In force  |
| SM.1448                  | 2000-05 | Determination of the coordination area around an earth station in the frequency bands between 100 MHz and 105 GHz                                     | In force  |
| SM.1535                  | 2001-07 | The protection of safety services from unwanted emissions   | In force  |
| SM.1536                  | 2001-07 | Frequency channel occupancy measurements  | Withdrawn |
| SM.1537                  | 2001-07 | Automation and integration of spectrum monitoring systems with automated spectrum management  | In force  |
| SM.1538-2                | 2006-05 | Technical and operating parameters and spectrum requirements for short range radiocommunication devices   | Withdrawn |
| SM.1539-1                | 2002-11 | Variation of the boundary between the out-of-band and spurious domains required for the application of Recommendations ITU-R SM.1541 and ITU-R SM.329 | In force  |
| SM.1540                  | 2001-07 | Unwanted emissions in the out-of-band domain falling into adjacent allocated bands  | In force  |
| SM.1541-4                | 2011-09 | Unwanted emissions in the out-of-band domain  | In force  |
| SM.1542                  | 2001-07 | The protection of passive services from unwanted emissions  | In force  |
| SM.1598                  | 2002-10 | Methods of radio direction finding and location on time division multiple access and code division multiple access signals                            | In force  |
| SM.1599-1                | 2007-02 | Determination of the geographical and frequency distribution of the spectrum utilization factor for frequency planning purposes                       | In force  |
| SM.1600                  | 2002-11 | Technical identification of digital signals   | In force  |
| SM.1603                  | 2003-02 | Spectrum redeployment as a method of national spectrum management   | In force  |
| SM.1604                  | 2003-02 | Guidelines for an upgraded spectrum management system for developing countries  | In force  |
| SM.1633                  | 2003-06 | Compatibility analysis between a passive service and an active service allocated in adjacent and nearby bands   | In force  |
| SM.1681                  | 2004-05 | Measuring of low-level emissions from space stations at monitoring earth stations using noise reduction techniques                                    | In force  |
| SM.1682-1                | 2011-09 | Methods for measurements on digital broadcasting signals  | In force  |
| SM.1708-1                | 2011-09 | Field-strength measurements along a route with geographical coordinate registrations  | In force  |
|                          |         |   |           |

Thursday, August 30, 2012

| SM.1723-2 | 2011-09 | Mobile spectrum monitoring unit   | In force  |
|-----------|---------|---|-----------|
| SM.1751   | 2006-05 | An additional methodology for the evaluation of the effect of interference<br>between radiocommunication networks operating in a shared frequency<br>band | In force  |
| SM.1752   | 2006-05 | Limits for unwanted emissions under free-space condition  | In force  |
| SM.1753-1 | 2010-04 | Methods for measurements of radio noise   | In force  |
| SM.1754   | 2006-05 | Measurement techniques of ultra-wideband transmissions  | In force  |
| SM.1755   | 2006-05 | Characteristics of ultra-wideband technology  | In force  |
| SM.1756   | 2006-05 | Framework for the introduction of devices using ultra-wideband technology   | In force  |
| SM.1757   | 2006-05 | Impact of devices using ultra-wideband technology on systems operating within radiocommunication services   | In force  |
| SM.1792   | 2007-02 | Measuring sideband emissions of T-DAB and DVB-T transmitters for<br>monitoring purposes   | In force  |
| SM.1793   | 2007-02 | Measuring frequency channel occupancy using the technique used for<br>frequency band measurement  | Withdrawn |
| SM.1794   | 2007-02 | Wideband instantaneous bandwidth spectrum monitoring systems  | In force  |
| SM.1809   | 2007-04 | Standard data exchange format for frequency band registrations and measurements at monitoring stations  | In force  |
| SM.1836   | 2007-12 | Test procedure for measuring the properties of the IF filter of radio monitoring receivers  | In force  |
| SM.1837   | 2007-12 | Test procedure for measuring the 3rd order intercept point (IP3) level of radio monitoring receivers  | In force  |
| SM.1838   | 2007-12 | Test procedure for measuring the noise figure of radio monitoring receivers   | In force  |
| SM.1839-1 | 2011-09 | Test procedure for measuring the scanning speed of radio monitoring receivers   | In force  |
| SM.1840   | 2007-12 | Test procedure for measuring the sensitivity of radio monitoring receivers using analogue-modulated signals   | In force  |
| SM.1875   | 2010-04 | DVB T coverage measurements and verification of planning criteria   | In force  |
| SM.1879-1 | 2011-09 | The impact of power line high data rate telecommunication systems on radiocommunication systems below 30 MHz and between 80 and 470 MHz                   | In force  |
| SM.1880   | 2011-02 | Spectrum occupancy measurement  | In force  |
| SM.1896   | 2011-11 | Frequency ranges for global or regional harmonization of short-range devices (SRDs)   | In force  |

#### Series SNG : Satellite news gathering

| Number     | Approval Date | e Recommendation Title   | Status   |
|------------|---------------|--|----------|
| SNG.722-1  | 1992-03       | Uniform technical standards (analogue) for satellite news gathering (SNG)  | In force |
| SNG.770-2  | 2012-01       | Uniform operational procedures for digital satellite news gathering (DSNG)   | In force |
| SNG.771-1  | 1993-04       | Auxiliary coordination satellite circuits for SNG terminals  | In force |
| SNG.1007-1 | 1995-10       | Uniform technical standards (digital) for satellite news gathering (SNG)   | In force |
| SNG.1070   | 1994-09       | An automatic transmitter identification system (ATIS) for analogue-<br>modulation transmissions for satellite news gathering and outside<br>broadcasts | In force |
| SNG.1152   | 1995-10       | Use of digital transmission techniques for Satellite News Gathering (SNG) (sound)  | In force |
| SNG.1421   | 1999-11       | Common operating parameters to ensure interoperability for transmission of digital television news gathering   | In force |
| SNG.1561   | 2002-03       | Digital transmission of high-definition television for satellite news gathering and outside broadcasting   | In force |
| SNG.1710   | 2005-04       | Satellite news gathering carriers universal access procedures  | In force |

#### Number **Approval Date Recommendation Title Status** TF.374-5 1999-04 Precise frequency and time-signal transmissions In force TF.375-2 1982-07 Standard-frequency and time-signal emissions in additional frequency Withdrawn bands TF.376-1 1966-07 Avoidance of external interference with emissions of the standard-Withdrawn frequency service in the bands allocated to that service TF.457-2 1997-10 Use of the modified Julian date by the standard-frequency and time-In force signal services TF.458-3 1998-02 International comparisons of atomic time scales Withdrawn TF.460-6 2002-02 Standard-frequency and time-signal emissions In force TF.485-2 1990-06 Use of time scales in the field of standard-frequency and time services Withdrawn TF.486-2 1998-02 Use of UTC frequency as reference in standard frequency and time signal In force emissions TF.535-2 1998-02 Use of the term UTC In force TF.536-2 2003-05 Time-scale notations Withdrawn TF.537 1978-07 Reduction of mutual interference between emissions of the standard-Withdrawn frequency and time-signal service on the allocated frequencies in bands 6 and 7 TF.538-3 1994-03 Measures for random instabilities in frequency and time (phase) In force TF.582-2 1998-02 Time and frequency reference signal dissemination and coordination Withdrawn using satellite methods TF.583-6 2003-05 In force Time codes TF.685 1990-06 International synchronization of UTC time scale Withdrawn TF.686-2 2002-02 Glossary and definitions of time and frequency terms In force TF.767-2 2001-03 Use of global navigation satellite systems for high-accuracy time transfer In force TF.768-7 2011-04 Standard frequencies and time signals In force TF.1010-1 1997-10 Relativistic effects in a coordinate time system in the vicinity of the Earth In force TF.1011-1 1997-10 Systems, techniques and services for time and frequency transfer In force TF.1153-3 2010-04 The operational use of two-way satellite time and frequency transfer In force employing pseudorandom noise codes Withdrawn TF.1552 2002-02 Time scales for use by standard-frequency and time-signal services 2010-04 Trusted time source for Time Stamp Authority In force TF.1876

#### Series TF : Time signals and frequency standards emissions

## *List of ITU-R Recommendations on DVD* 2012 Edition 2

## Series V : Vocabulary and related subjects

| Number  | Approval De | ate Recommendation Title   | Status    |
|---------|-------------|--|-----------|
| V.430-3 | 1990-06     | Use of the international system of units (SI)  | In force  |
| V.431-7 | 2000-05     | Nomenclature of the frequency and wavelength bands used in telecommunications          | In force  |
| V.461-5 | 1993-04     | Graphical symbols and rules for the preparation of documentation in telecommunications | In force  |
| V.573-5 | 2007-09     | Radiocommunication vocabulary  | In force  |
| V.574-4 | 2000-05     | Use of the decibel and the neper in telecommunications                                 | In force  |
| V.607-3 | 2000-05     | Terms and symbols for information quantities in telecommunications                     | In force  |
| V.608-2 | 1993-04     | Letter symbols for telecommunications  | Withdrawn |
| V.662-3 | 2000-05     | Terms and definitions  | In force  |
| V.663-1 | 1990-06     | Use of certain terms linked with physical quantities                                   | In force  |
| V.664   | 1986-07     | Adoption of the CCITT Specification and Description Language (SDL)                     | Withdrawn |
| V.665-2 | 2000-05     | Traffic intensity unit   | In force  |
| V.666-2 | 1993-04     | Abbreviations and initials used in telecommunications                                  | In force  |

Recommendations count: 12

Total Recommendations count: 1383

#### Series BO : Satellite delivery

| Number    | Approval | Date Report Title  | Status    |
|-----------|----------|--|-----------|
| BO.215-7  | 1990     | Systems for the broadcasting satellite service (sound and television)  | In force  |
| BO.473-5  | 1990     | Characteristics of receiving equipment for the broadcasting-satellite service  | In force  |
| BO.631-4  | 1990     | Frequency sharing between the broadcasting-satellite service (sound and television) and terrestrial services   | In force  |
| BO.632-4  | 1990     | Technically suitable methods of modulation   | In force  |
| BO.633-3  | 1986     | Orbit and frequency planning in the broadcasting-satellite service   | In force  |
| BO.634-4  | 1990     | Measured interference protection ratios for planning television broadcasting systems   | In force  |
| BO.807-3  | 1990     | Unwanted emissions from broadcasting-satellite space stations  | In force  |
| BO.808-3  | 1990     | Space segment technology   | In force  |
| BO.809-3  | 1990     | Inter-regional sharing of the 11.7 to 12.75 GHz frequency band between the broadcasting-satellite service and the fixed-satellite service  | In force  |
| BO.810-4  | 1994     | Transmitting and receiving antenna technology and reference patterns for the BSS   | In force  |
| BO.811-2  | 1986     | Planning elements including those used in the establishment of plans of<br>frequency assignements and orbital positions for the broadcasting-satellite<br>service in the 12 GHz band | In force  |
| BO.812-4  | 1994     | Computer programs for planning broadcasting-satellite services in the 12 GHz band  | In force  |
| BO.814-2  | 1986     | Factors to be considered in the choice of polarization for planning the broadcasting-satellite service   | In force  |
| BO.951    | 1982     | Sharing between the inter-satellite service and the broadcasting-satellite service in the vicinity of 23 GHz   | Withdrawn |
| BO.952-2  | 1990     | Technical characteristics of feeder links to broadcasting satellites   | In force  |
| BO.953-2  | 1990     | Digital coding for the emission of high-quality sound signals in satellite broadcasting (15 kHz nominal bandwidth)   | In force  |
| BO.954-2  | 1990     | Multiplexing methods for the emission of several digital audio signals and also data signals in broadcasting   | In force  |
| BO.955-3  | 1994     | Satellite sound broadcasting to vehicular, portable and fixed receivers in the range 500-3 000 MHz   | Withdrawn |
| BO.1073-1 | 1990     | Television standards for the broadcasting-satellite service  | In force  |
| BO.1074-1 | 1990     | Satellite transmission of multiplexed analogue component (MAC) vision signals  | Withdrawn |
| BO.1075-2 | 1994     | High-definition television by satellite  | In force  |
| BO.1076   | 1986     | Considerations affecting the accomodation of spacecraft service functions (TTC) within the broadcasting-satellite and feeder-link service bands                                      | Withdrawn |
| BO.1227-2 | 1998     | Satellite broadcasting systems of integrated services digital broadcasting   | In force  |
|           |          |  |           |

| BO.1228   | 1990 | High quality sound/data standards for the broadcasting satellite service in the 12 GHz band                             | In force |
|-----------|------|---|----------|
| BO.2006   | 1995 | Introduction of satellite and complementary terrestrial digital sound broadcasting in the WARC-92 frequency allocations | In force |
| BO.2007-1 | 1998 | Considerations for the introduction of broadcasting satellite service high definition television systems                | In force |
| BO.2008-1 | 1998 | Digital multiprogramme broadcasting by satellite  | In force |
| BO.2016   | 1997 | BSS systems for the 40.5-42.5 GHz band  | In force |
| BO.2019   | 1999 | Interference calculation methods  | In force |
| BO.2029   | 2002 | Broadcasting-satellite service earth station antenna pattern measurements and related analyses                          | In force |
| BO.2071-1 | 2011 | System parameters of BSS between 17.3 GHz and 42.5 GHz and associated feeder links                                      | In force |
| BO.2101   | 2007 | Digital satellite broadcasting system (television, sound and data) with flexible configuration                          | In force |
| BO.2102   | 2007 | Multiple-feed BSS receiving antennas  | In force |

Reports count:

## Series BR : Recording for production, archival and play-out; film for television

| Number         | Approval Dat | e Report Title  | Status    |
|----------------|--------------|---|-----------|
| BR.1229        | 2000         | Recording of high-definition televison programmes on cinematographic film | Withdrawn |
| Reports count. | : 1          |   |           |

## Series BS : Broadcasting service (sound)

| Number    | Approval Do | tte Report Title   | Status    |
|-----------|-------------|--|-----------|
| BS.300-7  | 1990        | Stereophonic or multi-dimensional sound in frequency-modulation sound  | In force  |
| BS.302-1  | 1978        | Interference to sound broadcasting in the shared bands in the Tropical Zone  | In force  |
| BS.303-3  | 1986        | Determination of the effects of atmospheric noise on the grade of reception in the Tropical Zone                               | In force  |
| BS.304-3  | 1990        | Fading characteristics for sound broadcasting in the Tropical Zone   | In force  |
| BS.401-6  | 1990        | Transmitting antennas in LF and MF broadcasting  | In force  |
| BS.458-5  | 1990        | Characteristics of systems in LF, MF and HF broadcasting   | In force  |
| BS.463-5  | 1990        | Transmission of several sound programmes or other signals with a single transmitter in frequency-modulation sound broadcasting | In force  |
| BS.464-5  | 1990        | Polarization of emissions in frequency-modulation broadcasting in band 8 (VHF)   | In force  |
| BS.472-2  | 1990        | Single-sideband reception for re-broadcasting applications within the Tropical Zone  | In force  |
| BS.516-4  | 1990        | Field strength resulting from several electromagnetic fields   | In force  |
| BS.795-3  | 1990        | Transmission of two or more sound programmes or information channels in television   | Withdrawn |
| BS.799-2  | 1986        | Subjective assessment of quality of sound in broadcasting using digital techniques   | In force  |
| BS.943-1  | 1986        | Protection of sound-broadcasting stations against atmospheric electricity  | In force  |
| BS.944    | 1982        | Theoretical network planning   | In force  |
| BS.945-2  | 1990        | Methods for the assessment of multiple interference  | In force  |
| BS.946-1  | 1990        | Frequency-planning constraints of FM sound broadcasting in band 8 (VHF)  | In force  |
| BS.1058   | 1986        | Minimum AF and RF signal-to-noise ratio required for broadcasting in band 7 (HF)   | In force  |
| BS.1059-1 | 1990        | Characteristics of single-sideband systems in HF broadcasting  | In force  |
| BS.1060-1 | 1990        | Energy saving methods in amplitude modulation broadcasting and their influence on reception quality                            | In force  |
| BS.1063   | 1986        | Prediction and control of re-radiation in MF broadcasting  | In force  |
| BS.1065   | 1986        | The RF spectrum of frequency-modulation sound-broadcasting<br>transmitters   | In force  |
| BS.1067   | 1986        | Improvement of the reception quality in automobiles for frequency modulation sound broadcasts in band 8 (VHF)                  | In force  |
| BS.1071   | 1986        | Sampling frequency conversion and synchronization of digital sound signals   | In force  |
| BS.1200   | 1990        | The effect of delay in sound-programme operations  | In force  |
| BS.1201   | 1990        | Number of HF sound broadcasting transmitters using a single channel  | In force  |

Thursday, August 30, 2012

| BS.1203-1 | 1994 | Digital sound broadcasting to vehicular, portable and fixed receivers using terrestrial transmitters in the UHF/VHF bands                                   | In force  |
|-----------|------|---|-----------|
| BS.1204   | 1990 | Automatic synchronization of video and audio after transmission   | In force  |
| BS.2001   | 1994 | Ancillary services for the visually impaired and hearing impaired in multi-<br>channel sound systems  | In force  |
| BS.2002   | 1994 | Introduction of satellite and complementary terrestrial digital sound broadcasting in the WARC-92 frequency allocations                                     | In force  |
| BS.2004   | 1995 | Digital broadcasting systems intended for AM bands  | Withdrawn |
| BS.2037   | 2004 | Evaluating fields from terrestrial broadcasting transmitting systems<br>operating in any frequency band for assessing exposure to non-ionizing<br>radiation | In force  |
| BS.2054-2 | 2011 | Audio levels and loudness   | In force  |
| BS.2103-1 | 2008 | Short-term loudness metering  | In force  |
| BS.2104   | 2007 | FM modulator interference to broadcast services   | In force  |
| BS.2105   | 2007 | Information relating to the HF broadcasting service   | In force  |
| BS.2144   | 2009 | Planning parameters and coverage for Digital Radio Mondiale (DRM) broadcasting at frequencies below 30 MHz  | In force  |
| BS.2159-3 | 2011 | Multichannel sound technology in home and broadcasting applications   | In force  |
| BS.2161   | 2009 | Low delay audio coding for broadcasting applications  | In force  |
| BS.2208   | 2010 | Possible use of VHF Band I for digital sound broadcasting services  | In force  |
| BS.2213   | 2011 | Impact of audio signal processing and compression techniques on terrestrial FM sound broadcasting emissions at VHF  | In force  |
| BS.2214   | 2011 | Planning parameters for terrestrial digital sound broadcasting systems in VHF bands   | In force  |
| BS.2217   | 2011 | Compliance material for ITU-R BS.1770   | In force  |

Reports count:

## Series BT : Broadcasting service (television)

| Number    | Approval 1 | Date Report Title  | Status    |
|-----------|------------|--|-----------|
| BT.311-6  | 1986       | The present position of standards conversion   | Withdrawn |
| BT.312-5  | 1990       | Constitution of a system of stereoscopic television  | Withdrawn |
| BT.476-1  | 1974       | Colorimetric standards in colour television  | In force  |
| BT.482-1  | 1986       | Recommended characteristics for collective and individual antenna systems for domestic reception of signal from terrestrial transmitters | In force  |
| BT.484-2  | 1986       | Ratio of picture-signal to synchronizing-signal  | Withdrawn |
| BT.485-1  | 1982       | Contribution to the planning of broadcasting services  | In force  |
| BT.624-4  | 1990       | Characteristics of television systems  | In force  |
| BT.626-1  | 1978       | Simplification of synchronizing signals in television  | Withdrawn |
| BT.628-4  | 1990       | Automatic monitoring and control of television operation   | In force  |
| BT.629-4  | 1990       | Digital coding of colour television signals  | In force  |
| BT.801-4  | 1990       | The present state of high-definition television  | In force  |
| BT.802-3  | 1990       | Additional services using broadcasting channels  | In force  |
| BT.804    | 1978       | Definitions of parameters for automatic measurement of televison insertion test signals  | In force  |
| BT.956-2  | 1990       | Data broadcasting systems: signal and service quality field trials and theoretical studies   | In force  |
| BT.958-1  | 1986       | Possibilities for incorporating the sound information in the video signal in terrestrial television                                      | In force  |
| BT.959-2  | 1990       | Experimental results relating picture quality to objective magnitude of impairment   | In force  |
| BT.961-2  | 1994       | Terrestrial television broadcasting in bands above 2 GHz   | Withdrawn |
| BT.962-2  | 1990       | The filtering, sampling and multiplexing for digital encoding of colour television signals   | In force  |
| BT.1077-1 | 1990       | Enhanced 4:3 aspect ratio television systems   | Withdrawn |
| BT.1079-1 | 1990       | General characteristics of a conditional-access broadcasting system  | In force  |
| BT.1080-1 | 1990       | International exchange of television programmes with data-encoded captions (sub-titles)  | In force  |
| BT.1081-1 | 1990       | The relative timing of sound and picture signals   | In force  |
| BT.1082-1 | 1990       | Studies toward the unification of picture assessment methodology   | In force  |
| BT.1088-2 | 2009       | Interfaces for digital video signals in 525-line and 625-line television systems   | In force  |
| BT.1206   | 1990       | Methods for picture quality assessment in relation to impairments from digital coding of television signals                              | In force  |
| BT.1207   | 1990       | Reference model for data broadcasting  | In force  |

Thursday, August 30, 2012

**Page 6 of 27** 

| BT.1208   | 1990 | Telesoftware Services   | In force  |
|-----------|------|---|-----------|
| BT.1209   | 1990 | Measures for the avoidance of possible interference generated by digital television studio equipment  | In force  |
| BT.1210   | 1990 | Error-protection strategies for data broadcasting services  | In force  |
| BT.1212   | 1990 | Measurements and test signals for digitally encoded colour television signals   | In force  |
| BT.1213   | 1990 | Test pictures and sequences for subjective assessments of digital codecs  | In force  |
| BT.1217   | 1990 | Future development of HDTV  | In force  |
| BT.1218   | 1990 | Measurements in HDTV  | In force  |
| BT.1219   | 1990 | Synchronizing signals for the component digital studio  | In force  |
| BT.1220   | 1990 | Wider aspect ratio television systems   | In force  |
| BT.1223   | 1990 | A layered model approach for digital television   | In force  |
| BT.1225   | 1990 | Data broadcasting systems and services in an HDTV environment   | In force  |
| BT.1226   | 1990 | Characteristic of a programme delivery control (PDC) system for video recording   | In force  |
| BT.1237   | 1990 | Satellite news gathering  | In force  |
| BT.2003   | 1994 | The harmonization of HDTV standards between broadcast and non-<br>broadcast applications  | In force  |
| BT.2005   | 1995 | Bit-rate reduction for digital TV signals   | Withdrawn |
| BT.2017   | 1998 | Stereoscopic television MPEG-2 multi-view profile   | In force  |
| BT.2018   | 1998 | Study of the system C ghost cancelling reference signal for the evaluation and correction of linear distortion in the television chain  | Withdrawn |
| BT.2020-1 | 2000 | Objective quality assessment technology in a digital environment  | In force  |
| BT.2025   | 2000 | Progress on development and implementation of interactivity broadcasting systems and services   | In force  |
| BT.2035-2 | 2008 | Guidelines and techniques for the evaluation of digital terrestrial television broadcasting systems including assessment of their coverage areas                                | In force  |
| BT.2036   | 2003 | The problem of unauthorized redistribution of broadcast content via the Internet  | In force  |
| BT.2042-5 | 2011 | Technologies in the area of extremely high resolution imagery   | In force  |
| BT.2043   | 2004 | Analogue television systems currently in use throughout the world   | In force  |
| BT.2044   | 2004 | Tolerable round-trip time delay for sound-programme and television broadcast programme inserts - Context and rationale  | In force  |
| BT.2049-5 | 2011 | Broadcasting of multimedia and data applications for mobile reception   | In force  |
| BT.2052   | 2005 | Protection of end-users' privacy in interactive broadcasting systems  | In force  |
| BT.2053-2 | 2009 | Large screen digital imagery  | In force  |
| BT.2069-5 | 2011 | Tuning ranges and operational characteristics of terrestrial electronic news gathering (ENG), television outside broadcast (TVOB) and electronic field production (EFP) systems | In force  |

| BT.2070-1 | 2009 | Broadcasting of content protection signalling for television   | In force |
|-----------|------|--|----------|
| BT.2075   | 2006 | Protection requirements for terrestrial television broadcasting services in the 620-790 MHz band against potential interference from GSO and non-GSO broadcasting-satellite systems and networks | In force |
| BT.2088   | 2006 | Stereoscopic television  | In force |
| BT.2129   | 2008 | User requirements for a Flat Panel Display (FPD) as a Master monitor in an HDTV programme production environment   | In force |
| BT.2137   | 2009 | Coverage prediction methods and planning software for digital terrestrial television broadcasting (DTTB) networks  | In force |
| BT.2138   | 2009 | Radiation pattern characteristics of UHF television receiving antennas   | In force |
| BT.2139   | 2009 | Diversity reception of digital terrestrial television broadcasting signals   | In force |
| BT.2140-4 | 2011 | Transition from analogue to digital terrestrial broadcasting   | In force |
| BT.2142-1 | 2010 | The effect of the scattering of digital television signals from a wind turbine   | In force |
| BT.2143-2 | 2010 | Boundary coverage assessment of digital terrestrial television broadcasting signals  | In force |
| BT.2160-2 | 2011 | Features of three-dimensional television video systems for broadcasting  | In force |
| BT.2207-1 | 2011 | Accessibility to broadcasting services for persons with disabilities   | In force |
| BT.2209   | 2010 | Calculation model for SFN reception and reference receiver<br>characteristics of ISDB-T system   | In force |
| BT.2215-1 | 2011 | Measurements of Protection Ratios and Overload Thresholds for<br>Broadcast TV Receivers  | In force |
| BT.2216   | 2011 | A perspective of the hierarchy of digital television image systems based on human viewing behaviour  | In force |
| BT.2245   | 2011 | HDTV test materials for assessment of picture quality  | In force |
| BT.2246   | 2011 | The present state of ultra high definition television  | In force |
| BT.2247   | 2011 | Field measurement and analysis of compatibility between DTTB and IMT   | In force |
| BT.2248   | 2011 | A conceptual method for the representation of loss of broadcast coverage   | In force |
| BT.2249   | 2011 | Digital broadcasting and multimedia video information systems  | In force |

Reports count:

#### Series F : Fixed service

| Number   | Approval Date | e Report Title  | Status   |
|----------|---------------|---|----------|
| F.2047   | 2005          | Technology developments and application trends in the fixed service   | In force |
| F.2058   | 2006          | Design techniques applicable to broadband fixed wireless access systems conveying Internet protocol packets or asynchronous transfer mode cells     | In force |
| F.2059   | 2005          | Antenna characteristics of point-to-point fixed wireless systems to facilitate coordination in high spectrum use areas                              | In force |
| F.2060   | 2006          | Fixed service use in the IMT-2000 transport network   | In force |
| F.2061   | 2006          | HF fixed radiocommunications systems  | In force |
| F.2062   | 2005          | Enhanced high frequency digital radiocommunication systems capable of providing enhanced applications   | In force |
| F.2086-1 | 2010          | Technical and operational characteristics and applications of broadband wireless access in the fixed service  | In force |
| F.2087   | 2006          | Requirements for high frequency (HF) radiocommunication systems in the fixed service  | In force |
| F.2106-1 | 2010          | Fixed service applications using free-space optical links   | In force |
| F.2107-2 | 2011          | Characteristics and applications of fixed wireless systems operating in frequency ranges between 57 GHz and 134 GHz                                 | In force |
| F.2108   | 2007          | Fixed service system parameters for different frequency bands   | In force |
| F.2239   | 2011          | Coexistence between fixed service operating in 71-76 GHz, 81-86 GHz and 92-94 GHz bands and passive services  | In force |
| F.2240   | 2011          | Interference analysis modelling for sharing between HAPS gateway links in the fixed service and other systems/services in the range 5 850-7 075 MHz | In force |

Reports count:

#### Series M : Mobile, radiodetermination, amateur and related satellite services

| Number  | Approval Date | e Report Title  | Status    |
|---------|---------------|---|-----------|
| M.319-7 | 1990          | Characteristics of equipment and principles governing the assignment of frequency channels between 25 and 1000 MHz for land mobile services                   | In force  |
| M.358-5 | 1986          | Protection ratios and minimum field strengths required in the mobile services   | Withdrawn |
| M.499-5 | 1990          | Radio-paging systems  | Withdrawn |
| M.501-5 | 1990          | Digital selective-calling systems for future operational requirements of the maritime mobile service  | Withdrawn |
| M.509-5 | 1990          | Modulation and coding technique for mobile satellite service  | Withdrawn |
| M.585-4 | 1990          | Introduction of direct-printing telegraph equipment in the maritime mobile service  | Withdrawn |
| M.588-1 | 1978          | Black and white facsimile transmissions over combined metallic and radio circuits in the maritime mobile service and in the maritime mobile-satellite service | In force  |
| M.739-1 | 1986          | Interference due to intermodulation products in the land mobile service between 25 and 100 MHz  | In force  |
| M.740-2 | 1986          | General aspects of cellular systems   | Withdrawn |
| M.741-3 | 1990          | Multi-channel land mobile systems for dispatch traffic (with or without PSTN interconnection)   | In force  |
| M.742-4 | 1995          | Public land mobile telephone systems  | Withdrawn |
| M.743-1 | 1982          | Transmission quality assessment of digital channels in maritime mobile services   | Withdrawn |
| M.744-2 | 1986          | Use of class J3E emissions for distress and safety purposes   | Withdrawn |
| M.751   | 1978          | Methods for the subjective assessment of speech quality in the maritime mobile-satellite service  | Withdrawn |
| M.760-3 | 2004          | Link power budgets for a maritime mobile-satellite service  | In force  |
| M.761-3 | 1990          | Technical and operating characteristics of distress systems in the mobile-<br>satellite service   | Withdrawn |
| M.762-2 | 1986          | Effects of multipath on digital transmission overlinks in the maritime mobile-satellite service   | Withdrawn |
| M.763-3 | 1990          | Signal level variation due to multipath effects and blockage by ship's superstructure in maritime mobile-satellite service links                              | Withdrawn |
| M.764-3 | 2006          | Interference and noise problems for maritime mobile-satellite systems using frequencies in the region of 1.5 and 1.6 GHz                                      | Withdrawn |
| M.766-2 | 1990          | Feasibility of frequency sharing between the GPS and other services   | In force  |
| M.778-2 | 1990          | Wireless communication systems for persons with impaired hearing  | In force  |
| M.899-1 | 1990          | Systems of modulation with high spectrum efficiency for the land mobile service   | Withdrawn |
| M.900-2 | 1990          | Radio-paging systems - Standardization of code and format   | Withdrawn |
|         |               |   |           |

| M.901-2  | 1990 | Frequency assignement methods for trunked mobile radio systems   | In force  |
|----------|------|--|-----------|
| M.902-1  | 1990 | Leaky-feeder systems in the land mobile service  | In force  |
| M.903-2  | 1990 | Digital transmission in the land mobile service  | Withdrawn |
| M.904-2  | 1990 | Automatic determination of location and guidance in the land mobile service  | In force  |
| M.908-1  | 1986 | Channel requirements for a digital selective-calling system  | In force  |
| M.910-1  | 1986 | Sharing between the maritime mobile service and the aeronautical radionavigation service in the band 415-526.5 kHz   | In force  |
| M.914-2  | 1990 | Efficient use of the radio spectrum by radar stations in the radiodetermination service  | In force  |
| M.917-2  | 1990 | Permissible levels of interference into telephone channels in the maritime mobile-satellite service  | Withdrawn |
| M.918-1  | 1990 | Availability of communications circuits in the maritime mobile-satellite service   | In force  |
| M.919-2  | 1990 | Performance of a low-altitude, polar-orbiting satellite EPIRB system   | Withdrawn |
| M.920-2  | 1990 | Maritime satellite system performance at low elevation angles  | Withdrawn |
| M.921-3  | 2006 | Fundamental design examples of digital ship earth stations   | Withdrawn |
| M.922-1  | 1986 | Reference radiation pattern for ship Earth-station antennas  | Withdrawn |
| M.923-1  | 1986 | Design of frequency plans for satellite transmission of SCPC carriers using non-linear transponders  | Withdrawn |
| M.926    | 1982 | Factors that should be considered when establishing protection criteria for aeronautical safety services   | Withdrawn |
| M.927-2  | 1990 | General considerations relative to harmful interference from the viewpoint of the aeronautical mobile service and the aeronautical radionavigation service | In force  |
| M.929-2  | 1990 | Compatibility between the broadcasting service in the band of about 87-<br>108 MHz and the aeronautical services in the band 108-136 MHz                   | In force  |
| M.1018-1 | 1990 | Co-channel and adjacent-channel coordination criteria for simultaneous use of different modulation techniques in the mobile service                        | Withdrawn |
| M.1019   | 1986 | Sources of unwanted signals in multiple base station sites in the land mobile service  | Withdrawn |
| M.1020   | 1986 | Adaptation of system specification to ease the practical implementation of radio equipment   | Withdrawn |
| M.1021   | 1986 | Equipment characteristics for digital transmission in the land mobile services   | In force  |
| M.1022-1 | 1990 | Multi-transmitter radio systems using quasi-synchronous (simulcast) transmission in the land mobile service  | Withdrawn |
| M.1023-1 | 1990 | Frequency sharing between the land mobile service dans the broadcasting service (television) below 1 GHz   | In force  |
| M.1024   | 1986 | Personal radio system  | Withdrawn |
| M.1025-1 | 1990 | Technical and operating characteristics of cordless telephones   | In force  |

| M.1026-1   | 1990   | Use of narrow-band direct-printing telegraph equipment on a single-<br>frequency radio channel  | Withdrawn   |
|--|--|---|---|
| M.1027-1   | 1990   | Adaptive coding/decoding methods for narrow-band direct-printing equipment  | Withdrawn   |
| M.1028   | 1986   | 3 kHz duplex separation for DSC channels in the band 435-526.5 kHz  | Withdrawn   |
| M.1030   | 1986   | Use of directional antennas in the MF band allocated to the maritime mobile service to improve spectrum efficiency  | Withdrawn   |
| M.1032-1   | 1990   | Radio noise environment on board vessels  | Withdrawn   |
| M.1033-1   | 1990   | VHF radiotelephone systems with automatic facilities for the maritime mobile service  | Withdrawn   |
| M.1035   | 1986   | Minimum required frequency separation between receive and transmit frequencies use for duplex MF/HF radiotelephony  | Withdrawn   |
| M.1036-1   | 1990   | Frequencies for homing and locating in the global maritime distress and safety system (GMDSS)   | Withdrawn   |
| M.1039   | 1986   | Present and expected use of the band 9 320-9 500 MHz by mobile radars of the radionavigation service  | Withdrawn   |
| M.1042   | 1986   | Compatibility between satellite EPIRBs using the band 406-406.1 MHz and other radio services using adjacent bands   | Withdrawn   |
| M.1045-1   | 1986   | Satellite EPIRB coordinated trials programme and pre-operational<br>demonstrations using the INMARSAT geostationary space segment<br>operating in the 1.6 GHz band  | Withdrawn   |
| M.1047-1   | 1990   | Compact antennas for mobile satellite communication   | Withdrawn   |
|  |  |   |   |
| M.1048-1   | 1990   | Fading reduction techniques applicable to ship earth-stations antennas  | Withdrawn   |
| M.1048-1<br>M.1049-1   | 1990<br>1990   | Fading reduction techniques applicable to ship earth-stations antennas<br>Control of passive intermodulation products   | Withdrawn<br>In force   |
|  |  |   |   |
| M.1049-1   | 1990   | Control of passive intermodulation products<br>Technical and operational considerations for a radio-determination   | In force  |
| M.1049-1<br>M.1050-1   | 1990<br>1990   | Control of passive intermodulation products<br>Technical and operational considerations for a radio-determination<br>satellite service in bands 9 and 10  | In force<br>Withdrawn   |
| M.1049-1<br>M.1050-1<br>M.1051-1   | 1990<br>1990<br>1990                                 | Control of passive intermodulation products<br>Technical and operational considerations for a radio-determination<br>satellite service in bands 9 and 10<br>Public mobile telephone service with aircraft   | In force<br>Withdrawn<br>In force   |
| M.1049-1<br>M.1050-1<br>M.1051-1<br>M.1153   | 1990<br>1990<br>1990<br>1990                         | Control of passive intermodulation products<br>Technical and operational considerations for a radio-determination<br>satellite service in bands 9 and 10<br>Public mobile telephone service with aircraft<br>Future public land mobile telecommunication systems<br>Adaptation of mobile radiocommunication technology to the needs of  | In force<br>Withdrawn<br>In force<br>In force   |
| M.1049-1<br>M.1050-1<br>M.1051-1<br>M.1153<br>M.1155   | 1990<br>1990<br>1990<br>1990<br>1990                 | Control of passive intermodulation products<br>Technical and operational considerations for a radio-determination<br>satellite service in bands 9 and 10<br>Public mobile telephone service with aircraft<br>Future public land mobile telecommunication systems<br>Adaptation of mobile radiocommunication technology to the needs of<br>developing countries  | In force<br>Withdrawn<br>In force<br>In force<br>In force                                     |
| M.1049-1<br>M.1050-1<br>M.1051-1<br>M.1153<br>M.1155<br>M.1156                               | 1990<br>1990<br>1990<br>1990<br>1990                 | Control of passive intermodulation products<br>Technical and operational considerations for a radio-determination<br>satellite service in bands 9 and 10<br>Public mobile telephone service with aircraft<br>Future public land mobile telecommunication systems<br>Adaptation of mobile radiocommunication technology to the needs of<br>developing countries<br>Digital cellular public land mobile telecommunication systems (DCPLMTS)   | In force<br>Withdrawn<br>In force<br>In force<br>In force<br>In force                         |
| M.1049-1<br>M.1050-1<br>M.1051-1<br>M.1153<br>M.1155<br>M.1156<br>M.1157                     | 1990<br>1990<br>1990<br>1990<br>1990<br>1990         | Control of passive intermodulation products<br>Technical and operational considerations for a radio-determination<br>satellite service in bands 9 and 10<br>Public mobile telephone service with aircraft<br>Future public land mobile telecommunication systems<br>Adaptation of mobile radiocommunication technology to the needs of<br>developing countries<br>Digital cellular public land mobile telecommunication systems (DCPLMTS)<br>Integration of public mobile radiocommunication systems<br>Data communication in the maritime mobile services using MF, HF and   | In force<br>Withdrawn<br>In force<br>In force<br>In force<br>In force<br>In force             |
| M.1049-1<br>M.1050-1<br>M.1051-1<br>M.1153<br>M.1155<br>M.1156<br>M.1157<br>M.1158           | 1990<br>1990<br>1990<br>1990<br>1990<br>1990<br>1990 | Control of passive intermodulation products<br>Technical and operational considerations for a radio-determination<br>satellite service in bands 9 and 10<br>Public mobile telephone service with aircraft<br>Future public land mobile telecommunication systems<br>Adaptation of mobile radiocommunication technology to the needs of<br>developing countries<br>Digital cellular public land mobile telecommunication systems (DCPLMTS)<br>Integration of public mobile radiocommunication systems<br>Data communication in the maritime mobile services using MF, HF and<br>VHF frequencies<br>Characteristics of an automatic identification system for VHF and UHF   | In force<br>Withdrawn<br>In force<br>In force<br>In force<br>In force<br>In force<br>In force |
| M.1049-1<br>M.1050-1<br>M.1051-1<br>M.1153<br>M.1155<br>M.1156<br>M.1157<br>M.1158<br>M.1159 | 1990<br>1990<br>1990<br>1990<br>1990<br>1990<br>1990 | Control of passive intermodulation products<br>Technical and operational considerations for a radio-determination<br>satellite service in bands 9 and 10<br>Public mobile telephone service with aircraft<br>Future public land mobile telecommunication systems<br>Adaptation of mobile radiocommunication technology to the needs of<br>developing countries<br>Digital cellular public land mobile telecommunication systems (DCPLMTS)<br>Integration of public mobile radiocommunication systems<br>Data communication in the maritime mobile services using MF, HF and<br>VHF frequencies<br>Characteristics of an automatic identification system for VHF and UHF<br>transmitting stations in the maritime mobile service | In force<br>Withdrawn<br>In force<br>In force<br>In force<br>In force<br>In force<br>In force |

| M.1165   | 1990 | Transmission of digital data for the updating of electronic chart display systems (ECDIS)   | In force  |
|----------|------|---|-----------|
| M.1166   | 1990 | Technical characteristics of GPS differential transmissions from maritime radiobeacons  | In force  |
| M.1167   | 1990 | Study on general questions relating to the global maritime distress and safety system   | Withdrawn |
| M.1169   | 1990 | Sea surface multipath effects in the aeronautical mobile-satellite service  | In force  |
| M.1170   | 1990 | Mobile satellite communication systems using highly inclined elliptical<br>orbits   | Withdrawn |
| M.1172   | 1990 | Intersystem frequency sharing and reuse in the mobile-satellite services operating at mid to high portions of band 9  | Withdrawn |
| M.1173   | 1990 | Technical and operational considerations for aeronautical mobile-satellite communications   | Withdrawn |
| M.1175   | 1990 | 406 MHz Geostationary satellite distress alerting experiment  | Withdrawn |
| M.1176   | 1990 | Interworking between the mobile satellite systems and the terrestrial networks for data transmission services   | Withdrawn |
| M.1178   | 1990 | Efficient use of the bands 1 544-1 545 and 1 645.5-1 646.5 MHz  | Withdrawn |
| M.1179-1 | 2004 | Methodology for the derivation of interference and sharing criteria for the mobile-satellite services   | Withdrawn |
| M.1180   | 1990 | Design of mobile satellite systems providing aeronautical, land and maritime services using shared resources  | Withdrawn |
| M.1181   | 1990 | Microwave landing system (MLS) spectrum requirements and signal protection criteria   | Withdrawn |
| M.1184   | 1990 | Pre-operational demonstrations of the 1.6 GHz satellite EPIRB system<br>using the INMARSAT geostationary space segment  | Withdrawn |
| M.1185-1 | 2006 | Technical aspects of coordination among mobile satellite systems using the geostationary satellite orbit  | Withdrawn |
| M.1186   | 1990 | Use of frequency band 4 200 MHz to 4 400 MHz by radio altimeters  | In force  |
| M.2009   | 1995 | Direct-dial telephone systems for the maritime mobile service   | In force  |
| M.2010-1 | 1997 | Improved efficiency in the use of the band 156-174 MHz by stations in the maritime mobile service   | In force  |
| M.2013   | 1997 | Wind Profiler Radars  | In force  |
| M.2014-1 | 2006 | Digital land mobile systems for dispatch traffic  | In force  |
| M.2023   | 2000 | Spectrum requirements for International Mobile Telecommunications-2000 (IMT-2000)   | In force  |
| M.2024   | 2000 | Summary of spectrum usage survey results  | In force  |
| M.2026   | 2001 | Adaptability of real zero single sideband technology to HF data communications  | In force  |
| M.2027   | 2001 | Engineering guidance for operators to upgrade shore based facilities to operate the global maritime distress and safety system in the A1, A2 and A3/A4 sea areas  | In force  |
| M.2030   | 2003 | Coexistence between IMT-2000 time division duplex and frequency division duplex terrestrial radio interface technologies around 2 600 MHz operating in adjacent bands and in the same geographical area | In force  |

| M.2031   | 2003 | Compatibility between WCDMA 1800 downlink and GSM 1900 uplink  | In force  |
|----------|------|--|-----------|
| M.2032   | 2003 | Tests illustrating the compatibility between maritime radionavigation radars and emissions from radiolocation radars in the band 2 900-3 100 MHz   | In force  |
| M.2033   | 2003 | Radiocommunication objectives and requirements for public protection and disaster relief   | In force  |
| M.2034   | 2003 | Impact of radar detection requirements of dynamic frequency selection on 5 GHz wireless access system receivers  | In force  |
| M.2038   | 2004 | Technology trends  | In force  |
| M.2039-2 | 2010 | Characteristics of terrestrial IMT-2000 systems for frequency sharing/interference analyses  | In force  |
| M.2040   | 2004 | Adaptive antennas concepts and key technical aspects   | In force  |
| M.2041   | 2003 | Sharing and adjacent band compatibility in the 2.5 GHz band between the terrestrial and satellite components of IMT-2000   | In force  |
| M.2045   | 2004 | Mitigating techniques to address coexistence between IMT-2000 time division duplex and frequency division duplex radio interface technologies within the frequency range 2 500-2 690 MHz operating in adjacent bands and in the same geographical area   | In force  |
| M.2050   | 2004 | Test results illustrating the susceptibility of maritime radionavigation radars to emissions from digital communication and pulsed systems in the bands 2 900-3 100 MHz and 9 200-9 500 MHz  | In force  |
| M.2063   | 2005 | Software defined radio in IMT-2000, the future development of IMT-2000 and systems beyond IMT-2000   | Withdrawn |
| M.2064   | 2005 | Software-defined radio in the land mobile service  | Withdrawn |
| M.2072   | 2006 | World mobile telecommunication market forecast   | In force  |
| M.2073   | 2006 | Feasibility and practicality of prioritization and real-time pre emptive access between different networks of mobile-satellite service in the bands 1 525-1 559 MHz and 1 626.5-1 660.5 MHz  | In force  |
| M.2074   | 2006 | Radio aspects for the terrestrial component of IMT-2000 and systems beyond IMT-2000  | In force  |
| M.2076   | 2006 | Factors that mitigate interference from radiolocation and Earth exploration-<br>satellite service/space research service (active) radars to maritime and<br>aeronautical radionavigation radars in the 9.0-9.2 and 9.3-9.5 GHz bands<br>and between Earth exploration-satellite service/ space research service<br>(active) radars and radiolocation radars in the 9.3-9.5 and 9.8-10.0 GHz<br>bands | In force  |
| M.2077   | 2006 | Traffic forecasts and estimated spectrum requirements for the satellite<br>component of IMT 2000 and systems beyond IMT-2000 for the period<br>2010 to 2020  | In force  |
| M.2078   | 2006 | Estimated spectrum bandwidth requirements for the future development of IMT-2000 and IMT-Advanced  | In force  |
| M.2079   | 2006 | Technical and operational information for identifying Spectrum for the terrestrial component of future development of IMT-2000 and IMT-<br>Advanced  | In force  |
| M.2080   | 2006 | Consideration of sharing conditions and usage in the 4-10 MHz band   | In force  |
| M.2081   | 2006 | Test results illustrating compatibility between representative radionavigation systems and radiolocation and EESS systems in the band 8.5-10 GHz   | In force  |

| M.2082   | 2006 | Modifications of Appendix 17 of the Radio Regulations (Frequencies and channelling arrangements in the high-frequency bands for the maritime mobile service) for a possible solution of agenda item 1.13 (Resolution 351 (WRC-03)) | In force |
|----------|------|--|----------|
| M.2083   | 2006 | Level of unwanted emissions of mobile-satellite service feeder links operating in the bands 1 390-1 392 MHz (Earth-to-space) and 1 430-1 432 MHz (space-to-Earth)  | In force |
| M.2084   | 2007 | Satellite detection of automatic identification system messages  | In force |
| M.2085-1 | 2011 | Role of the amateur and amateur-satellite services in support of disaster mitigation and relief  | In force |
| M.2109   | 2007 | Sharing studies between IMT Advanced systems and geostationary satellite networks in the fixed-satellite service in the 3 400-4 200 and 4 500-4 800 MHz frequency bands  | In force |
| M.2110   | 2007 | Sharing studies between radiocommunication services and IMT systems operating in the 450-470 MHz band  | In force |
| M.2111   | 2007 | Sharing studies between IMT-Advanced and the radiolocation service in the 3 400-3 700 MHz bands  | In force |
| M.2112   | 2007 | Compatibility/sharing of airport surveillance radars and meteorological radar with IMT systems within the 2 700-2 900 MHz band   | In force |
| M.2113-1 | 2009 | Sharing studies in the 2 500-2 690 MHz band between IMT-2000 and fixed broadband wireless access systems including nomadic applications in the same geographical area  | In force |
| M.2114   | 2007 | Key technical and operational characteristics for access technologies to<br>support IP applications over land mobile systems   | In force |
| M.2115-1 | 2009 | Testing procedures for implementation of dynamic frequency selection   | In force |
| M.2116-1 | 2010 | Characteristics of broadband wireless access systems operating in the<br>land mobile service for use in sharing studies  | In force |
| M.2117   | 2007 | Software defined radio in the land mobile, amateur and amateur satellite services  | In force |
| M.2118   | 2007 | Compatibility between proposed systems in the aeronautical mobile service and the existing fixed-satellite service in the 5 091-5 250 MHz band   | In force |
| M.2119   | 2007 | Sharing between aeronautical mobile telemetry systems for flight testing and other systems operating in the 4 400-4 940 and 5 925-6 700 MHz bands  | In force |
| M.2120   | 2007 | Initial estimate of new aviation AM(R)S spectrum requirements  | In force |
| M.2121   | 2007 | Guidelines for AM(R)S sharing studies in the 960-1 164 MHz band  | In force |
| M.2122   | 2007 | EMC assessment of shore-based electronic navigation (eNAV) infrastructure and new draft Standards for data exchange in the VHF maritime mobile band (156-174 MHz)  | In force |
| M.2123   | 2007 | Long range detection of automatic identification system (AIS) messages<br>under various tropospheric propagation conditions  | In force |
| M.2124   | 2007 | Interference calculations to assess sharing between the mobile-satellite service and space research (passive) service in the band 1 668-1 668.4 MHz  | In force |
| M.2127   | 2008 | Example of maritime wideband VHF data system   | In force |
|          |      |  |          |

| M.2128   | 2008 | Test results and simulations illustrating the effective duty cycle of frequency modulated pulsed radiolocation and EESS system waveforms in marine radionavigation receivers   | In force |
|----------|------|--|----------|
| M.2133   | 2008 | Requirements, evaluation criteria and submission templates for the development of IMT-Advanced   | In force |
| M.2134   | 2008 | Requirements related to technical performance for IMT-Advanced radio interface(s)  | In force |
| M.2135-1 | 2009 | Guidelines for evaluation of radio interface technologies for IMT-Advanced   | In force |
| M.2136   | 2009 | Theoretical analysis and testing results pertaining to the determination of relevant interference protection criteria of ground-based meteorological radars  | In force |
| M.2141   | 2009 | Study of the isolation between VHF land mobile radio antennas in close proximity   | In force |
| M.2146   | 2009 | Coexistence between IMT-2000 CDMA-DS and IMT-2000 OFDMA TDD WMAN in the 2 500-2 690 MHz band operating in adjacent bands in the same area  | In force |
| M.2147   | 2009 | Assessment of potential interference between FM broadcasting stations operating in the band around 87-108 MHz and aeronautical VDL Mode 4 systems in the band 112-117.975 MHz operating in the AM(R)S  | In force |
| M.2149-1 | 2011 | Use and examples of mobile-satellite service systems for relief operation in the event of natural disasters and similar emergencies  | In force |
| M.2168-1 | 2010 | Compatibility between a proposed new aeronautical mobile (R) service (AM(R)S) system and both radionavigation-satellite service (RNSS) operating in the 5 000-5 010 MHz band and radio astronomy in the adjacent band 4 990-5 000 MHz  | In force |
| M.2169   | 2009 | Improved satellite detection of AIS  | In force |
| M.2170   | 2009 | Compatibility analysis and results for radiolocation systems planned to operate in the 15.4 to 17.3 GHz band and aircraft landing system operating in the 15.4-15.7 GHz band as well as the radio astronomy service operating in the adjacent band 15.35-15.40 GHz, FSS systems and aeronautical radionavigation systems | In force |
| M.2171   | 2009 | Characteristics of unmanned aircraft systems and spectrum requirements to support their safe operation in non-segregated airspace  | In force |
| M.2172-1 | 2011 | Radiolocation service sharing feasibility in the frequency band 154-156 MHz  | In force |
| M.2175   | 2010 | Simultaneous dual linear polarization transmission technique using digital cross-polarization cancellation for MSS systems   | In force |
| M.2176   | 2010 | Vision and requirements for the satellite radio interface(s) of IMT-   | In force |
| M.2197   | 2010 | Technical characteristics and operational objectives for Wireless avionics intra-communications (WAIC)   | In force |
| M.2198   | 2010 | The outcome of the evaluation, consensus building and decision of the IMT-Advanced process (steps 4-7), including characteristics of IMT-Advanced radio interfaces   | In force |
| M.2200   | 2010 | Characteristics of amateur radio stations in the range 415-526.5 kHz for sharing studies   | In force |
| M.2201   | 2010 | Utilization of the 495-505 kHz band by the maritime mobile service for the digital broadcasting of safety and security related information from shore-to-ships   | In force |

| M.2202 | 2010 | Maritime broadband wireless mesh networks   | In force |
|--------|------|---|----------|
| M.2203 | 2010 | Compatibility of amateur service stations with existing services in the range 415-526.5 kHz   | In force |
| M.2204 | 2010 | Characteristics and spectrum considerations for sense and avoid systems use on Unmanned Aircraft Systems (UAS)  | In force |
| M.2205 | 2010 | Results of studies of the AM(R)S allocation in the band 960-1 164 MHz<br>and of the AMS(R)S allocation in the band 5 030-5 091 MHz to support<br>control and non-payload communications links for unmanned aircraft<br>systems  | In force |
| M.2206 | 2010 | Sharing between the aeronautical mobile service and the fixed service in the band 37-38 GHz   | In force |
| M.2218 | 2011 | Traffic forecasts and estimated spectrum requirements for future development of the mobile-satellite service in the range 4 16 GHz  | In force |
| M.2219 | 2011 | Radionavigation-satellite service applications for the 5 000-5 010 MHz and 5 010-5 030 MHz bands  | In force |
| M.2220 | 2011 | Calculation method to determine aggregate interference parameters of pulsed RF systems operating in and near the bands 1 164-1 215 MHz and 1 215 1 300 MHz that may impact radionavigation-satellite service airborne and ground-based receivers operating in those frequency bands | In force |
| M.2221 | 2011 | Feasibility of MSS operations in certain frequency bands  | In force |
| M.2224 | 2011 | System design guidelines for wide area sensor and/or actuator network (WASN) systems  | In force |
| M.2225 | 2011 | Introduction to cognitive radio systems in the land mobile service  | In force |
| M.2226 | 2011 | Description of amateur and experimental operation between 415 and 526.5 kHz in some countries   | In force |
| M.2227 | 2011 | Multiple Gigabit Wireless Systems in frequencies around 60 GHz  | In force |
| M.2228 | 2011 | Advanced intelligent transport systems (ITS) radiocommunications  | In force |
| M.2229 | 2011 | Compatibility study to support line-of-sight control and non-payload<br>communications links for unmanned aircraft systems proposed in the<br>frequency band 15.4-15.5 GHz  | In force |
| M.2230 | 2011 | Frequency sharing between unmanned aircraft systems for beyond line of sight control and non-payload communications links and other existing and planned services in the frequency bands 13.25-13.40 GHz, 15.4-15.7 GHz, 22.5-22.55 GHz and 23.55-23.60 GHz                         | In force |
| M.2231 | 2011 | Use of Appendix 18 to the Radio Regulations for the maritime mobile service   | In force |
| M.2232 | 2011 | Spectrum requirements for surface applications at airports in the 5 GHz range   | In force |
| M.2233 | 2011 | Examples of technical characteristics for unmanned aircraft control and non-payload communications links  | In force |
| M.2234 | 2011 | The feasibility of sharing sub-bands between oceanographic radars operating in the radiolocation service and fixed and mobile services within the frequency band 3-50 MHz   | In force |
| M.2235 | 2011 | Aeronautical mobile (route) service sharing studies in the frequency band 960-1 164 MHz   | In force |
|        |      |   |          |

| M.2236 | 2011 | Compatibility study to support the line of sight control and non-payload communication links for unmanned aircraft systems proposed in the frequency bands 5 000-5 010 and 5 010-5 030 MHz | In force |
|--------|------|--|----------|
| M.2237 | 2011 | Compatibility study to support the line-of-sight control and non-payload communications link(s) for unmanned aircraft systems proposed in the frequency band 5 030-5 091 MHz               | In force |
| M.2238 | 2011 | Compatibility study to support line of sight control and non-payload<br>communications links for unmanned aircraft systems proposed in the<br>frequency band 5 091-5 150 MHz               | In force |
| M.2241 | 2011 | Compatibility studies in relation to Resolution 224 in the bands 698-806 MHz and 790-862 MHz   | In force |
| M.2242 | 2011 | Cognitive Radio Systems specific for IMT Systems   | In force |
| M.2243 | 2011 | Assessment of the global mobile broadband deployments and forecasts for International Mobile Telecommunications  | In force |
| M.2244 | 2011 | Isolation between antennas of IMT base stations in the land mobile service   | In force |

Reports count:

#### Series P : Radiowave propagation

| P.227-3  | 1982 |   |           |
|----------|------|---|-----------|
|          |      | General methods of measuring the field strength and related parameters  | In force  |
| P.228-3  | 1986 | Measurement of field strength for VHF (metric) and UHF (decimetric) broadcast services, including television                                      | In force  |
| P.229-6  | 1990 | Electrical characteristics of the surface of the Earth  | Withdrawn |
| P.239-7  | 1990 | Propagation statistics required for broadcasting services using the frequency range 30 to 1 000 MHz   | In force  |
| P.249-7  | 1990 | The use of oblique sounding for propagation analysis and optimization   | Withdrawn |
| P.252-2  | 1970 | C.C.I.R Interim method for estimating sky-wave field strength and transmission loss at frequencies between the approximate limits of 2 and 30 MHz | Withdrawn |
| P.259-7  | 1990 | VHF ionospheric propagation   | Withdrawn |
| P.262-7  | 1990 | ELF, VLF and LF propagation in and through the ionosphere   | Withdrawn |
| P.266-7  | 1990 | lonospheric propagation and noise characteristics pertinent to terrestrial radiocommunication systems design and service planning (Fading)        | Withdrawn |
| P.336-3  | 1990 | Propagation on the Moon and the definition of its radio-quiet area  | Withdrawn |
| P.562-4  | 1990 | Propagation data required for terrestrial broadcasting and point-to-<br>multipoint communication systems in the frequency bands above 10 GHz      | Withdrawn |
| P.714-2  | 1990 | Ground-wave propagation in an exponential atmosphere  | Withdrawn |
| P.716-3  | 1990 | The phase of the ground wave  | Withdrawn |
| P.727-3  | 1990 | Short-term prediction of solar-induced variations of operational<br>parameters for ionospheric propagation  | Withdrawn |
| P.879-1  | 1986 | Methods for estimating effective electrical characteristics of the surface of the Earth   | Withdrawn |
| P.880-2  | 1990 | Short distance radiowave propagation in special environements   | In force  |
| P.888-2  | 1990 | Short-term forecasting of critical frequencies, operational maximum usable frequencies and total electron content                                 | Withdrawn |
| P.889-2  | 1990 | Real-time channel evaluation of HF ionospheric radio circuits   | Withdrawn |
| P.895-2  | 1990 | Radio propagation and circuit performance at frequencies below about 30 kHz   | Withdrawn |
| P.1008-1 | 1990 | Reflection from the surface of the Earth  | Withdrawn |
| P.1012-1 | 1990 | Operational modelling of HF radio propagation conditions at high latitudes  | Withdrawn |
| P.1145   | 1990 | Propagation over irregular terrain with and without vegetation  | Withdrawn |
| P.2011-1 | 1999 | Propagation at frequencies above the basic MUF  | In force  |
| P.2089   | 2006 | The analysis of radio noise data  | In force  |
| P.2090   | 2006 | Measuring the input parameters for the radiative energy transfer model of vegetation attenuation  | In force  |

| P.2097        | 2007 | Transionospheric radio propagation – The Global lonospheric Scintillation Model (GISM)                                     | In force |
|---------------|------|--|----------|
| P.2145        | 2009 | Model parameters for an urban environment for the physical-statistical wideband LMSS model in Recommendation ITU R P.681-6 | In force |
| Reports count | t:   | 27   |          |

## Series RA : Radio astronomy

| Number  | Approval Date | e Report Title  | Status   |
|---------|---------------|---|----------|
| RA.2099 | 2007          | Radio observations of pulsars for precision timekeeping   | In force |
| RA.2126 | 2007          | Techniques for mitigation of radio frequency interference in radio astronomy  | In force |
| RA.2131 | 2009          | Supplementary information on the detrimental threshold levels of interference to radio astronomy observations in Recommendation ITU-R RA.769                    | In force |
| RA.2163 | 2009          | Astronomical use of frequency band 50-350 THz and coexistence with other applications   | In force |
| RA.2188 | 2010          | Power flux-density and e.i.r.p. levels potentially damaging to radio astronomy receivers  | In force |
| RA.2189 | 2010          | Sharing between the radio astronomy service and active services in the frequency range 275-3 000 GHz  | In force |
| RA.2195 | 2010          | The transition to digital television and its impact on the unprotected use by the radio astronomy service of bands used for terrestrial television broadcasting | In force |

Reports count:

#### Series RS : Remote sensing systems

| Number  | Approval Date | e Report Title   | Status   |
|---------|---------------|--|----------|
| RS.2068 | 2006          | Current and future use of the band near 13.5 GHz by spaceborne active sensors  | In force |
| RS.2094 | 2007          | Studies related to the compatibility between Earth exploration-satellite service (active) and the radiodetermination service in the 9 300-9 500 MHz and 9 800-10 000 MHz bands and between Earth exploration-satellite service (active) and the fixed service in the 9 800-10 000 MHz band | In force |
| RS.2095 | 2007          | Sharing of the 36-37 GHz band by the fixed and mobile services and the Earth exploration-satellite service (passive)   | In force |
| RS.2096 | 2007          | Sharing of the 10.6-10.68 GHz band by the fixed and mobile services and the Earth exploration-satellite service (passive)  | In force |
| RS.2165 | 2009          | Identification of degradation due to interference and characterization of possible interference mitigation techniques for passive sensors operating in the Earth exploration satellite service (passive)   | In force |
| RS.2178 | 2010          | The essential role and global importance of radio spectrum use for Earth observations and for related applications   | In force |
| RS.2184 | 2010          | Arrival time difference lightning detection systems in the meteorological aids service in operation below 20 kHz   | In force |
| RS.2185 | 2010          | Study on compatibility between "arrival time difference" (ATD) stations of the meteorological aids service and stations of the radionavigation service in the frequency band 9 to 14 kHz   | In force |
| RS.2186 | 2010          | Radio services and radio-frequency environment within the band below 20 $\ensuremath{kHz}$   | In force |
| RS.2187 | 2010          | Determining radiosonde maximum interference levels from link analysis and flight studies   | In force |
| RS.2194 | 2010          | Passive bands of scientific interest to EESS/SRS from 275 to 3 000 GHz   | In force |

Reports count:

#### Series S : Fixed-satellite service

| Number | Approval Date | Report Title   | Status   |
|--------|---------------|--|----------|
| S.2148 | 2009          | Transmission control protocol (TCP) over satellite networks  | In force |
| S.2150 | 2009          | An interference reduction technique by adaptive-array earth station<br>antennas for sharing between the fixed-satellite service and fixed/mobile<br>services   | In force |
| S.2151 | 2009          | Use and examples of systems in the fixed-satellite service in the event of natural disasters and similar emergencies for warning and relief operations   | In force |
| S.2173 | 2010          | Multi-carrier based transmission techniques for satellite systems  | In force |
| S.2174 | 2010          | Guidelines that may be used in the design of satellite networks for<br>assessing the impact of rain attenuation on the carrier to noise plus<br>interference ratios of the FSS Plan allotments                 | In force |
| S.2196 | 2010          | Methodology on the modelling of earth station antenna gain in the region<br>of the antenna main-lobe and the transition region between the minimum<br>angle of the reference antenna pattern and the main-lobe | In force |
| S.2199 | 2010          | Studies on compatibility of broadband wireless access (BWA) systems and fixed-satellite service (FSS) networks in the 3 400-4 200 MHz band   | In force |
| S.2222 | 2011          | Cross-layer QoS for IP-based hybrid satellite-terrestrial networks   | In force |
| S.2223 | 2011          | Technical and operational requirements for GSO FSS earth stations on mobile platforms in bands from 17.3 to 30.0 GHz   | In force |

Reports count:

#### Series SA : Space applications and meteorology

| Number  | Approval Date | Report Title   | Status   |
|---------|---------------|--|----------|
| SA.2065 | 2006          | Protection of the space VLBI telemetry link  | In force |
| SA.2066 | 2006          | Means of calculating low-orbit satellite visibility statistics   | In force |
| SA.2067 | 2005          | Use of the 13.75 to 14.0 GHz band by the space research service and the fixed-satellite service  | In force |
| SA.2098 | 2007          | Mathematical gain models of large-aperture space research service earth<br>station antennas for compatibility analysis involving a large number of<br>distributed interference sources | In force |
| SA.2132 | 2009          | Telecommunication characteristics and requirements for space VLBI systems  | In force |
| SA.2162 | 2009          | Sharing conditions between space research service extra vehicular activities (EVA) links and fixed and mobile service links in the 410-420 MHz band                                    | In force |
| SA.2164 | 2009          | Compatibility between the meteorological satellite and the fixed services in the band 7 850-7 900 $\rm MHz$  | In force |
| SA.2166 | 2009          | Examples of radiation patterns of large antennas used for space research and radio astronomy   | In force |
| SA.2167 | 2009          | Factors affecting the choice of frequency bands for space research service deep-space (space-to-Earth) telecommunication links   | In force |
| SA.2177 | 2010          | Selection of frequency bands in the 1-120 GHz range for deep-space research  | In force |
| SA.2183 | 2010          | Method for calculating link performance in the space research service  | In force |
| SA.2190 | 2010          | Study on compatibility between the mobile service (aeronautical) and the space research service (space-to-Earth) in the frequency band 37-38 GHz                                       | In force |
| SA.2191 | 2010          | Spectrum requirements for future SRS missions operating under a potential new SRS allocation in the band 22.55-23.15 GHz   | In force |
| SA.2192 | 2010          | Compatibility between the space research service (Earth-to-space) and the non-GSO-to-non-GSO systems on the inter-satellite service in the band 22.55-23.55 GHz                        | In force |
| SA.2193 | 2010          | Compatibility between the space research service (Earth-to-space) and the systems in the fixed, mobile and inter-satellite service in the band 22.55-23.15 GHz                         | In force |

Reports count:

# Series SF : Frequency sharing and coordination between fixed-satellite and fixed service systems

| Number       | Approval Da | nte Report Title  | Status   |
|--------------|-------------|---|----------|
| SF.2046      | 2005        | Determination of the interference potential, and its possible reduction by mitigation techniques, between earth stations in the fixed-satellite service operating with non-geostationary satellites and stations in the fixed service in the 18/19 GHz band | In force |
| Reports cour | nt:         | 1   |          |

#### Series SM : Spectrum management

| M.20151998Methods for determining national long-term strategies for spectrumIn forceW.20212000Production and mitigation of intermodulation products in the transmitterIn forceW.2022-12005The effect on digital communications systems of interference from other<br>modulation schemesIn forceW.2028-12002Monte Carlo simulation methodology for the use in sharing and<br>compatibility studies between different radio services or systemsIn forceW.20482006Use of the x dB bandwidth criterion for determination of spectral propertiesIn forceW.20552006Radio noise measurementsIn forceW.20562006Airborne verification of antenna patterns of broadcasting stationsIn forceW.20572005Studies related to the impact of devices using ultra-wideband technology<br>on radiocommunication servicesIn forceW.20912007Studies related to the impact of active services allocated in<br>adjacent or nearby bands on radio astronomy serviceIn forceW.20922007Studies related to the impact of active services allocated in adjacent or<br>nearby bands on tadio astronomy serviceIn forceW.2152-12010Guidance on the regulatory framework for national spectrum managementIn forceW.21522009Definitions of Software Defined Radio (SDR) and Cognitive Radio SystemIn force<br>(CRS)W.2153-22011Trestnicial and operating parameters and spectrum use for short-rangeIn force<br>masurement techniquesW.21542009Short-range radiocommunication devicesIn force<   | Number    | Approval | Date Report Title  | Status   |
|--|-----------|----------|--|----------|
| W.2021 2000 Production and mitigation of intermodulation products in the transmitter In force   W.2022-1 2005 The effect on digital communications systems of interference from other modulation schemes In force   W.2028-1 2002 Monte Carlo simulation methodology for the use in sharing and compatibility studies between different radio services or systems In force   W.2028-1 2006 Use of the x dB bandwidth criterion for determination of spectral properties of a transmitter in the out-of-band domain In force   W.2055 2006 Radio noise measurements In force   W.2056 2006 Airborne verification of antenna patterns of broadcasting stations In force   W.2057 2005 Studies related to the impact of active space services allocated in adjacent or nearby bands on Factive space services allocated in adjacent or nearby bands on Earth exploration-satellite service (passive) In force   W.2092 2007 Studies related to the impact of active space services allocated in adjacent or nearby bands on Earth exploration-satellite service (passive) In force   W.2093-1 2010 Guidance on the regulatory framework for national spectrum management In force   W.2125-1 2011 Parameters of and measurement procedures on H/V/UHF monitoring In force   W.2153 <t< td=""><td>SM.2012-3</td><td>2010</td><td>Economic aspects of spectrum management</td><td>In force</td></t<>  | SM.2012-3 | 2010     | Economic aspects of spectrum management  | In force |
| M.2022-1 2005 The effect on digital communications systems of interference from other modulation schemes In force   M.2028-1 2002 Monte Carlo simulation methodology for the use in sharing and compatibility studies between different radio services or systems In force   M.2048 2006 Use of the x dB bandwidth criterion for determination of spectral properties In force   M.2055 2006 Radio noise measurements In force   M.2056 2006 Airborne verification of antenna patterns of broadcasting stations In force   M.2057 2005 Studies related to the impact of devices using ultra-wideband technology on radiocommunication services In force   M.2091 2007 Studies related to the impact of active space services allocated in adjacent or nearby bands on radio astronomy service (passive) In force   M.2092 2007 Studies related to the regulatory framework for national spectrum management In force   M.2125-1 2010 Guidance on the regulatory framework for national spectrum management In force   M.2130 2008 Inspection of radio stations In force   M.2152 2009 Definitions of Software Defined Radio (SDR) and Cognitive Radio System In force   M.2153-2 2011  | SM.2015   | 1998     |  | In force |
| M.2028-1   2002   Monte Carlo simulation methodology for the use in sharing and<br>compatibility studies between different radio services or systems   In force<br>compatibility studies between different radio services or systems   In force     M.2048   2006   Use of the x dB bandwidth criterion for determination of spectral properties<br>of a transmitter in the out-of-band domain   In force     M.2055   2006   Radio noise measurements   In force     M.2057   2005   Studies related to the impact of devices using ultra-wideband technology<br>on radiocommunication services   In force     M.2057   2007   Studies related to the impact of active space services allocated in<br>adjacent or nearby bands on radio astronomy service   In force     M.2092   2007   Studies related to the impact of active space services allocated in adjacent or<br>nearby bands on Earth exploration-satellite service (passive)   In force     M.2093-1   2010   Guidance on the regulatory framework for national spectrum management   In force     M.2130   2008   Inspection of radio stations   In force     M.21425-1   2011   Parameters of and measurement procedures on H/V/UHF monitoring   In force     M.2152   2009   Definitions of Software Defined Radio (SDR) and Cognitive Radio System   In force  | SM.2021   | 2000     | Production and mitigation of intermodulation products in the transmitter   | In force |
| M.20482006Use of the x dB bandwidth criterion for determination of spectral properties<br>of a transmitter in the out-of-band domainIn forceM.20552006Radio noise measurementsIn forceM.20562006Airborne verification of antenna patterns of broadcasting stationsIn forceM.20572005Studies related to the impact of devices using ultra-wideband technology<br>on radiocommunication servicesIn forceM.20512007Studies related to the impact of active space services allocated in<br>adjacent or nearby bands on radio astronomy serviceIn forceM.20922007Studies related to the impact of active services allocated in adjacent or<br>nearby bands on Earth exploration-satelitie service (passive)In forceM.2093-12010Guidance on the regulatory framework for national spectrum management<br>receivers and stationsIn forceM.21302008Inspection of radio sationsIn force<br>receivers and stationsIn forceM.21522009Definitions of Software Defined Radio (SDR) and Cognitive Radio System<br>(CRS)In forceM.21542009Man-made noise measurements in the HF rangeIn forceM.21552009Man-made noise measurements in the HF rangeIn forceM.21562009The role of spectrum monitoring in support of inspectionsIn forceM.21572011Impact of power line telecommunication systems on radiocommunication<br>systemsIn forceM.2158-22011The role of spectrum monitoring in support of inspectionsIn forceM.2158-22011Impac  | SM.2022-1 | 2005     |  | In force |
| M.20552006Radio noise measurementsIn forceM.20562006Airborne verification of antenna patterns of broadcasting stationsIn forceM.20572005Studies related to the impact of devices using ultra-wideband technology<br>on radiocommunication servicesIn forceM.20912007Studies related to the impact of active space services allocated in<br>adjacent or nearby bands on radio astronomy serviceIn forceM.20922007Studies related to the impact of active services allocated in adjacent or<br>nearby bands on Earth exploration-satellite service (passive)In forceM.2093-12010Guidance on the regulatory framework for national spectrum management<br>receivers and stationsIn forceM.21502008Inspection of radio stationsIn forceM.21522009Definitions of Software Defined Radio (SDR) and Cognitive Radio System<br>(CRS)In forceM.2153-22011Technical and operating parameters and spectrum use for short-range<br>radiocommunication devices spectrum occupancy<br>measurement techniquesIn forceM.21552009Man-made noise measurements in the HF rangeIn forceM.21562009The role of spectrum monitoring in support of inspectionsIn forceM.2157-22011Impact of power line telecommunication systemsIn forceM.2158-22011Impact of power line telecommunication systemsIn forceM.2158-22011Impact of power line telecommunication systems on radiocommunicationIn forceM.2158-22011Impact of power line telecommunication sy  | SM.2028-1 | 2002     |  | In force |
| M.20562006Airborne verification of antenna patterns of broadcasting stationsIn forceM.20572005Studies related to the impact of devices using ultra-wideband technology<br>on radiocommunication servicesIn forceM.20912007Studies related to the impact of active space services allocated in<br>adjacent or nearby bands on Earth exploration-satellite service (passive)In forceM.20922007Studies related to the impact of active services allocated in adjacent or<br>nearby bands on Earth exploration-satellite service (passive)In forceM.2093-12010Guidance on the regulatory framework for national spectrum management<br>receivers and stationsIn forceM.2125-12011Parameters of and measurement procedures on H/V/UHF monitoring<br>receivers and stationsIn forceM.21302008Inspection of radio stationsIn force<br>(CRS)M.2153-22011Technical and operating parameters and spectrum use for short-range<br>radiocommunication devicesIn forceM.21542009Short-range radiocommunication devices spectrum occupancy<br>measurement techniquesIn forceM.21552009Man-made noise measurements in the HF rangeIn forceM.21562009The role of spectrum monitoring in support of inspectionsIn forceM.2157-22011Impact of power line telecommunication systems on radiocommunication<br>systemsIn forceM.2158-22011Impact of power line telecommunication systems on radiocommunication<br>systemsIn forceM.2158-22011Impact of power line telecommunication systems on  | SM.2048   | 2006     |  | In force |
| M.20572005Studies related to the impact of devices using ultra-wideband technology<br>on radiocommunication servicesIn forceM.20912007Studies related to the impact of active space services allocated in<br>adjacent or nearby bands on radio astronomy serviceIn forceM.20922007Studies related to the impact of active services allocated in adjacent or<br>nearby bands on Earth exploration-satellite service (passive)In forceM.2093-12010Guidance on the regulatory framework for national spectrum management<br>receivers and stationsIn forceM.2125-12011Parameters of and measurement procedures on H/V/UHF monitoring<br>receivers and stationsIn forceM.21302008Inspection of radio stationsIn forceM.21522009Definitions of Software Defined Radio (SDR) and Cognitive Radio System<br>(CRS)In forceM.2153-22011Technical and operating parameters and spectrum use for short-range<br>measurement techniquesIn forceM.21542009Short-range radiocommunication devicesSpectrum occupancy<br>measurement techniquesIn forceM.21552009Man-made noise measurements in the HF rangeIn forceIn forceM.21572009Measurement methods for power line high data rate telecommunication<br>systemsIn forceM.2158-22011Impact of power line telecommunication systems on radiocommunication<br>systems operating in the LF, MF, HF and VHF bands below 80 MHzIn forceM.2158-22010Short-range radiocommunication devices measurementsIn forceM.2158-22010 <t< td=""><td>SM.2055</td><td>2006</td><td>Radio noise measurements</td><td>In force</td></t<> | SM.2055   | 2006     | Radio noise measurements   | In force |
| M.20912007Studies related to the impact of active space services allocated in<br>adjacent or nearby bands on radio astronomy serviceIn forceM.20922007Studies related to the impact of active services allocated in adjacent or<br>nearby bands on Earth exploration-satellite service (passive)In forceM.2093-12010Guidance on the regulatory framework for national spectrum managementIn forceM.2125-12011Parameters of and measurement procedures on H/V/UHF monitoring<br>receivers and stationsIn forceM.21302008Inspection of radio stationsIn forceM.21522009Definitions of Software Defined Radio (SDR) and Cognitive Radio System<br>(CRS)In forceM.2153-22011Technical and operating parameters and spectrum use for short-range<br>radiocommunication devicesIn forceM.21542009Short-range radiocommunication devices spectrum occupancy<br>measurement techniquesIn forceM.21562009The role of spectrum monitoring in support of inspectionsIn forceM.21572011Impact of power line telecommunication systems on radiocommunication<br>systemsIn forceM.2158-22011Impact of power line telecommunication systems on radiocommunication<br>systems operating in the LF, MF, HF and VHF bands below 80 MHzIn forceM.2158-22010Short-range radiocommunication devices measurementsIn forceM.2158-22011Impact of power line telecommunication systems on radiocommunication<br>systemsIn forceM.2158-22010Short-range radiocommunication devices measurements  | SM.2056   | 2006     | Airborne verification of antenna patterns of broadcasting stations   | In force |
| adjacent or nearby bands on radio astronomy serviceM.20922007Studies related to the impact of active services allocated in adjacent or<br>nearby bands on Earth exploration-satellite service (passive)In forceM.2093-12010Guidance on the regulatory framework for national spectrum management<br>In forceIn forceM.2125-12011Parameters of and measurement procedures on H/V/UHF monitoring<br>receivers and stationsIn forceM.21302008Inspection of radio stationsIn forceM.21522009Definitions of Software Defined Radio (SDR) and Cognitive Radio System<br>(CRS)In forceM.2153-22011Technical and operating parameters and spectrum use for short-range<br>radiocommunication devicesIn forceM.21542009Short-range radiocommunication devices spectrum occupancy<br>measurement techniquesIn forceM.21552009Man-made noise measurements in the HF rangeIn forceM.21572009Measurement methods for power line high data rate telecommunication<br>systemsIn forceM.21572011Impact of power line telecommunication systems on radiocommunication<br>systemsIn forceM.21572010Short-range radiocommunication devices measurementsIn forceM.21572011Impact of power line telecommunication systems on radiocommunication<br>systemsIn forceM.21572010Short-range radiocommunication devices measurementsIn forceM.2158-22011Impact of power line telecommunication systems on radiocommunication<br>systems operating in the LF, MF, HF and VHF bands  | SM.2057   | 2005     |  | In force |
| nearby bands on Earth exploration-satellite service (passive)M.2093-12010Guidance on the regulatory framework for national spectrum managementIn forceM.2125-12011Parameters of and measurement procedures on H/V/UHF monitoring<br>receivers and stationsIn forceM.21302008Inspection of radio stationsIn forceM.21522009Definitions of Software Defined Radio (SDR) and Cognitive Radio System<br>(CRS)In forceM.2153-22011Technical and operating parameters and spectrum use for short-range<br>radiocommunication devicesIn forceM.21542009Short-range radiocommunication devices spectrum occupancy<br>measurement techniquesIn forceM.21552009Man-made noise measurements in the HF rangeIn forceM.21562009The role of spectrum monitoring in support of inspectionsIn forceM.21572009Measurement methods for power line high data rate telecommunication<br>systemsIn forceM.2158-22011Impact of power line telecommunication systems on radiocommunication<br>systems operating in the LF, MF, HF and VHF bands below 80 MHzIn forceM.21792010Short-range radiocommunication devices measurementsIn force   | SM.2091   | 2007     | Studies related to the impact of active space services allocated in<br>adjacent or nearby bands on radio astronomy service | In force |
| M.2125-12011Parameters of and measurement procedures on H/V/UHF monitoring<br>receivers and stationsIn forceM.21302008Inspection of radio stationsIn forceM.21522009Definitions of Software Defined Radio (SDR) and Cognitive Radio System<br>(CRS)In forceM.2153-22011Technical and operating parameters and spectrum use for short-range<br>radiocommunication devicesIn forceM.21542009Short-range radiocommunication devices spectrum occupancy<br>  | SM.2092   | 2007     |  | In force |
| M.21302008Inspection of radio stationsIn forceM.21302009Definitions of Software Defined Radio (SDR) and Cognitive Radio SystemIn forceM.21522009Definitions of Software Defined Radio (SDR) and Cognitive Radio SystemIn forceM.2153-22011Technical and operating parameters and spectrum use for short-range<br>radiocommunication devicesIn forceM.21542009Short-range radiocommunication devices spectrum occupancy<br>measurement techniquesIn forceM.21552009Man-made noise measurements in the HF rangeIn forceM.21562009The role of spectrum monitoring in support of inspectionsIn forceM.21572009Measurement methods for power line high data rate telecommunication<br>systemsIn forceM.2158-22011Impact of power line telecommunication systems on radiocommunication<br>systems operating in the LF, MF, HF and VHF bands below 80 MHzIn forceM.21792010Short-range radiocommunication devices measurementsIn force  | SM.2093-1 | 2010     | Guidance on the regulatory framework for national spectrum management  | In force |
| M.21522009Definitions of Software Defined Radio (SDR) and Cognitive Radio SystemIn force<br>(CRS)M.2153-22011Technical and operating parameters and spectrum use for short-range<br>radiocommunication devicesIn forceM.21542009Short-range radiocommunication devices spectrum occupancy<br>measurement techniquesIn forceM.21552009Man-made noise measurements in the HF rangeIn forceM.21562009The role of spectrum monitoring in support of inspectionsIn forceM.21572009Measurement methods for power line high data rate telecommunication<br>systemsIn forceM.2158-22011Impact of power line telecommunication systems on radiocommunication<br>systems operating in the LF, MF, HF and VHF bands below 80 MHzIn forceM.21792010Short-range radiocommunication devices measurementsIn forceM.21802010Impact of industrial, scientific and medical (ISM) equipment onIn force  | SM.2125-1 | 2011     |  | In force |
| M.2153-22011Technical and operating parameters and spectrum use for short-range<br>radiocommunication devicesIn forceM.21542009Short-range radiocommunication devices spectrum occupancy<br>measurement techniquesIn forceM.21552009Man-made noise measurements in the HF rangeIn forceM.21562009The role of spectrum monitoring in support of inspectionsIn forceM.21572009Measurement methods for power line high data rate telecommunication<br>systemsIn forceM.2158-22011Impact of power line telecommunication systems on radiocommunication<br>systems operating in the LF, MF, HF and VHF bands below 80 MHzIn forceM.21792010Short-range radiocommunication devices measurementsIn force  | SM.2130   | 2008     | Inspection of radio stations   | In force |
| M.21542009Short-range radiocommunication devicesIn forceM.21542009Short-range radiocommunication devices spectrum occupancy<br>measurement techniquesIn forceM.21552009Man-made noise measurements in the HF rangeIn forceM.21562009The role of spectrum monitoring in support of inspectionsIn forceM.21572009Measurement methods for power line high data rate telecommunication<br>systemsIn forceM.2158-22011Impact of power line telecommunication systems on radiocommunication<br>systems operating in the LF, MF, HF and VHF bands below 80 MHzIn forceM.21792010Short-range radiocommunication devices measurementsIn forceM.21802010Impact of industrial, scientific and medical (ISM) equipment onIn force  | SM.2152   | 2009     |  | In force |
| M.21552009Man-made noise measurements in the HF rangeIn forceM.21562009The role of spectrum monitoring in support of inspectionsIn forceM.21572009Measurement methods for power line high data rate telecommunicationIn forceM.21572009Measurement methods for power line high data rate telecommunicationIn forceM.2158-22011Impact of power line telecommunication systems on radiocommunicationIn forceM.21792010Short-range radiocommunication devices measurementsIn forceM.21802010Impact of industrial, scientific and medical (ISM) equipment onIn force   | SM.2153-2 | 2011     |  | In force |
| M.21562009The role of spectrum monitoring in support of inspectionsIn forceM.21572009Measurement methods for power line high data rate telecommunication<br>systemsIn forceM.2158-22011Impact of power line telecommunication systems on radiocommunication<br>systems operating in the LF, MF, HF and VHF bands below 80 MHzIn forceM.21792010Short-range radiocommunication devices measurementsIn forceM.21802010Impact of industrial, scientific and medical (ISM) equipment onIn force  | SM.2154   | 2009     |  | In force |
| M.21572009Measurement methods for power line high data rate telecommunication<br>systemsIn forceM.2158-22011Impact of power line telecommunication systems on radiocommunication<br>systems operating in the LF, MF, HF and VHF bands below 80 MHzIn forceM.21792010Short-range radiocommunication devices measurementsIn forceM.21802010Impact of industrial, scientific and medical (ISM) equipment onIn force   | SM.2155   | 2009     | Man-made noise measurements in the HF range  | In force |
| SystemsM.2158-22011Impact of power line telecommunication systems on radiocommunication<br>systems operating in the LF, MF, HF and VHF bands below 80 MHzIn forceM.21792010Short-range radiocommunication devices measurementsIn forceM.21802010Impact of industrial, scientific and medical (ISM) equipment onIn force  | SM.2156   | 2009     | The role of spectrum monitoring in support of inspections  | In force |
| Systems operating in the LF, MF, HF and VHF bands below 80 MHzM.21792010Short-range radiocommunication devices measurementsIn forceM.21802010Impact of industrial, scientific and medical (ISM) equipment onIn force   | SM.2157   | 2009     |  | In force |
| M.2180 2010 Impact of industrial, scientific and medical (ISM) equipment on In force   | SM.2158-2 | 2011     |  | In force |
|  | SM.2179   | 2010     | Short-range radiocommunication devices measurements  | In force |
|  | SM.2180   | 2010     |  | In force |

| SM.2181 | 2010 | Use of Appendix 10 of the Radio Regulations to convey information<br>related to emissions from both GSO and non-GSO space stations<br>including geolocation information | In force |
|---------|------|---|----------|
| SM.2182 | 2010 | Measurement facilities available for the measurement of emissions from<br>both GSO and non-GSO space stations   | In force |
| SM.2210 | 2011 | Impact of emissions from short-range devices on radiocommunication services   | In force |
| SM.2211 | 2011 | Comparison of Time-Difference-of-Arrival and Angle-of-Arrival Methods of signal geolocation   | In force |
| SM.2212 | 2011 | Impact of power line telecommunication systems on radiocommunication systems operating in the VHF and UHF bands above 80 MHz  | In force |

Reports count:

Total Reports count:

*28*