

Status of Regional Proposals and Positions for WRC-19

Abstract

The following text provides the current status of APT, ASMG, ATU, CEPT, CITEL, and RCC proposals and/or positions WRC-19 as shown against the SFCG WRC-19 objectives as contained in Resolution SFCG 36-1R1. These are summaries only and are intended solely for the information and the use by SFCG member agencies.

Table of Contents

Agenda Item 1.2 Power Limits for MSS/MetSat/EESS Earth Stations Around 400 MHz	2
Agenda Item 1.3 MetSat Upgrade / EESS Allocation (space-to-Earth) at 460-470 MHz.....	5
Agenda Item 1.5 Earth Stations in Motion at 17.7-19.7 GHz & 27.5-29.5 GHz	7
Agenda Item 1.6 Regulatory Framework for Non-GSO FSS at 37.5-39.5 GHz (↓) & 47.2-50.2 GHz (↑).....	11
Agenda Item 1.7 SOS for Non-GSO Satellites With Short Duration Below 1 GHz.....	14
Agenda Item 1.11 Railway Radiocommunication Systems Between Train and Trackside	17
Agenda Item 1.12 Intelligent Transport Systems (ITS).....	20
Agenda Item 1.13 International Mobile Telecommunications (IMT) Studies Between 24.25-86 GHz	23
Agenda Item 1.14 High Altitude Platform Systems (HAPS)	33
Agenda Item 1.15 Land Mobile and Fixed Services Footnote Between 275-450 GHz	37
Agenda Item 1.16 RLANs Studies at 5150-5925 MHz.....	41
Agenda Item 7 Resolution 86 – Satellite Regulatory Procedures.....	46
Agenda Item 9.1.1 Implementation of IMT at 1885-2025 MHz and 2110-2200 MHz.....	59
Agenda Item 9.1.4 Stations Onboard Sub-Orbital Vehicles	61
Agenda Item 9.1.6 Urgent Studies for Wireless Power Transfer (WPT) for Electric Vehicles	63
Agenda Item 9.1.8 Urgent Studies for Machine Type Communications (MTC)	65
Agenda Item 9.1.9 FSS (↑) Studies at 51.4-52.4 GHz.....	67
Agenda Item 10 - Future Conference Agenda Items	69
WRC-23 Draft Agenda Item 2.2 EESS (Active) Around 45 MHz.....	73
Annex 1.2.....	76
Annex 1.3.....	79
Annex 1.4.....	82

Agenda Item 1.2 Power Limits for MSS/MetSat/EESS Earth Stations Around 400 MHz

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<p>SFCG</p>	<p>SFCG supports establishment of appropriate in band e.i.r.p limits for earth stations operating in mobile-satellite service (399.9-400.05 MHz), the meteorological-satellite service (401-403 MHz) and the Earth exploration-satellite service (401-403 MHz), in order to preserve, on a long term basis, the operation of Data Collection Systems of both NGSO and GSO systems. SFCG does not support the use of e.i.r.p. density limits as a mechanism for ensuring compatibility. In addition, for both frequency bands, SFCG supports not applying the corresponding limit to satellite systems, for which complete notification information has been received by the Radiocommunication Bureau by 22 November 2019.</p>
<p>APT (2019-08-06)</p>	<p>Preliminary Position</p> <p>APT Members support the ITU-R studies in accordance with Resolution 765 (WRC-15) on establishing in-band power limits, given in section 4/1.2/3.1 and 4/1.2/3.2 of CPM AI 1.2 report, for earth stations required to protect satellite system with lower or moderate power (e.g. DCS) from harmful interference from telecommand-link earth stations operating in the EESS and MetSat in the frequency band 401-403 MHz and the MSS in the frequency band 399.9-400.05MHz.</p> <p>For the band 399.9-400.05 MHz</p> <p>APT Members support Method C in the CPM Report for this Agenda Item and support the e.i.r.p. limit indicated in Table 4/1.2/3-1 of the CPM Report. APT Members are of the view that transitional period until 22 November 2024 are needed to ensure that the existing telecommands for EESS systems, including those systems to be notified before November 22, 2019, may continue to operate.</p> <p>For the band 401-403 MHz</p> <p>APT Members support Method E in the CPM Report for this Agenda Item. APT Members are of the view that transitional arrangements are needed to ensure that the existing telecommands for EESS, including those systems to be notified and brought into use before November 22, 2019, may continue to operate until November 22, 2024 or 2029 (date to be agreed on at WRC 19).</p> <p>Some APT Members are of the view that telecommand links for all of the existing satellite systems in operation under EESS are necessary to be ensured continuously until November 22, 2029. Therefore, some APT Members support the Method E of the CPM Report with a transition period for applying the relevant e.i.r.p. limits of up to November 22, 2029 in this band.</p>
<p>ASMG (2018-12-13)</p>	<p>Preliminary Position</p> <p>Follow up the ongoing studies in the ITU-R.</p> <p>Supporting the ongoing studies in order to establish in-band power limits for earth stations operating in Mobile satellite service (MSS), Meteorological satellite service (MetSat) and Earth exploration service in the frequency bands 401-403MHz and 399.9-400.05MHz, in order to ensure the protection of the existing services without imposing any additional constraints in these services due to the massive usage of the fixed and mobile services in these frequency bands in the countries.</p>
<p>ATU (2018-09-17)</p>	<p>Preliminary Position</p> <p>APM19-3 agreed to:</p> <p>(a) For the band 399.9 – 400.05 MHz:</p>

Agenda Item 1.2 Power Limits for MSS/MetSat/EESS Earth Stations Around 400 MHz

	<ul style="list-style-type: none"> • Note that ECOWAS and EACO positions is Method A (no Change) • Note that Egypt position is to support Method B • Note that SADC was still considering the issue and therefore did not have a common position. <p>(b) For the band 401-403MHz:</p> <ul style="list-style-type: none"> • Note that ECOWAS and Egypt positions is to support Method E. • Note that EACO position is to support No Change • Note that SADC was still considering the issue.
<p>CEPT (2019-05-24)</p>	<p>European Common Proposal (ECP) adopted Position</p> <p>In order to ensure long term continuity for the operation of satellite data collection systems, CEPT supports the establishment of in-band e.i.r.p. limits, as appropriate, for earth stations in the EESS and MetSat in the frequency band 401-403 MHz (for GSO and non-GSO) and in the MSS frequency band, specified per emission within reference bandwidth (4 kHz) as well as within whole allocated band, to avoid possible power aggregation of closely spaced narrowband carriers, notified for earth stations,, taking into account the result of studies.</p> <p>In addition, CEPT proposes specific provisions for frequency band 399.9-400.05 MHz until 22 November 2024 and for frequency band 401-403 MHz until 22 November 2027 for existing and planned satellite systems exceeding these e.i.r.p. limits, for which complete notification information has been received by the Radiocommunication Bureau, and that have been brought into use before 22 November 2019.</p> <p>The ECP and the CEPT position are based on the following Methods from the CPM Report: Method C for the 399.9-400.05 MHz band, Method E for the 401-403 MHz band.</p>
<p>CITEL (2019-04-12)</p>	<p>Draft Inter-American Proposal</p> <p>Resolution 765 (WRC-15) calls for the necessary technical, operational and regulatory consideration of the possibility of establishing in-band power limits for earth stations in the EESS and MetSat services in the frequency bands 401-403 MHz and in the MSS frequency band 399.9-400.05 MHz taking into account the results of ITU-R studies.</p> <p>The frequency bands 401-403 MHz and 399.9-400.5 MHz are used for Earth station uplink transmission by the Data Collection System (DCS) under the Earth exploration-satellite service (EESS) and meteorological-satellite service (MetSat) and the mobile-satellite service (MSS) allocations. DCS Earth stations as knows as data collection platforms (DCP) are deployed worldwide and communicate with GSO and non-GSO satellites.</p> <p>The Data Collection Platforms (DCP) is a network of sensors measuring and gather information activity related to the Earth, environmental and scientific applications, weather, environment observation: meteorological and oceanographic, seismic observation, volcanology, geodesy and geodynamics, fishing vessel monitoring, wildlife tracking, homeland security, law enforcement, test/evaluation, monitoring shipments of dangerous goods, humanitarian applications, managing water resources or tsunami warning system.</p> <p>The data collected by DCPs are transmitted to GSO and non-GSO satellite networks using the non-GSO MSS allocation in the band 399.9-400.05 MHz or the meteorological satellite allocation in the band 401-403 MHz. These systems usually operate using moderate to low equivalent isotropically radiated power (e.i.r.p.) levels, resulting in small link margins.</p> <p>These frequency bands are also used by non-geostationary satellites for telecommand space operations (see RR No 1.23) under the EESS, MetSat services, or under the MSS allocations and a growing number of these satellites are planned. The output power levels of the earth stations at the antenna port peak e.i.r.p. of these telecommand links (Earth-to-space) can be much higher than</p>

Agenda Item 1.2 Power Limits for MSS/MetSat/EESS Earth Stations Around 400 MHz

	<p>the moderate to low power levels used for the DCS service links, leading to potential harmful interference to DCS satellite receivers.</p> <p>Recommendation ITU-R SA.2045 provides information on the performance and interference criteria for relevant geostationary-satellite orbit (GSO) and non-geostationary satellite (non-GSO) DCS in the frequency band 401-403 MHz. Recommendation ITU-R SA.2044 provides information on the current and future usage of non-GSO DCS in the frequency band 401-403 MHz, and the portioning of the frequency band to allow all DCS equal access to the spectrum. Recommendation ITU-R M.2046 provides a description, and the corresponding protection criteria for broadband noise and narrowband interference, of one MSS system that uses the frequency band 399.9-400.05 MHz (Earth-to-space).</p> <p>ITU-R studies considered in-band power limits for earth stations operating in the frequency ranges 399.9-400.05 MHz in the MSS and 401-403 MHz in the EESS and MetSat services.</p>
<p>RCC (2019-01-25)</p>	<p>Preliminary Position</p> <p>The RCC Administrations support measures to study this issue and establish emitted power limits for earth stations used for space operation functions in the frequency bands 401-403 MHz and 399.9-400.05 MHz in order to avoid interference to data collection systems in the meteorological-satellite service, Earth exploration-satellite service and mobile-satellite service taking into account the Report ITU-R SA [400 MHz-LIMITS].</p> <p>The RCC Administrations consider that specified limits shall not cover the frequency assignments to satellite systems registered in MIFR before 22 November 2019 in frequency bands 399.9-400.05 MHz and 401-403 MHz during the transition period spanning not less than 5 years following WRC-19. At the same time, equivalent isotropically radiated power limit for earth stations of the existing satellite data collection systems operating in the frequency band 401.898 – 402.522 MHz, for which complete notification information has been received by the Radiocommunication Bureau by 28 April 2007, can be increased to 12 dBW.</p>

Agenda Item 1.3 MetSat Upgrade / EESS Allocation (space-to-Earth) at 460-470 MHz

Agenda Item 1.3 MetSat Upgrade / EESS Allocation (space-to-Earth) at 460-470 MHz

<p>SFCG</p>	<p>SFCG supports raising the regulatory status of MetSat and EESS space-to-Earth allocations as proposed by Method B of the draft CPM text (ITU-R WP 7B Chairman Report 7B/326 Annex 2). SFCG recognizes the need for harmonization of the global operating environment to allow full development of critical MetSat/EESS systems. SFCG is of the opinion that the MetSat (space-to-Earth) allocation should be upgraded from secondary to primary status and a primary EESS (space-to-Earth) allocation should be added in the frequency band 460-470 MHz while providing protection for and not imposing any additional constraints on existing primary services to which the frequency band is already allocated. This should be realised while retaining the priority of MetSat over EESS as currently expressed in the RR. The SFCG supports the pfd mask for non-GSO satellites contained in Method B of the draft CPM text, and encourages SFCG member agencies to further develop a suitable pfd mask for GSO satellites.</p>
<p>APT (2019-08-06)</p>	<p>Preliminary Position</p> <p>Some APT members support Method C while some other APT members support Method B of the CPM Report.</p> <p>Some APT members are of the view that pfd limits are to be revised for both non-GSO and GSO MetSat/EESS satellites to give additional protection needed by mobile services that require higher protection based on further ITU-R studies.</p> <p>Reasons: APT Members did not reach an agreement to develop specific proposed regulatory text for Agenda item 1.3</p>
<p>ASMG (2018-12-13)</p>	<p>Method A: No changes are proposed to the RR. A consequential suppression of Resolution 766 (WRC-15).</p>
<p>ATU (2018-09-17)</p>	<p>Preliminary Position</p> <p>APM19-3 agreed to take <u>Method A (No change)</u> as the African preliminary position.</p>
<p>CEPT (2019-05-24)</p>	<p>ECP adopted</p> <p>Position</p> <p>CEPT supports that the MetSat (space-to-Earth) allocation should be upgraded from secondary to primary status and that a primary EESS (space-to-Earth) allocation should be added in the frequency band 460-470 MHz provided that</p> <ul style="list-style-type: none"> • the protection of primary services in the frequency band and in adjacent frequency bands is ensured by the introduction of regulatory provisions, including relevant pfd masks for GSO and non-GSO satellites • “MetSat and EESS earth stations shall not claim protection from stations in the fixed and mobile services”, as stated in recognizing f) of Res 766 • priority of MetSat over EESS as currently expressed in the RR is retained. • CEPT position and ECP are based on Method C of the CPM Report.
<p>CITEL (2019-04-12)</p>	<p>Preliminary Position</p> <p>NOC ARTICLE 5, SUP RESOLUTION 766 (WRC-15)</p> <p>Reason: <i>proposing not to introduce to the Radio Regulations in the 460-470 MHz frequency band can guarantee the current and planned use of this band for the deployment of mobile service IMT systems.</i></p>

Agenda Item 1.3 MetSat Upgrade / EESS Allocation (space-to-Earth) at 460-470 MHz

	<p>Draft Inter-American Proposal</p> <p>Inclusion in the Table, a primary EESS (space-to-Earth) and MetSat allocation in the frequency band 460-470 MHz; provision of protection to the fixed and mobile services from MetSat and EESS satellite downlinks; provision of protection to MetSat downlinks from EESS satellite downlinks; and replaces RESOLUTION 766 with a new Resolution to provide the transitional measures for the existing Metsat/EESS frequency assignments to ensure that the existing satellite systems, including those for which complete notification information or coordination request was received by the Radiocommunication Bureau prior to the end of WRC-19 can continue their operation in compliance with the provisions adopted at WRC-19 as well as to provide the definition of pfd limits that will protect the terrestrial services.</p>
<p>RCC (2019-01-25)</p>	<p>Preliminary Position</p> <p>The RCC Administrations support upgrading the secondary allocation to the meteorological-satellite service (space-to-Earth) to a primary status as well as a primary allocation to the Earth exploration-satellite service (space-to-Earth) in the frequency band 460-470 MHz under the following conditions:</p> <ul style="list-style-type: none"> • upgrading the status of allocations of the frequency bands to the meteorological-satellite service and the Earth exploration-satellite service shall be applied both for future systems as well as existing systems of these radio services; • for the protection of the terrestrial services to which the frequency band 460-470 MHz is allocated on a primary basis, which ensure acceptable interference level, pfd limits for the specified satellite services shall be established to ensure acceptable interference level. In case of non-compliance with these limits, existing satellite systems of specified services can be used on the primary basis provided that no interference is caused to stations in terrestrial services, and they do not claim protection from stations in terrestrial services; • maintaining priority of the meteorological-satellite service over the Earth exploration-satellite service should be ensured. <p>The RCC Administrations do not support segmentation of the frequency band 460-470 MHz for geostationary and non-geostationary satellite systems.</p>

Agenda Item 1.5 Earth Stations in Motion at 17.7-19.7 GHz & 27.5-29.5 GHz

Agenda Item 1.5 Earth Stations in Motion at 17.7-19.7 GHz & 27.5-29.5 GHz

<p>SFCG</p>	<p>SFCG does not oppose the use of the 17.7-19.7 GHz by earth stations in motion communicating with geostationary space stations in the fixed-satellite service as per Method B of the draft CPM text (ITU-R WP4A Chairman Report 4A/826 Annex 28) provided that the protection of the EESS(passive) is ensured. SFCG notes that the introduction of ESIM for maritime and aeronautical use in the sub-band 18.6-18.8 GHz may change the sharing environment with EESS(passive) over the ocean area.</p>
<p>APT (2019-08-06)</p>	<p>Preliminary Position</p> <p>Based on input documents from APT Members, modifications to Draft New Resolution [A15] were discussed. APT members developed a PACP which is essentially Method B with Option 1 for footnote 5.A15 and numerous other modifications to the draft resolution [A15] (or selections amongst options) including a new <i>recognizing</i> “c)bis” article as follows:</p> <p><i>c)bis</i> that the successful compliance of this Resolution does not oblige any administration to authorize/licence any ESIM to operate within the territory under its jurisdiction unless such an operation it fully complies with its national jurisdiction;</p> <p>In a number of areas of the PACP consensus was not reached, including for Annexes:</p> <p>Annex 1 to [A15] - With respect to emission bandwidth larger than 100 MHz and the maximum ESIM on-axis e.i.r.p. no consensus was reached on any of two options contained in the CPM 19-2 Report.</p> <p>Annex 2 to [A15] - With respect to protection to terrestrial service by any type of ESIM using Annex 2 with its pfd approach including various options providing modality how to implement these options as contained in CPM Report, no consensus was reached at APG19-5 meeting. However 2 approaches were proposed:</p> <p>Approach 1: Establish of pfd mask/limit which shall not be exceeded on any point at the earth surface.</p> <p>Approach 2: Establish of altitude limit below which aircraft on which ESIM operates shall not transmit.</p> <p>Annex 3 to [A15] - No consensus was reached on this matter therefore no PACP is proposed in this regard.</p>
<p>ASMG (2018-12-13)</p>	<p>Method B: Add a new footnote in RR Article 5 that refers to a new WRC Resolution [A15] (WRC-19) with technical, operational and regulatory conditions for the operation of ESIM while ensuring protection of allocated services and consequential suppression of Resolution 158 (WRC-15).</p>
<p>ATU (2018-09-17)</p>	<p>Preliminary Positions</p> <p>APM19-3 agreed to:</p> <p>Take <u>Method B</u> as the African preliminary position, which includes addition to a new footnote in Article 5 of the Radio Regulations with reference to a new resolution which will define operational and regulatory conditions for ESIMs incl pfd mask to protect terrestrial services in the band 27.5 to 29.5 MHz from aircraft ESIM, and an offshore separation distance to protect terrestrial services from maritime ESIM.</p> <ul style="list-style-type: none"> • Note that there is an increasing need for mobile-satellite broadband communications to support the broader agenda of enhancing broadband; • Note that the study results conducted in EACO, SADC and Senegal show that sharing and compatibility between the three types of ESMIs and existing terrestrial services allocated in the bands is feasible and therefore support the identification of the

Agenda Item 1.5 Earth Stations in Motion at 17.7-19.7 GHz & 27.5-29.5 GHz

	<p>frequency bands 17.7 -19.7 GHz and 27.5 AND 29.5GHz to the different types of ESIM.</p> <ul style="list-style-type: none"> Note the positive study result both in ITYU-R WP4A and the sub-regions and countries that identification of the frequency bands 17.7 -19.7 GHz and 27.5- 29.5GHz for ESIM operations can be supported whilst ensuring protection of, and not imposing undue constraints on, other existing primary services allocated to these frequency bands. <p>Invite sub-regions and African countries to</p> <ul style="list-style-type: none"> Continue exploring different solutions (ie. the operational and regulatory conditions for ESIMs in item 4 above) incl band segmentation to ensure co-existence between Land ESIMs and Fixed services. Thoroughly examine the draft example WRC Resolution (AI 1.5) and its annexes esp the sections which are not yet agreed or discussed and propose a contribution for the next CPM-19-2 <p>Note that EACO was still considering this agenda item and did thus not have a common position.</p>
<p>CEPT (2019-05-24)</p>	<p>Preliminary Position</p> <p>CEPT supports a regulatory framework for the operation of earth stations in motion (ESIM) in the bands 17.7-19.7 GHz and 27.5-29.5 GHz, while ensuring protection of, and not imposing undue constraints on, services allocated in those frequency bands.</p> <p>Due to the foreseen growing demand for ESIM and because ESIM terminals are ‘in motion’ and world-wide use, the regulatory framework for these terminals needs to be as simple and practicable as possible.</p> <p>Regarding the compatibility with terrestrial services in the 27.5-29.5 GHz bands, CEPT supports the following:</p> <ul style="list-style-type: none"> Maritime ESIM –minimum distance of 70 km from the low water mark officially recognized by coastal states and a maximum e.i.r.p. of 24.44 dBW/14 MHz towards the territory of any coastal state similar to the method adopted in Resolution 902 (WRC-03). ESIM should comply with this minimum distance unless prior agreement of the concerned administrations has been given. Aeronautical ESIM – together with other technical conditions, the pfd limits on the earth’s surface as specified in <u>ECC Decision (13)01</u>, should be used to ensure protection of MS and FS. This together with other consideration would ensure protection of terrestrial systems. ESIM should comply with these pfd limits unless prior agreement of the concerned administrations has been given. Land ESIM – operating within national boundaries no specific regulatory action or amendments to the Radio Regulations at WRC-19 are needed. <p>Regarding compatibility with terrestrial services in the 17.7-19.7 GHz band, CEPT is of the view that ESIM shall not claim protection from the fixed and mobile services in the band.</p> <p>CEPT is of the view that the pfd for Aeronautical ESIM and minimum distance for maritime ESIM from the low water mark officially recognized by coastal states mentioned above are sufficient for the protection of terrestrial services. Therefore, prior to authorising aeronautical and maritime ESIM, an administration is not required to perform coordination with regards to terrestrial service stations of other administrations provided that the above-mentioned pfd and the minimum distance are met.</p> <p>CEPT is of the view that the pfd mask for Aeronautical ESIM and minimum distance for maritime ESIM defined above are deemed to provide protection for the terrestrial services in</p>

Agenda Item 1.5 Earth Stations in Motion at 17.7-19.7 GHz & 27.5-29.5 GHz

	<p>order to provide regulatory certainty for both the terrestrial services and for the operation of ESIM. CEPT is not favourable to regulatory provisions that could allow protection requirements other than pfd mask based on the need to protect future development of terrestrial services. Moreover, CEPT is of the view that the proposed pfd mask shall be defined based on parameters of terrestrial systems which are consistent with the technical characteristics provided by responsible Working Parties at ITU-R and should not address the protection of applications which do not conform with these characteristics.</p> <p>Regarding compatibility with satellite networks the ESIM characteristics shall remain within the envelope of the satellite network with which these ESIM communicate and the satellite network, when using ESIM, shall not cause more interference and shall not claim more protection than was coordinated when using typical earth stations in this satellite network.</p> <p>CEPT is of the view that, in line with the principles already expressed in ITU Resolution 156 (WRC-15), the notifying administration of the GSO FSS satellite network with which ESIM communicate shall be responsible for ensuring that the ESIM network operator has the capability to limit operations of ESIM to the territory or territories of administration having authorised those ESIM and to comply with Article 18 and shall provide a point of contact for the purpose of tracing any suspected cases of interference from earth stations in motion.</p> <p>In case of interference from L-ESIM, the administration of the territory on which the L-ESIM operates is responsible for authorising the operation of L-ESIM on its territory and for acting. In case of interference from maritime or aeronautical ESIM, the administration of the country in which the ship or aircraft is registered and the administration responsible for the satellite network should have joined responsibility to act to remove interference.</p> <p>CEPT has developed a Roadmap on 5G (http://www.cept.org/ecc/topics/spectrum-for-wireless-broadband-5g#roadmap). In this respect it is noted that “Europe has harmonised the 27.5-29.5 GHz band for broadband satellite and is supportive of the worldwide use of this band for ESIM. This band is therefore not available for 5G”. It should also be noted that, in Europe, according to Decision ECC/DEC/(05)01, portions of the frequency band 27.5-29.5 GHz, are designated and can be used for the fixed service.</p>
<p>CITEL (2019-04-12)</p>	<p>Draft Inter-American Proposal</p> <p>In accordance with Method B of the draft text for the Conference Preparatory Meeting it is proposed that the addition of a new footnote to Article 5 of the Radio Regulations to include the use of ESIMs in frequency bands 17.7-19.7 GHz and 27.5-29.5 GHz, adopting a new Resolution that contains the specific conditions for ESIM operation and ensures the protection of primary services within them. The attached Resolution would contain guidelines to help administrations to authorize ESIMs in these bands.</p>
<p>RCC (2018-03-15)</p>	<p>Preliminary Positions</p> <p>1. The RCC Administrations support a draft new Resolution [A15] (WRC-19) which, as a method of addressing WRC-19 agenda item 1.5, shall contain technical conditions and regulatory provisions with regard to operation of earth stations in motion (ESIM) communicating with geostationary space stations in the fixed-satellite service in radio frequency bands 17.7-19.7 GHz (space-to-Earth) and 27.5-29.5 GHz (Earth-to-space), to provide protection, based on existing criteria, of services having allocations in these (and adjacent) radio frequency bands, including EESS (passive) in the radio frequency band 18.6-18.8 GHz and future use of EESS (Earth-to-space) in the radio frequency band 28.5-29.5 GHz and also use of terrestrial services in the radio frequency bands 25.25-27.5 GHz and 27.5-29.5 GHz (method B in draft CPM Report).</p> <p>2. The RCC Administrations consider that with regard to satellite networks or systems in space services of other administrations in radio frequency bands 17.7-19.7 GHz and 27.5-29.5 GHz ESIM shall comply with the following conditions:</p>

Agenda Item 1.5 Earth Stations in Motion at 17.7-19.7 GHz & 27.5-29.5 GHz

a) using ESIM within earlier-registered frequency assignment to typical earth station of GSO FSS satellite network, the appropriate information on such a use shall be recorded in MIFR. If frequency assignment to a typical earth station was made under RR No. 11.38, ESIM can use this frequency assignment provided that ESIM shall not cause more interference, nor claim more protection than registered frequency assignment to the typical earth station. If frequency assignment to a typical earth station was made under RR No. 11.41, ESIM shall not cause unacceptable interference, nor claim protection from interference, with regard to recorded frequency assignments that served the basis for the registration of frequency assignment to a typical earth station under RR No 11.41;

b) using ESIM within a new frequency assignment to GSO FSS satellite network requires notifying administration to provide information to the Bureau, according to RR Appendix 4, on the characteristics of ESIM, intended to communicate with the space station of this GSO FSS network, in order to be verified by the Bureau and to publish the results in specific section of BR IFIC. In this case such a frequency assignment to ESIM needs to be coordinated and registered, according to procedures of RR Articles 9 and 11 in the relevant GSO FSS satellite network before starting the use of ESIM;

c) administration authorizing the use of ESIM in the territory under its jurisdiction is entitled to request ESIM to use only those frequency assignments to GSO FSS network which have been successfully coordinated, notified, implemented and recorded in the MIFR with a favourable finding under RR Article 11;

3. The RCC Administrations consider that, with respect to terrestrial services operating in the radio frequency bands 17.7–19.7 GHz and 27.5–29.5 GHz, ESIM shall comply with the following conditions:

a) transmitting ESIMs in the frequency band 27.5–29.5 GHz shall not cause unacceptable interference to stations of terrestrial services in this band, operating in accordance with the Radio Regulations, or impose constraints on future development of these services;

b) receiving ESIMs in the radio frequency band 17.7–19.7 GHz shall not claim protection from stations of terrestrial services in this band, operating in accordance with the Radio Regulations, or impose constraints on future development of these services;

c) the notifying administration responsible for the GSO FSS satellite network with which ESIMs communicate shall submit to the Bureau a commitment that, in case of unacceptable interference, upon receipt of a report of such an interference, will take appropriate action to immediately cease or reduce the interference to the acceptable level.

4. The RCC Administrations consider that in the draft new Resolution **[A15] (WRC-19)** special measures shall be envisaged to exclude unauthorized use of ESIM in the territory of States that have not granted relevant authorizations (licenses). Regulations applicable to ESIM, which would be defined under the issue 9.1.7 of WRC-19 agenda item 9.1, shall be taken into account when developing regulations within the frameworks of WRC-19 agenda item 1.5.

Agenda Item 1.6 Regulatory Framework for Non-GSO FSS at 37.5-39.5 GHz (↓) & 47.2-50.2 GHz (↑)

Agenda Item 1.6 Regulatory Framework for Non-GSO FSS at 37.5-39.5 GHz (↓) & 47.2-50.2 GHz (↑)

<p>SFCG</p>	<p>SFCG supports the revision of the current limits in Resolution 750 (Rev. WRC-15) for the band 50.2-50.4 GHz to protect EESS (passive) for both NGSO and GSO systems taking into account that studies have demonstrated the limits in Resolution 750 (Rev. WRC-15) do not sufficiently protect passive services in the band. Therefore SFCG supports Method D, Option 1 of the draft CPM text (ITU-R WP4A Chairman Report 4A/826 Annex 29). Studies have shown that compatibility between EESS (passive) and NGSO FSS in the band 36-37 GHz is achieved, noting however that they did not address the cold calibration channel. It is to be noted that sharing studies for SRS and EESS earth stations in the bands 37.5-38 GHz and 40-40.5 GHz are not listed in Resolution 159 (WRC-15). These studies will have to be addressed by WP 7B through the revision of Report ITU-R SA.2307 and Recommendation ITU-R SA.2079 for the band 37.5-38 GHz, and additional new report and recommendation for the band 40-40.5 GHz.</p>
<p>APT (2019-08-06)</p>	<p>Preliminary Position</p> <p>APT Members support the establishment of regulatory and procedural conditions for non-GSO FSS satellite systems in the frequency bands 37.5- 39.5 GHz (space-to-Earth), 39.5 - 42.5 GHz (space-to-Earth), 47.2 - 50.2 GHz (Earth-to-space) and 50.4 - 51.4 GHz (Earth-to-space) while ensuring protection to GSO satellite networks in FSS, MSS and BSS, and other existing primary services in the same bands as well as protection of the EESS (passive) in the frequency bands 36-37 GHz and 50.2-50.4 GHz and the radio astronomy in the frequency bands 42.5-43.5 GHz, 48.94-49.04 GHz and 51.4-54.25 GHz.</p> <p>APT Members support Method A of Issue 1 in the CPM Report.</p> <p>In the absence of suitable ITU-R Recommendations able to be incorporated by reference, APT Members support consideration of Resolutions, addressing:</p> <ul style="list-style-type: none"> • generic GSO Reference Links and calculation procedures, that may be used to verify the compliance of non-GSO systems; and • regulatory provisions to protect GSO satellite networks based on appropriate sharing methodology and reference characteristics of GSO satellite networks. <p>APT Members support ensuring the protection of EESS (passive) from unwanted emission in adjacent bands. In relation to Issue 2 relating to possible modifications to Resolution 750 (Rev. WRC-15), preference towards Option A has been expressed, and Option B is still under consideration</p>
<p>ASMG (2018-12-13)</p>	<p>Preliminary Position:</p> <p>Issue A:</p> <p>Method B: Carry forward the studies to ensure the protection of GSO satellite networks under WRC-19 agenda item 1.6 to a new WRC 23 agenda item towards the development of epfd limits.</p> <p>Reason: Resolution 159 (WRC-15) indicates that technical and regulatory studies, under this agenda item, shall focus exclusively on the development of equivalent power flux-density limits to protect GSO FSS satellite networks from non-GSO FSS systems as appropriate.</p> <p>There are views that developing appropriate equivalent power flux-density limits is still not satisfied and if the relevant epfd limits are still not agreed upon in time for WRC-19, the studies conducted to protect the GSO satellite network, under this agenda item, should be carried forward to a new WRC-23 agenda item and should be modelled after Resolution 159 (WRC-15).</p> <p>Issue B:</p> <p>Option A supported by ASMG.</p> <ul style="list-style-type: none"> •

Agenda Item 1.6 Regulatory Framework for Non-GSO FSS at 37.5-39.5 GHz (↓) & 47.2-50.2 GHz (↑)

<p>ATU (2018-09-17)</p>	<p>Preliminary Position:</p> <p>Take Method A as the African preliminary position while continuing to further examine other Methods and their implementation (editor’s note: Method A presents a regulatory and technical implantation to modify RR Article 22 to include a Regulatory framework to enable non-GSO systems based upon a maximum allowable percent increase in GSO unavailability specified in the short-term and long-term performance objectives of the GSO links).</p> <p>Note that EXOWAS and EACO were yet to formulate a position on this agenda item and SADC had no firm view yet.</p> <p>Note that the last WP4A meeting (July 2018) proposed four methods to satisfy the agenda item. Methods A, B and C are almost the same. They only differ slightly on their implementation.</p> <p>Support the studies under Resolution 159 (WRC-15) which aim at developing a regulatory framework for new non-GSO FSS satellite systems, while protecting GSO FSS systems in the frequency bands above 30GHz.</p> <p>Encourage administrations to contribute to ongoing studies and ensure protection of existing FSS GSO but also exploring opportunities that might come with new NGSO systems.</p>
<p>CEPT (2019-05-24)</p>	<p>Preliminary Position</p> <p>CEPT supports the development of regulatory provisions, technical and operational conditions that would enable spectrally efficient operation of non-GSO FSS satellite systems in the frequency bands 37.5-42.5 GHz (space-to-Earth), 47.2-50.2 GHz (Earth-to-space) and 50.4-51.4 GHz (Earth-to-space) while ensuring protection for GSO satellite networks and stations of other existing services including passive services in the adjacent frequency bands.</p> <p>CEPT considers that the limits currently in Resolution 750 (Rev. WRC-15) are not sufficient for the protection of EESS (passive) in the adjacent frequency band 50.2-50.4 GHz from operation of [both GSO and] non-GSO FSS satellite systems in the frequency bands under consideration in accordance with Resolution 159 (WRC-15). Appropriate unwanted emission limits for the protection of EESS (passive) are --51.3 dBW/200 MHz for non-GSO user terminals, -48.7 dBW/200 MHz for non-GSO gateways, [-58.1 dBW/200 MHz for GSO user terminals and -44.1 dBW/200 MHz for GSO gateways]. .</p> <p>CEPT supports the development of the new Recommendation ITU-R S. [50/40 GHz Sharing Methodology] which describes in particular the methodology to calculate the maximum permissible level of interference from non-GSO satellite systems specified as single entry and aggregate limits for: a) increase in unavailability time allowance for degradation of GSO networks short term performance objectives b) a maximum reduction of the throughput or spectral efficiency for GSO networks using Adaptive Coding Modulation. CEPT supports that this methodology takes into account the correlation between a fading event attenuating both the wanted signal and interfering signals in the frequency bands 40/50 GHz. In addition, CEPT supports that the conformity with these single-entry limits be evaluated using the calculation procedures in the new Recommendation ITU-R S.[50/40 GHz Sharing Methodology] and using the statistics of degradations due to the non-GSO system interference and fading issued from the latest versions of Recommendations ITU-R S.1503 and P.618, respectively.</p> <p>CEPT also supports the development of the new Recommendation incorporated by reference ITU-R S. [50/40 GHz Reference links] which contains characteristics of representative FSS GSO reference links.</p>
<p>CITEL (2019-04-12)</p>	<p>Draft Inter-American Proposal</p> <p>The use of the frequency bands 37.5-39.5 GHz (space-to-Earth), 39.5-42.5 GHz (space-to-Earth), 47.2-50.2 GHz (Earth-to-space) and 50.4-51.4 GHz (Earth-to-space) by a non-GSO-satellite system in the fixed-satellite service or mobile satellite-service is subject to the application of the provisions of No. 9.12 for coordination with other non-GSO-satellite systems</p>

Agenda Item 1.6 Regulatory Framework for Non-GSO FSS at 37.5-39.5 GHz (↓) & 47.2-50.2 GHz (↑)

	<p>in the fixed-satellite service and/or non-GSO satellite systems in the mobile satellite service, but not with non-GSO systems in other services.</p> <p>In the frequency bands 1 350-1 400 MHz, 1 427-1 452 MHz, 22.55-23.55 GHz, 30-31.3 GHz, 49.7-50.2 GHz, 50.4-50.9 GHz, 51.4-52.6 GHz, 81-86 GHz and 92-94 GHz, Resolution 750 (Rev.WRC-19) applies.</p>
<p>RCC (2019-01-25)</p>	<p>Preliminary Positions</p> <p>The RCC Administrations consider that studies on technical and operational issues and regulatory provisions in order to ensure operation of non-GSO FSS satellite systems in the frequency bands 37.5-42.5 GHz (space-to-Earth), 47.2-48.9 GHz (limited to feeder links), 48.9-50.2 GHz (Earth-to-space) and 50.4-51.4 GHz (Earth-to-space) shall ensure protection to GSO satellite networks in FSS, MSS and BSS, and also to stations of other existing services in the same and adjacent frequency bands.</p> <p>The RCC Administrations consider that technical conditions and regulatory provisions shall be developed to ensure sharing of the considered frequency bands between non-GSO FSS systems.</p> <p>The RCC Administrations support the revision of Resolution 750 (Rev. WRC-15) and establishment of appropriate unwanted emission limits for non-GSO FSS earth stations operated in the frequency bands 49.7-50.2 GHz and 50.4-50.9 GHz to protect EESS (passive) in the frequency band 50.2-50.4 GHz taking into account aggregate interference effect caused by existing radio services' systems in adjacent frequency bands. The RCC Administrations consider that Article 22 of the Radio Regulations shall establish the limitations for non-GSO FSS systems in order to ensure proper protection of GSO FSS and BSS systems in the frequency bands concerned. To identify the limits mentioned the RCC Administrations support the development of new Recommendation ITU-R S. [Methodology to assess FSS compatibility in the 50/40 GHz bands] for establishment of the appropriate protection criteria and maximum permissible levels of interferences from non-GSO FSS systems to GSO FSS networks in 40/50 GHz bands as well as new Recommendation ITU-R on characteristics of GSO FSS and BSS reference links in 50/40 GHz bands.</p>

Agenda Item 1.7 Space Operations Service for Non-GSO Satellites With Short Duration Below 1 GHz

Agenda Item 1.7 SOS for Non-GSO Satellites With Short Duration Below 1 GHz

<p>SFCG</p>	<p>SFCG recognizes the growing number of non-geostationary orbit satellites with short duration (NGSO SD) missions and the associated spectrum requirements resulting from this activity.</p> <p>SFCG recognises the need for viable solution for NGSO SD missions, however none of the methods contained in draft CPM text (ITU-R WP7B Chairman Report 7B/326 Annex 3) provides a solution that is acceptable on a global level.</p> <p>SFCG does not support Methods B1/B2 due to the large number of radiosondes that operate in the frequency range 403-406 MHz and their susceptibility to harmful interference by the NGSO SD missions, as evidenced in the Working Party 7B sharing studies.</p> <p>SFCG is of the view that new SOS allocations or updates to existing SOS allocations are favourable to accommodate the growing number of short duration non-GSO satellites. However, any new regulatory measures under this agenda item should assure four key elements:</p> <p>An unambiguous definition must be given about what constitutes a “satellite with short duration mission”:</p> <ul style="list-style-type: none"> • A system with a period of validity of not more than three years that cannot be extended. • The case of a (or multiple) spacecraft with a lifetime of not more than three years, where the operator launches a (or multiple) replenishment/replacement spacecraft(s) such that the operator has persistent frequency and orbital characteristics and capabilities longer than three years, is not a short duration mission. <p>The solution shall not have negative impacts on science services already operating in the frequency bands proposed. Due to the importance of the frequency band 401-403 MHz for Data Collection Systems (GSO and non-GSO), any potential new allocation to SOS in this band added under this Agenda Item must be consistent with those limits established under WRC-19 agenda item 1.2.</p> <p>In the light of the importance of MetAids operations for the scientific community, used in particular for the calibration of the EESS (passive) measurements, SFCG does not support a potential new allocation to SOS in the the band 403-406 MHz.</p> <p>Any consideration of bands for use under this agenda item must exclude the 406-406.1 MHz COSPAS-SARSAT band as well as appropriate guard bands (see <i>resolves</i> 1, Resolution 205 (WRC-15) and Working Party 7B studies).</p>
<p>APT (2019-08-06)</p>	<p>Preliminary Position</p> <p>APT Members do not support allocations for non-GSO Short Duration systems in the following frequency ranges:</p> <ul style="list-style-type: none"> - Maritime mobile VHF radiocommunication in the frequency ranges 156-157.45 MHz, 160.6-160.975 MHz and 161.475-162.05 MHz, in accordance with RR No. 5.226 and Appendix 18 (Rev. WRC-15). - The frequency range 406-406.1 MHz that is dedicated for satellite emergency position-indicating radio beacons, in accordance with Resolution 205 (Rev. WRC-15); and - Frequency bands used by Global Maritime Distress and Safety System (GMDSS) included in Appendix 15 of RR. <p>The main support from APT members is for Method A and Method C, with a preference for Method C if the protection can be ensured for AM(R)S below the 137-138 MHz frequency band and the FS and MS in the 148-149.9 MHz frequency band.</p> <p>Some APT members do not support Method C.</p>

Agenda Item 1.7 Space Operations Service for non-GSO satellites with short duration below 1 GHz

<p>ASMG (2018-12-13)</p>	<p>Preliminary Position Method A:NOC</p>
<p>ATU (2018-09-17)</p>	<p>Preliminary Potision Take Method A (No Change) as the African preliminary position. Noted that EACO was still considering this agenda item and therefore did not have a common position.</p>
<p>CEPT (2019-05-25)</p>	<p>Preliminary Position CEPT supports additional allocations or upgrades of existing allocations to the space operation service for short duration mission satellites provided that studies show compatibility with existing services.: CEPT supports the use of the current primary allocation to the space operation service in the space-to-Earth direction in the band 137-138 MHz, associated with relevant technical conditions (e.g. pfd limits). CEPT supports modifications to the current regulatory situation including the removal of No 9.21 in the existing allocation to the space operation service in the Earth-to-space direction within the band 148-149.9 MHz. For the following bands, considered under this Agenda item, CEPT supports a “No Change”:</p> <ul style="list-style-type: none"> • 150.05-174 MHz; • 400.15-420 MHz;. <p>CEPT is of the view that the band 272-273 MHz does not provide a solution to satisfy Agenda item 1.7 and hence supports a “No Change” for this band. CEPT recognises that studies under this Agenda item will have to take into account the considerations under Agenda item 1.2.</p>
<p>CITEL (2019-04-12)</p>	<p>Preliminary Proposal Add Space Operation Service allocation to the 404-405 MHz band, to satisfy the uplink spectrum requirement identified for satellites with short duration missions. The use of the band 404-405 MHz by the space operation service (Earth-to-space) is limited to non-GSO satellite systems having a limited period of validity of not more than three years. The period of validity of these systems shall not be extended. <i>Reason: The period of validity is limited to ensure that this allocation is only used for short duration missions.</i> Draft Inter-American Proposal <u>NOC Article 5</u> <i>Reason: ITU-R sharing and compatibility studies between NGSO satellites with short duration missions and the incumbent services, with respect to invites ITU-R 2 and 3 of Resolution 659 (WRC-15), demonstrated that sharing is not feasible.</i> SUP RESOLUTION 659 (WRC-15) <i>Reasons: ITU-R studies showed that sharing between incumbent services and short duration non-geostationary satellites with short duration missions is not feasible in frequency bands considered under this resolution. The work is complete; therefore, the resolution is no longer needed.</i></p>

Agenda Item 1.7 Space Operations Service for non-GSO satellites with short duration below 1 GHz

<p>RCC (2019-01-25)</p>	<p>Preliminary Position</p> <p>The RCC Administrations consider that spectrum needs for telemetry, tracking and command in the space operation service for non-GSO satellites with short duration missions should be based on real plans for satellite constellation development, taking into account to be able to meet these needs by existing allocations to the space operation service and to the services where a space station is operated in the frequency bands below 1 GHz.</p> <p>The RCC Administrations consider that when using existing or new frequency allocations to the space operation service below 1 for the purpose to command non-GSO satellites with short duration missions, the protection shall be ensured to the incumbent services in the same and adjacent frequency bands.</p> <p>The RCC Administrations oppose using the frequency bands 148-174.0 MHz and 405.9-410 to command non-GSO satellites with short duration missions, since:</p> <ul style="list-style-type: none">• separate parts of the frequency band 148-174.0 MHz are actively used within the territory of RCC Administrations for fixed and mobile services;• frequency band 154-156 MHz is used for the radiolocation service on a primary basis according to No 5.225A in some countries of Region 1;• separate parts of the frequency band 156-162.05 MHz, as well as frequency band 405.9-406.2 MHz are used by GMDSS; <p>frequency bands 150.05-153.0 MHz and 406.1-410.0 MHz are allocated to the radio astronomy service on a primary basis, and the conducted studies have shown the difficulties of sharing between the space operation service and the above mentioned radio services.</p>
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Agenda Item 1.11 Railway Radiocommunication Systems between train and trackside

Agenda Item 1.11 Railway Radiocommunication Systems Between Train and Trackside

<p>SFCG</p>	<p>SFCG supports the protection of existing allocations of space science services. Since there is no consensus on frequency bands for study, SFCG will monitor this agenda item at this time. Of particular concern is the potential for interference in the passive bands 86-92 GHz and 100-102 GHz.</p>
<p>APT (2019-08-06)</p>	<p>Preliminary Position</p> <p>APT Members encourage that frequency bands (or parts thereof) within the ranges of 70-74.8 MHz, 75.2-88 MHz, 142-144 MHz, 146-149.9 MHz, 150.05-156.4875 MHz, 156.5625-156.7625 MHz, 156.8375-161.9625 MHz, 161.9875-162.0125 MHz, 162.0375-174 MHz, 335.4-399.9 MHz, 406.1-430 MHz, 440-470 MHz, 470-520 MHz, 703-748 MHz, 758-803 MHz, 873-915 MHz, 918-960 MHz, 1770-1880 MHz, 43.5-45.5 GHz, 92-94 GHz, 94.1-100 GHz and 102-109.5 GHz, within the existing mobile service allocations on primary basis, are to be considered with the view to achieve spectrum harmonization for RSTT in Region 3, in particular for train radio applications.</p> <p>Note: the frequency band 470-520 MHz is within the preliminary agenda item 2.5 for WRC-23, therefore the decision of WRC-23 on this matter should not be pre-judged.</p> <p>APT Members also invite other regional groups to consider frequency bands (or parts thereof) within the ranges of 148-149.9 MHz, 150.05-156.4875 MHz, 156.5625-156.7625 MHz, 156.8375-161.9625 MHz, 161.9875-162.0125 MHz, 162.0375-174 MHz, 335.4-399.9 MHz, 406.1-430 MHz, 440-470 MHz, 873-902 MHz and 928-960 MHz, within the existing mobile service allocations on primary basis, for achieving global frequency harmonization for RSTT, in particular for train radio applications.</p> <p>APT Members agree to propose a draft new WRC-19 Resolution on the spectrum harmonization for railway radiocommunication systems between train and trackside (RSTT).</p> <p>APT Members are also of the following views:</p> <ul style="list-style-type: none"> • International standards and global/regional harmonized frequency bands could facilitate the current and future development of RSTT; • Deployment of RSTT requires significant long term investment and a stable radio regulatory environment is important for the railway industry; • As train radio application of RSTT directly ensures passenger safety and security for train operations, harmonization of frequency bands for train radio application may have the priority among the four categories of RSTT applications; • when implementing RSTT, in particular for cross-border operations, administrations should take reasonable steps to effectively use the spectrum resources and minimize the risk of interference; <p>The current and future ITU-R studies on RSTT should not be restricted to, or preclude, any particular relevant technology or delivery model.</p>
<p>ASMG (2018-12-13)</p>	<p>Method C: Add a new Resolution [B111-METHOD C] (WRC-19) without specifying frequency ranges for RSTT, while referencing the most recent version of Recommendation ITU-R M.[RSTT_FRQ] and consequently suppress the resolution 236 (WRC-15).</p> <p>Reason : with the firm Resolution [B111-METHOD C] (WRC-19) can provide a regulatory framework to guide the harmonization process and flexibility through reference to the most recent version of ITU-R reports & Recommendations</p>

Agenda Item 1.11 Railway Radiocommunication Systems between train and trackside

<p>ATU (2018-09-17)</p>	<p>Preliminary Position</p> <p>Take Method C as the African preliminary position which entails a new WRC resolution to provide a regulatory framework to guide the harmonization process, with reference s to the Recommendation ITU R M [RSTT_FRQ] for possible global and/or regional harmonization of frequency arrangements for RSTT to provide flexibility. This method provides support for global or regional harmonization of frequency bands for use by (RSTT) within the existing Mobile services allocation so that no additional constraints are imposed on services to which these frequency bands are already allocated.</p> <p>Note that SADC having reviewed the draft CPM report and the proceedings of the meetings of APM19-3 reviewed its position to align with the ATU preliminary Method C.</p> <p>Invite EACO administrations whose current position is method A to review in view of the current draft CPM report and consider the possibility of aligning its position with ATU preliminary of Method C.</p> <p>Task WG1 to foster a fully harmonized African position on or before the next APM 19-4.</p>
<p>CEPT (2019-05-24)</p>	<p>ECP adopted (no change to the RR, except suppression of Resolution 236) Position.</p> <p>CEPT is of the view that the harmonized use of frequencies for RSTT within existing mobile service allocations serves current and future demands of railway organisations on all operational levels.</p> <p>CEPT is of the view that no change to the RR is needed in response to WRC-19 Agenda item 1.11, except suppression of Resolution 236 (WRC-15).</p> <p>CEPT is of the view that harmonisation of frequencies for RSTT can be achieved through the course of ITU-R study group work by an applicable ITU-R Recommendation and/or Reports (e.g. non-mandatory Recommendation ITU-R M.[RSTT_FRQ] containing regional harmonisation measures). In this regard, CEPT highlights its existing framework for RSTT train radio on the basis of GSM-R, which serves interoperable cross-border railway operations. CEPT recognizes that there are other standards/technologies and frequency bands providing for RSTT. In addition, CEPT is of the view that Agenda item 1.11 does not cover the provision of public communication services for passengers.</p>
<p>CITEL (2019-04-12)</p>	<p>Inter-American Proposal</p> <p><u>NOC</u> Radio Regulations Volumes 1, 2 and 3</p> <p>Reasons: The Administrations believe it is unnecessary to identify spectrum specifically for railway radiocommunication systems. Regional and global harmonization can be satisfied by developing applicable ITU-R Reports and Recommendations. Therefore, no change to the Radio Regulations or regulatory action is required under this agenda item.</p> <p>SUP RESOLUTION 236 (WRC-15) Railway radiocommunication systems between train and trackside</p> <p>Reasons: The studies towards regional and global harmonization can be satisfied through ITU-R Recommendations and Reports.</p>
<p>RCC (2019-01-25)</p>	<p>Preliminary Position</p> <p>The RCC Administrations consider that no changes to the Radio Regulations are necessary under WRC-19 agenda item 1.11 (method A).</p>

Agenda Item 1.11 Railway Radiocommunication Systems between train and trackside

	<p>The RCC Administrations consider it reasonable to harmonize frequency bands within existing mobile service allocations at global or regional level through the development of ITU-R Recommendations and Reports.</p> <p>The RCC Administrations are of the view that harmonized use of frequency bands by railway transportation systems shall not impose additional constraints on services to which these frequency bands are already allocated, and provided interference to systems for government communication is avoided.</p>
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Agenda Item 1.12 Intelligent Transport Systems (ITS)

Agenda Item 1.12 Intelligent Transport Systems (ITS)

<p>SFCG</p>	<p>SFCG supports no change to the Article 5 of Radio Regulations under this agenda item. ITS may continue to operate in existing allocations for mobile service. Harmonization can be achieved through ITU-R Recommendations or Reports encouraging administrations to use globally or regionally harmonized bands.</p>
<p>APT (2019-08-06)</p>	<p>Preliminary Position</p> <p>APT members are of the view that there are needs for harmonization of spectrum use in existing mobile service allocations for evolving ITS. APT Members support possible harmonization of frequency bands in existing mobile service allocations for the implementation of evolving ITS. APT Members support the consideration of the frequency band 5 850-5 925 MHz, or parts thereof, as global harmonized frequency band for evolving ITS. APT Members also support the consideration of examples of ITS frequency bands in current use, as listed in the Annex of Recommendation ITU-R M.2121 for regional harmonized ITS frequency bands.</p> <p>APT Members agreed that no changes to the Table of Frequency Allocations are required for harmonization of spectrum use for ITS.</p> <p>APT Members are also of the view that evolving ITS should not be restricted to, nor exclude, any particular evolving ITS technology including LTE based V2X and its evolution technologies.</p> <p>APT Members are also of the view that the use of frequency bands by ITS should not adversely affect other primary services to which these frequency bands are allocated should not claim protection from other primary services including FSS earth station uplinks.</p> <p>APT Members support the suppression of Resolution 237 (WRC-15).</p> <p>The draft new resolution [A112] is included in the PACP with changes including:</p> <ul style="list-style-type: none"> • The Method B option for <i>resolves</i> <p>Adds the following <i>invites ITU-R and instructs the Director of the Radiocommunication Bureau:</i></p> <p>invites ITU-R</p> <p style="padding-left: 40px;">to continue the studies on different ITS aspects, including harmonization of spectrum,</p> <p>instructs the Director of the Radiocommunication Bureau</p> <p>1 to report to the Radiocommunication Assembly 2023 on the implementation of this Resolution through the relevant ITU-R Study Groups, for the adoption of any necessary actions;</p> <p>2 to support administrations in their work towards the harmonization of spectrum for ITS applications pursuant to the resolves and this Resolution,</p> <p>Reasons: This Resolution provides a framework for Member States and others to deploy on the basis of global or regional harmonization for ITS applications through a new WRC Resolution by referring to the most recent version of Recommendation ITU-R M.2121, and allows for the development of ITU-R Recommendations and Reports within the Study Groups.</p>
<p>ASMG (2018-12-13)</p>	<p>Method B: No change to the Table of Frequency Allocations in the Radio Regulations, and add a new WRC Resolution to encourage administrations to use 5 850-5 925 MHz, or parts thereof, as global harmonized evolving ITS frequency bands. Other harmonized frequency band(s) for evolving ITS applications refer to the most recent version of Recommendation ITU-R M.2121.</p> <p>Reason: This method provides a stable regulatory environment and guidance of evolving ITS applications to administrations, and benefits worldwide economy scale of ITS industry</p>

Agenda Item 1.12 Intelligent Transport Systems (ITS)

	development by encouraging administrations to use 5850-5925 MHz, or parts thereof, to ensure safely operation of V2X applications.
ATU (2018-09-17)	<p>Preliminary Position</p> <p>Take Method C as the African preliminary position which entails a new WRC resolution to encourage administrations to use globally and regionally harmonized frequency bands for ITS applications by referring to the most recent version of Recommendations ITU-R M. [ITS_FRQ. Suppress Resolution 237 (WRC-15). This method provides a regulatory framework for worldwide or regional harmonization for ITS applications through a new WRC Resolution and the most recent version of Recommendation ITU-R M.[ITS_FRQ].</p> <p>Note that the administration of EGYPT SUPPORTS Method B citing that too much flexibility is provide by method C which can erode the desired harmonization in case wher the ITU-R Recommendation is amended in the future.</p> <p>Note that EACO and SADC having reviewed the draft CPM report and the proceedings of the meetings of APM19-3 reviewed their position to align with the ATU preliminary position of Method C.</p> <p>Task WG1 o foster a fully harmonized African position on or before the next APM 19</p>
CEPT (2019-05-24)	<p>ECP adopted (no change to the RR, except suppression of Resolution 237)</p> <p>Position</p> <p>CEPT is of the view that its existing regional harmonisation measures for ITS in the band 5 855-5 925 MHz are sufficient and no changes to the RR are required in response to WRC-19 Agenda item 1.12 except the suppression of Resolution 237 (WRC-15). CEPT is developing a revision of its existing harmonisation framework for ITS around 63-64 GHz.</p> <p>CEPT is of the view that harmonisation measures for ITS at ITU-R level can be achieved through the course of ITU-R study group work by applicable ITU-R Recommendations (e.g. Recommendation ITU-R M.2121).</p> <p>CEPT is also of the view that harmonisation of ITS under AI 1.12 is limited to the exchange of information to improve traffic management and to assist driving safety.</p> <p>In addition, CEPT is of the view that Road tolling (also known as Electronic Toll Collection (ETC)) in 5 795-5 815 MHz is not part of Agenda Item 1.12.</p>
CITEL (2019-04-12)	<p>Inter-American Proposals</p> <p><u>NOC</u> Radio Regulations Volumes 1, 2 and 3</p> <p>Reason: It is unnecessary to identify spectrum specifically for Intelligent Transport Systems. Regional and global harmonization can be satisfied by developing applicable ITU-R Reports and Recommendations. Therefore, no change to the Radio Regulations or regulatory action is required under this agenda item.</p> <p>SUP RESOLUTION 237 (WRC-15) Intelligent Transport Systems applications</p> <p>Support: ARG, B, CAN, CLM, CTR, EQA, USA, GTM, MEX, PAN, PGY, DR, URG</p> <p>Reason: The studies towards regional and global harmonization can be satisfied through ITU-R Recommendations and Reports.</p>
RCC (2019-01-25)	<p>Preliminary Position</p> <p>The RCC Administrations consider that there is no need to modify RR within this Agenda Item (method A).</p>

Agenda Item 1.12 Intelligent Transport Systems (ITS)

	<p>The RCC Administrations support harmonization of frequency bands for evolving Intelligent Transport Systems at global and regional levels within existing mobile service allocations through the development of ITU-R Recommendations and Reports.</p> <p>The RCC Administrations are of the view that the use of frequency bands for evolving ITS shall not impose additional constraints on services to which these frequency bands are allocated..</p>
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Agenda Item 1.13 International Mobile Telecommunications (IMT) Studies Between 24.25-86 GHz

<p>SFCG</p>	<p>SFCG supports the protection of existing space science service allocations. No new allocation/identification of spectrum to support mobile broadband systems (IMT-2020) should be made in or adjacent to bands allocated to space science services unless acceptable criteria and mandatory conditions are developed and implemented that ensure the protection and future usability of the concerned bands by those services. SFCG does not support consideration of any frequency band that is not included in the list of potential candidate bands as identified in Resolution 238 (WRC-15).</p> <p>With regard to the issue of in-band sharing, a particularly critical situation concerns the band 25.5-27 GHz which constitutes the only frequency bands allocated to EESS and SRS (space –to-Earth) that allows for the downlink of the large data volume required by many current and future EESS and SRS satellite missions. As recognized in Resolution 238 (WRC-15) (footnote 2 of <i>resolves</i> 2) for the 25.5-27 GHz band, it is fundamental for SFCG Member Agencies to be assured that EESS and SRS earth stations will continue to be able to expand in the future both in terms of number of satellites serviced and number of earth stations. Licences for these earth stations, which inherently provide protection from interference by IMT-2020 systems, must not be denied or restricted on the basis that such action may limit the IMT-2020 operational areas. Negative licensing experiences in the past with earlier cellular mobile systems in the band 2110-2120 MHz must not be repeated.</p> <p>Internationally agreed mandatory mechanisms and criteria should therefore be identified to ensure the future availability of these earth station licences. It is necessary to ensure that the IMT-2020 systems will be deployed only in urban and suburban areas, as is assumed in all of the compatibility studies and as stated by WP 5D. Further, protection of earth stations needs to be codified in the Radio Regulations to ensure consistency across administrations; protection of earth stations should not be considered as strictly a domestic issue.</p> <p>Protection of the various EESS (passive) bands adjacent to bands studied under this Agenda Item (23.6-24 GHz, 31.3-31.8 GHz, 36-37 GHz, 50.2-50.4 GHz, 52.6-54.25 GHz and 86-92 GHz) has to be ensured. For this appropriate mandatory unwanted emission limits for IMT-2020 devices have to be established. For some of these bands RR No.5.340 applies.</p> <p>All studies presented in ITU-R confirm that only a drastic reduction in IMT-2020 unwanted emissions provided by WP 5D (in particular in the band 23.6-24 GHz) can ensure protection of EESS (passive). The SFCG is concerned that the current operational specifications for IMT-2020 indicate that the IMT-2020 systems will be unable to comply with the unwanted emission levels determined in the studies. The SFCG is of the view that an IMT allocation/identification should not be made unless the proponents of IMT-2020 clearly demonstrate the ability to comply with the needed unwanted emission limits to ensure the protection of the EESS (passive). Relevant unwanted emission limits will have to be implemented in the Radio Regulations by inclusion in Table 1 of Resolution 750 (Rev.WRC-15).</p> <p>Other specific concerns of SFCG are:</p> <ul style="list-style-type: none"> • Protection of the 25.25-27.5 GHz band allocated to inter-satellite service (ISS) on primary basis, used for data relay satellite return links; • Protection of the 31.8-32.3 GHz band allocated to SRS deep space (s-E) on primary basis, used for transmitting data to the Earth from distant locations in space; • Protection of the 37-38 GHz band allocated to SRS (space-to-Earth), and the 40-40.5 GHz band allocated to EESS/SRS (Earth-to-space).
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Agenda Item 1.13 International Mobile Telecommunications (IMT) Studies Between 24.25-86 GHz

	Frequency overlaps with other WRC-19 AI's (1.6 and 1.14) need to be taken into account.		
APT (2019-08-06)	Preliminary Position <ul style="list-style-type: none"> 24.25-27.5 GHz APT Members support identifying the 24.25-27.5 GHz frequency band for IMT globally through Method A2 together with a new WRC Resolution. In principle, APT Members support Alternative 2 under Method A2. However, it may be subject to the regulatory provisions to be specified in the new WRC Resolution associated with Condition A2e. In addition, APT Members have the following views on Options under the respective Conditions for Method A2 contained in the CPM Report. It should be noted that APT Members are still investigating the Options to be selected for some of the Conditions. <p align="center">APT Views on Options under the respective Conditions for Method A2</p>		
	Option		
	Supported Option		
	A2a	Protection measures for the EESS (passive) in the 23.6-24 GHz frequency band	1
	A2b	Protection measures for the EESS (passive) in the 50.2-50.4 GHz and 52.6-54.25 GHz frequency bands	2
	A2c	Protection measures for earth stations in the SRS/EESS (25.5-27 GHz (space-to-Earth))	To be developed
	A2d	Measures related to transmitting earth stations in the FSS (Earth-to-space) at known locations	To be developed
	A2e	Protection measures for the ISS and FSS (Earth-to-space) receiving space stations	To be developed
	A2f	Protection measures for the RAS (23.6-24 GHz)	To be developed
	A2g	Protection measures for multiple services	To be developed
	<ul style="list-style-type: none"> 31.8-33.4 GHz APT Members support Method B1 (NOC), which is the only Method in the CPM Report for the frequency band 31.8-33.4 GHz, due to difficulty of sharing and compatibility between IMT and the incumbent services. <ul style="list-style-type: none"> 37-40.5 GHz, 40.5-42.5 GHz and 42.5-43.5 GHz APT Members support identifying the 37-43.5 GHz frequency band, or portions thereof, for IMT globally through Methods C2, D2 and E2 with Alternative 2 together with a new WRC Resolution. In addition, APT Members have the following views on the Options under respective Conditions for Methods C2, D2 and E2 contained in the CPM Report. It should be noted APT Members are still investigating the Options to be selected for these Conditions.		

Agenda Item 1.13 International Mobile Telecommunications (IMT) Studies Between 24.25-86 GHz

APT Views on Options under the respective Conditions for Methods C2, D2 and E2		
Option		Supported Option
C2a	Protection measures for the EESS (passive) in the 36-37 GHz frequency band	To be developed
C2b	Protection measures for the FSS (space-to-Earth)	To be developed
C2c	Protection measures for the SRS (space-to-Earth)	To be developed
C2d	Measures for the SRS (Earth-to-space) and EESS (Earth-to-space)	To be developed
C2e	Protection measures for multiple services	To be developed
D2a	Protection measures for the FSS (space-to-Earth)	To be developed
D2b	Protection measures for the RAS	To be developed
D2c	Protection measures for multiple services	To be developed
E2a	Protection measures for the FSS (Earth-to-space)	To be developed
E2b	Protection measures for the RAS	To be developed
E2c	Protection measures for multiple services	To be developed
E2d	Measures related to transmitting earth stations in the FSS (Earth-to-space) at known locations	To be developed

Regarding the frequency band 37-40.5 GHz, APT Members do not support Method C3 in the CPM Report.

- **45.5-47 GHz**
APT Members agreed not to support IMT identification in the frequency band 45.5-47 GHz at WRC-19.
- **47-47.2 GHz**
APT Members agreed not to support IMT identification in the frequency band 47-47.2 GHz at WRC-19.
- **47.2-50.2 GHz**
APT Members agreed to further investigate whether the frequency band 47.2-50.2 GHz or portions thereof could be considered for IMT identification at WRC-19.
- **50.4-52.6 GHz**
APT Members agreed to further investigate whether the frequency band 50.4-52.6 GHz could be considered for IMT identification at WRC-19.
- **66-71 GHz**
In principle, APT Members support identification of the frequency band 66-71 GHz for IMT. However, APT Members are still investigating Method and condition(s) to be adopted when identifying this band for IMT.

Agenda Item 1.13 International Mobile Telecommunications (IMT) Studies Between 24.25-86 GHz

	<ul style="list-style-type: none"> • 71-76 GHz <p>APT Members agreed to further investigate whether the frequency band 71-76 GHz could be considered for IMT identification at WRC-19.</p> <ul style="list-style-type: none"> • 81-86 GHz <p>APT Members agreed to further investigate whether the frequency band 81-86 GHz could be considered for IMT identification at WRC-19.</p> <ul style="list-style-type: none"> • Total Radiated Power (TRP) <p>In order to avoid any unintended consequences on the regulatory provisions for other services and applications, APT Members are of the view that in the context of WRC-19 agenda item 1.13 outcomes, description of TRP should be solely limited to the regulatory implementation for this agenda item. Therefore, any changes made as a result of agenda item 1.13 should limit use of the term TRP to IMT.</p> <p>Note: Preliminary APT Common Proposals were developed for each frequency range.</p>
<p>ASMG (2018-12-13)</p>	<p>Preliminary Position:</p> <ul style="list-style-type: none"> • Support identification of IMT2020 within the frequency band 24.25 -27.5 GHz with studying the following OOB limits in TG5/1 : <ul style="list-style-type: none"> ○ BS OOB Limits:-32to -37dBW/200 MHz ○ UE OOB Limits: -28to -30dBW/200 MHz <p>With no restrictions on the use of IMT in this band</p> <ul style="list-style-type: none"> • Support identification of IMT2020 within the following frequency bands: <ul style="list-style-type: none"> ○ 40.5 -42.5 GHz ○ 42.5 -43.5 GHz • Following up the ongoing studies on the other candidate bands as included in Resolution 238 (WRC 15) • Not supporting discussing any study or contribution on the frequency bands such as 28 GHz (27.5 –29.5 GHz). • Protection of the existing services within the candidate band • Considering the protection of the existing services within the adjacent bands
<p>ATU (2018-09-17)</p>	<p>Preliminary Position:</p> <p>A) For the band 24.25 – 27.5 GHz (Band A)</p> <p>1. Take method A2, Alternatively 2, condition A2a:Option 1as the African preliminary position, which entails the following:</p> <ul style="list-style-type: none"> ○ Allocating the band 24.25 – 25.25 GHz to the mobile services (except aeronautical mobile) on a primary basis in Region 1 and 2. ○ Identifying, globally, the band 24.25-27.5 GHz for IMT by a new footnote. ○ Revising Resolution 750 (WRC-15) , Table 1-1, to include the following IMT unwanted emission limits for 23.6 to 24.0GHz frequency band to protect EESS (passive). <ul style="list-style-type: none"> ○ BS : -32 to -37 dBW/200 MHz ○ UE: -28 to -30 dBW/200 MHz <p>2. Take the following conditions and options as the AFRICAN preliminary position with respect to other services:</p> <ul style="list-style-type: none"> ○ Condition A2b: Option 3 – no condition necessary ○ Condition A2c: Option 4 – no condition necessary ○ Condition A2d: Option 4– no condition necessary ○ Condition A2e: Option 9 –no condition necessary

Agenda Item 1.13 International Mobile Telecommunications (IMT) Studies Between 24.25-86 GHz

<ul style="list-style-type: none">○ Condition A2f: Option 3 – no condition necessary○ Condition A2g: Option 4 – no condition necessary <p>3. Note inputs received by the meeting regarding the need to define conditions necessary to ensure co-existence between IMT and those services for which the stated conditions apply.</p> <p>4. Note the invitation from Satellite industry for ATU to further consider the protection of FSS and ISS space stations (and other space services) though the definition of a limit on the Total Radiated Power (TRP) for IMT base stations and limiting the pointing angle above the horizon for the main beam of IMT base stations.</p> <p>5. TASK WG2 for further consideration of the noted issues above and recommend a way forward at APM 19-4</p> <p>B.) For the band 31.8 33.4GHz (Band B)</p> <p>Take method B1 (No Change) as the African preliminary position</p> <p>C.) For the band 37-40.5 GHz (Band C)</p> <p>1. Take method C2, Alternative 2 Condition C2a ; Option 4 as the African preliminary position, which entails the following:</p> <ul style="list-style-type: none">○ Identifying of the band 37-40.5GHz to terrestrial component of IMT.○ No condition necessary with respect to ESS in the lower adjacent band: <p>2. Note that with respect to EESS (passive) protection; Compatibility with EESS (passive) systems operating in the frequency band 36-37GHz may require that IMT systems comply with some unwanted emission levels. However, the frequency band 36-37GHz is also allocated on a primary basis to the MS and FS; and , coexistence conditions with the EESS (passive) are currently addressed in resolution 752 (WRC-07)</p> <p>3. Take the following conditions and options as the African preliminary position with respect to other services:</p> <ul style="list-style-type: none">○ Condition C2b: Option 6○ Condition C2c: Option 3○ Condition C2d: Option 2○ Condition C2e: Option 3 <p>4. Note the concerns raised over the “no conditions apply” options with respect to co-existence of IMT with other services in the band.</p> <p>5. Note the need Note the need to ensure equitable access to spectrum by all services allocated to the band, in particular FSS (for HDFSS applications).</p> <p>6. Task WG2 for further consider the noted issues above and recommend a way forward at APM-19-4</p> <p>D.) For the band 40.5- 42.5GHz (Band D)</p> <p>1. Take Method D2, Alternative 2 as the African preliminary position, which entails upgrading the mobile allocation to a primary service in the Table of frequency allocations and identifying the frequency band for IMT by a new footnote in the frequency band 40.5-42.5GHz.</p> <p>2. Take the following Conditions and options as the African preliminary position with respect to other services:</p> <ul style="list-style-type: none">○ Condition D2a:Option 5 –no condition necessary○ Condition D2b:Option 3 –no condition necessary○ Condition D2c:Option 3 –no condition necessary

Agenda Item 1.13 International Mobile Telecommunications (IMT) Studies Between 24.25-86 GHz

<p>3. Note the need for further consideration of conditions necessary for co-existence with other services, in particular FSS</p> <p>4. Note the need to ensure adequate spectrum and conditions for HDFSS.</p> <p>5. Task WG2 for further consider the noted issues above and recommend a way forward.</p> <p>E.) For the band 42.5 – 43.5 GHz</p> <p>1. Take Method E2 , Alternative 2 as the African preliminary position , which entails identifying the 42.5-43.5 GHz to terrestrial component of IMT</p> <p>2. Take the following conditions and options as the African preliminary position:</p> <ul style="list-style-type: none">○ Condition E2a:Option 7 –no condition necessary○ Condition E2b:Option 3 –no condition necessary○ Condition E2c:Option 4 –no condition necessary <p>3. Note the need for further considerations of conditions necessary for co-existence with other services, in particular FSS.</p> <p>4. Task WG2 to further consider the noted issue above and recommend a way forward.</p> <p>F.) For the band 45.5-47.0 GHz (Band F)</p> <p>1. Note that no studies on this band were conducted by TG5/1.</p> <p>2. Defer a decision on this band in anticipation of output contributions with studies on the band at CPM19-2.</p> <p>G.) For the band 47- 47.2 GHz (Band G):</p> <p>1. Note that no studies on this band were conducted by TG5/1.</p> <p>2. Defer a decision on the band in anticipation of input contributions with studies on the band at CPM19-2.</p> <p>H.) For the band 47.2 – 50.2 GHz (Band H)</p> <p>1. Take method H2, Alternative 2 AS THE African preliminary position, which entails identifying the 47.2-50.2 GHz frequency band for the terrestrial component of IMT.</p> <p>2. Take the following conditions and options as the African preliminary position:</p> <ul style="list-style-type: none">○ Condition H2a:Options 2 –Resolution 750 (Rev. WRC-19) in Table 1-1 , taking into account RR No 5.340.1○ Condition H2b: Option 8 – no condition necessary○ Condition H2c: Option 3 – no condition necessary○ Condition H2d: Option 4– no condition necessary <p>3. Note that in the range 47.2-52.6 GHz, appropriate balance should be ensured between spectrum available for IMT, for FSS terminals and FSS gateways.</p> <p>4. Note the need for further consideration of conditions necessary for co-existence with other services, in particular FSS.</p> <p>5. Task WG2 for further consider the noted issues above and recommend a way forward.</p> <p>I.) For the band 50.4- 52.6 GHz (Band I)</p> <p>1. Take Method I2, Alternative 2 as the African preliminary positon: Identification to Terrestrial component of IMT in the 50.4-52.6GHz (in the Mobile service).</p> <p>2. Take the following conditions and options as the African preliminary position:</p>

Agenda Item 1.13 International Mobile Telecommunications (IMT) Studies Between 24.25-86 GHz

	<ul style="list-style-type: none"> ○ Condition I2a: Options 2 – Resolution 750 (rev. WRC-19) in Table 1-1, taking into account RR No. 5.340.1 ○ Condition I2b: Option 7: no condition necessary ○ Condition I2c: Option 4: no condition necessary <p>J.) For the band 66-71GHz (Band J)</p> <ol style="list-style-type: none"> 1. Take Method J2, Alternative 2 as the African preliminary position which entails identification to terrestrial component of IMT in 66-71GHz (in the mobile services) 2. Take the following conditions and options as the African preliminary position: <ul style="list-style-type: none"> ○ Condition J2a: option 1 <ul style="list-style-type: none"> ▪ Take into account the latest technical characteristics of IMT and MGWS/WAS ▪ To invite ITU-R to develop Recommendations and Reports that will assist administrations in ensuring that applications and services in the band 66-71GHz can utilize the band efficiently incl the development of appropriate sharing protocols between IMT and MGWS/WAS where needed. ○ Condition J2b: Option 1 – Revise RR No. 5.553 to remove the 66-71GHz frequency band from that footnote. ○ Condition J2c: Option 3 – no condition necessary 3. Note the need to consider the impact of an IMT identification in the band to the future of the MGWS/WAS ecosystem. 4. Task WG2 to further consider the noted issue above and recommend a way forward. <p>K.) For the band 71-76GHz (Band K)</p> <p>Continue with the consideration of the band at sub-regional and WG2 levels with a view to developing an appropriate solution to support (in terms of method, alternative and option) as appropriate.</p> <p>L.) For the band 81-86GHz (Band L)</p> <p>Continue with the consideration of the band at sub regional and WG2 levels with a view to developing an appropriate solution to support (in terms of method, alternative and option) as appropriate.</p>
<p>CEPT (2019-05-24)</p>	<p>ECPs adopted on NOC for the 31.8-33.4 GHz, 71-76 GHz and 81-86 GHz bands</p> <p>Preliminary Position:</p> <p>CEPT supports the results of the ITU-R studies¹ on IMT spectrum needs in the range 24.25-86 GHz. CEPT supports sharing and compatibility studies for the bands listed in Resolves 2 of Resolution 238 (24.25-27.5 GHz, 31.8-33.4 GHz, 37-43.5 GHz, 45.5-50.2 GHz, 50.4-52.6 GHz, 66-76 GHz and 81-86 GHz), with the focus on the frequency bands 24.25-27.5 GHz, 40.5-43.5 GHz and 66-71 GHz.</p> <p>CEPT supports the identification of global bands for IMT among the bands listed in resolves to invite ITU-R 2 of Resolution 238, taking into account the results of sharing and compatibility studies with existing services. Bands outside those listed in resolves to invite ITU-R 2 of Resolution 238 are not supported for consideration under this Agenda item.</p> <p>The following bands are supported for IMT identification and where appropriate, allocation to the Mobile Service on a primary basis:</p>

¹ i.e. excluding Annex B from Doc ITU-R TG5/1 Document 5-1/36 Attachment 1: Information on spectrum needs in some countries

Agenda Item 1.13 International Mobile Telecommunications (IMT) Studies Between 24.25-86 GHz

	<ul style="list-style-type: none"> • 24.25-27.5 GHz: CEPT has confirmed the clear priority for this band through the adoption of a harmonisation decision (ECC Decision (18)06) including relevant conditions for the protection of other services in the band and adjacent bands. The Decision was developed based on studies that assumed an individual authorisation regime. CEPT supports the unwanted emission limits of –42 dBW/200 MHz Total Radiated Power (TRP) for base stations and –38 dBW/200 MHz TRP for mobile terminals, into the 23.6-24 GHz band, to be included as mandatory limits in Resolution 750. CEPT is considering RR N° 5.536A, 5.536B and 5.536C in relation with coexistence with EESS and SRS earth stations. • 40.5 – 43.5 GHz: CEPT proposes an IMT identification for 40.5-43.5 GHz subject to certain regulatory conditions as described in the ECP. This is a priority band for CEPT and already identified for future harmonisation in Europe. CEPT considers that the bands 40.5-43.5 GHz has good potential for future harmonisation in Europe. The process for developing harmonisation decisions for additional bands (other than 26 GHz) may be launched immediately after WRC-19, under the assumption of an individual authorisation regime. • 66-71 GHz: CEPT supports that IMT and MGWS/WAS should have equal access to the frequency band 66-71 GHz. An identification should not confer any priority to IMT and this should be emphasized in the footnote identifying the band and associated WRC Resolution. CEPT supports modifying No. 5.553 to remove the frequency band 66-71 GHz from this footnote. <p>Other candidate bands considered:</p> <ul style="list-style-type: none"> • 37-40.5 GHz: CEPT supports the identification of the band 40.5-43.5 GHz for IMT. Whilst CEPT has no intention of using 37-40.5 GHz for IMT, CEPT will not oppose proposals from other Regions for an IMT identification within this band provided that the relevant conditions to ensure protection of incumbent services in the 37-40.5 GHz band and EESS (passive) in the 36-37 GHz band are properly addressed in the Radio Regulations. • The following bands are not supported for the IMT identification and CEPT is proposing NOC: <ul style="list-style-type: none"> ○ 31.8-33.4 GHz ○ 50.4-52.6 GHz ○ 71-76 GHz ○ 81-86 GHz. <p><i>Note: CEPT has developed a Roadmap on 5G (http://cept.org/ecc/topics/spectrum-for-wireless-broadband-5g#roadmap). In this respect it is noted that “Europe has harmonised the 27.5-29.5 GHz band for broadband satellite and is supportive of the worldwide use of this band for ESIM. This band is therefore not available for 5G”.</i></p>
<p>CITEL (2019-04-12)</p>	<p>Preliminary Position:</p> <p>In spectrum shared with FSS (E-s), restrictions should be applied so that IMT BS antenna beams are ‘normally’ kept below the horizon in order to ensure protection of FSS space station receivers as the situation where BS antenna beams go above the horizon was not studied and this situation could increase the risk of interference. In addition, the maximum e.i.r.p. density of IMT BS operating in the same bands as FSS uplink should be limited to a level consistent with studies undertaken in TG 5/1 (i.e. greater than the input assumptions provided by ITU-R WP 5D by a number of dB based on the margin of protection found in the sharing studies performed by ITU-R TG 5/1) that provides maximum flexibility to IMT while still providing sufficient protection to space station receivers.</p>

Agenda Item 1.13 International Mobile Telecommunications (IMT) Studies Between 24.25-86 GHz

	<p>The frequency bands 37-40 GHz and 42-43.5 GHz are identified for use by administrations wishing to implement the terrestrial component of International Mobile Telecommunications (IMT). This identification does not preclude the use of these frequency bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations.</p> <p>Preliminary Position</p> <ul style="list-style-type: none">• Allocation to mobile service on a primary basis and identification of the band 24.65-24.75 GHz in Region 2 for IMT. Identification of the band 24.65-27.5 GHz for IMT shall contribute to meeting additional spectrum needs in the bands above 24 GHz.• The identification of the band 37-40 GHz to IMT will help satisfy the need for additional spectrum in the bands above 24 GHz.• There is no consideration to do any change on frequency band 40-40.5 GHz in Region 2.• Identification of the band 42-42,5 GHz to IMT. The identification of the band 42-42,5 GHz to IMT in Region 2 will help satisfy the need for additional spectrum in the bands above 24 GHz.• Identification of the band 42,5-43,5 GHz to IMT. The identification of the band 42,5-43,5 GHz to IMT in Region 2 will help satisfy the need for additional spectrum in the bands above 24 GHz.• Identification of the band 50.4-51.4 GHz for IMT. Identification of the band 50.4-51.4 GHz to IMT will help meet the need for additional spectrum in the bands above 24 GHz.• Identification of the band 51.4-52.6 GHz for IMT. Identification of the band 51.4-52.6 GHz to IMT will help meet the need for additional spectrum in the bands above 24 GHz <p>Preliminary Position</p> <p>The identification of the band 66-71 GHz to IMT will help satisfy the need for additional spectrum in the bands above 24 GHz.</p> <p>Draft Inter-American Proposal</p> <p>The identification of the band 37-43.5 GHz to IMT will help satisfy the need for additional spectrum in the bands above 24 GHz.</p> <p>Draft Inter-American Proposal</p> <p>Studies were only performed between MSS and IMT-2020 systems in the 45.5-47 GHz band. The other incumbent services in 45.5-47 GHz were not studied. Therefore, it has not been demonstrated that the incumbent services can be protected, as required by Resolution 238 (WRC-15) and No Change (<u>NOC</u>) is proposed for the 45.5-47 GHz and the 47-47.2 GHz bands.</p> <p>Draft Inter-American Proposal</p> <p>As studies show sharing with other services operating in 47.2-48.2 GHz is feasible, these modifications provide an identification for IMT in the frequency range 47.2 to 48.2 GHz. This facilitates harmonized worldwide bands for IMT, which are highly desirable in order to achieve global roaming and the benefits of economies of scale. This identification does not preclude the use of this frequency band by any application of the services to which they are allocated, and does not establish any priority in the Radio Regulations.</p>
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Agenda Item 1.13 International Mobile Telecommunications (IMT) Studies Between 24.25-86 GHz

	<p><u>NOC</u> in the 47.5-51.4 GHz band so as to avoid any potential impacts to existing services.</p> <p>Draft Inter-American Proposal</p> <p>IMT identification in the 66-71 GHz band would be counterproductive to achieving international harmonization as many administrations confirmed plans for implementation of licence-exempt technologies such as Multiple Gigabit Wireless Systems (MGWS) systems.</p> <p>Inter-American Proposal</p> <p>The identification of the band 24.25-27.5 GHz to IMT will help satisfy the need for additional spectrum in the bands above 24 GHz. As studies show sharing with other services operating in 24.25-27.5 GHz is feasible, these modifications provide an identification for IMT in the frequency range 24.25-27.5 GHz and a primary allocation to the Mobile service, except aeronautical mobile, in 24.25-25.25 GHz. Protection of passive services in 23.6-24 GHz is addressed through the modification of No. 5.338A.</p>
<p>RCC (2019-01-25)</p>	<p>Preliminary Position</p> <p>The RCC Administrations consider that when developing technical conditions and regulatory provisions for the allocation of frequency bands to the MS and their identification for IMT it is necessary to ensure protection of other services having allocation in the considered and adjacent frequency bands taking into account the need in their development, first of all for existing systems or those planned to be used by RCC Administrations.</p> <p>The RCC Administrations do not oppose the allocation of the frequency band 24.25-25.25 GHz to mobile, excluding aeronautical mobile, service on a primary global basis, as well as the identification of the frequency band 24.25-27.5 GHz for IMT within land mobile service subject to incorporating the conditions in the Radio Regulations for IMT stations to protect:</p> <ul style="list-style-type: none"> • space stations in the Earth exploration-satellite service (EESS) (passive) in the frequency bands 23.6-24 GHz, 50.2-50.4 GHz and 52.6-54.25 GHz from unwanted emissions of IMT stations; • space stations in the fixed-satellite service and inter-satellite service. <p>In order to ensure this protection it is necessary to limit the emission from IMT base stations in upper hemisphere, as well as to limit unwanted emissions of IMT stations in frequency bands 23.6–24.0 GHz, 50.2–50.4 GHz and 52.6–54.25 GHz allocated to EESS (passive).</p> <p>The RCC Administrations oppose allocation of the frequency band 31.8-33.4 GHz to mobile service on a primary basis and identification of the frequency bands 31.8-33.4 GHz and 42.5-43.5 GHz, 71–76 GHz and 81–86 GHz for IMT systems, as the results of ITU-R studies in these bands have concluded that IMT systems are incompatible with the stations of the incumbent services.</p> <p>The RCC Administrations do not support the identification of the frequency bands 45.5–47.0 GHz and 66–71 GHz for IMT systems until ITU-R concludes the compatibility studies with existing primary radio services.</p> <p>Position of the RCC Administrations on frequency bands 37.0–40.5 GHz, 40.5–42.5 GHz, 47.0–50.2 GHz and 50.4–52.6 GHz included in Resolution 238 (WRC-15), is specified taking into account the need to protect both passive and active services.</p> <p>The RCC Administrations oppose the consideration of frequency bands not specified in Resolution 238 (WRC-15) for IMT systems in this WRC-19 agenda item.</p>

Agenda Item 1.14 High Altitude Platform Systems (HAPS)

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<p>SFCG</p>	<p>SFCG prefers Method A, “no change.” Assuming that the ITU-R studies show a need for identification of additional spectrum for HAPS in Region 2, SFCG does not support the identification of frequency bands in 21.4-22 GHz and 24.25-27.5 GHz for HAPS, unless acceptable sharing conditions are agreed upon that do not adversely impact the space research, Earth exploration-satellite, or inter-satellite services.</p> <p>As with WRC-19 agenda item 1.13, a particularly critical situation concerns the band 25.25-27.5 GHz which is heavily used globally for high data volume downlinks by many current and future EESS and SRS satellite missions. Within this band, inter-satellite links must also remain protected. This band is indicated as a candidate band for HAPS identification only for Region 2. If such an allocation is made, it should be accompanied by a WRC-19 Resolution which includes sufficient protection for these services. The Resolution should state that: “the provisions of No. 5.536A shall not apply and the provisions of RR Nos. 9.17 and 9.18 shall apply. Administrations operating HAPS systems shall not claim protection from SRS/EESS stations operated by other administrations.” The resolution should have PFD limits which protect SRS/EESS services.</p> <p>Identification of the band 24.25-27.5 GHz for HAPS under this agenda item must also be supported by studies showing the 21.2-21.4 GHz and 23.6-24.0 GHz EESS (passive) bands will be adequately protected from the HAPS unwanted emissions. The discussed above Resolution should contain EIRP density limits which protect these EESS (passive) services. Any revision of the current identifications for HAPS shall also continue to ensure that science services are protected.</p>
<p>APT (2019-08-06)</p>	<p>Preliminary Position</p> <p>APT Members support no changes to the Radio Regulations (Method A as contained in the CPM Report) to ensure protection of all existing services to which frequency bands are allocated and their future development in the frequency bands 6 440-6 520 MHz and 6 560-6 640 MHz.</p> <p>In addition, APT Members are of the view that any consideration of the frequency band 24.25-27.5 GHz in Region 2 under this agenda item should not limit the possibility to identify the band for IMT on a global basis under WRC-19 Agenda item 1.13.</p> <p>APT Members consider that protection of all existing services to which frequency bands are allocated and their future development should be ensured.</p> <p>No consensus was reached among APT Members on any Method to address this agenda item in the frequency bands 27.9-28.2 GHz, 31-31.3 GHz, 38-39.5 GHz, 47.2-47.5 GHz and 47.9-48.2 GHz, thus no PACP was agreed in these frequency bands.</p>
<p>ASMG (2018-12-13)</p>	<p>Method C – Suppress the existing HAPS identification, pursuant to resolves 3 of Resolution 160 (WRC-15)</p> <ul style="list-style-type: none"> • Method A - No change to the Radio Regulations with respect to the bands currently not defined for high altitude platform systems (HAPS)

Agenda Item 1.14 High Altitude Platform Systems (HAPS)

<p>ATU (2018-09-17)</p>	<p>Preliminary Position</p> <p>APM 19-3 agreed to:</p> <p>Take Method B1/2 as the African preliminary position which provides for the designation of certain fixed service bands for HAPS, in accordance with Resolution 160 (WRC-15) with options:</p> <ul style="list-style-type: none"> ○ Method B1 – Revision of the regulatory provisions for HAPS in the Fixed service (FS) with a primary status in bands already designated for HAPS: <ul style="list-style-type: none"> ▪ an amended footnote for a worldwide identification of 27.9-28.2 GHz and 31.-31.3GHz ▪ an updated Resolution 122 to facilitate the use for HAPS in 47.2 -47.5 GHz and 47.9-48.2 GHz ○ Method B2 –Add new designation(s) for HAPS in bands already allocated to the FS with a primary status: <ul style="list-style-type: none"> ▪ A new footnote for a worldwide designation of this band 38-39.5GHz
<p>CEPT (2019-05-24)</p>	<p>Preliminary Position</p> <p>CEPT supports, while ensuring protection of existing services and their future development including other applications of the fixed service (in accordance with Resolution 160 (WRC-15)) and subject to the conclusions of the ongoing sharing and co-existence studies for the bands mentioned below and, as appropriate, in the adjacent bands:</p> <ul style="list-style-type: none"> • Worldwide identifications for transmissions from high altitude platform stations (in the downlink direction) in the band 6 440- 6 520 MHz (Method 1B1 option 1 of the CPM Report). • Worldwide identifications for transmissions to and from high altitude platform stations (in the uplink and downlink directions) in the bands 31-31.3 GHz (Method 7B1 options 1A+1B of the CPM Report) and 38-39.5 GHz (Method 8B2 options 1A+1B of the CPM Report). • For the bands 6 440-6 520 MHz, 31-31.3 GHz, 38-39.5 GHz, 47.2-47.5 GHz and 47.9-48.2 GHz (Method 9B1 example 2 of the CPM Report), CEPT is supporting new footnotes and associated resolutions and/or, if appropriate, modifications to the existing footnotes and associated resolutions. • For the 27.9 – 28.2 GHz band, CEPT is currently considering further different options including those given in the CPM text under this agenda item. • CEPT is of the view that any consideration of the frequency bands 21.4-22 GHz and 24.25-27.5 GHz in Region 2 under this Agenda item shall be accompanied by appropriate protection of: ISS in the band 24.45-24.75 GHz, ISS in the band 25.25-27.5 GHz, EESS (passive) in the bands 21.2-21.4 GHz, 22.21-22.5 GHz and 23.6-24 GHz, EESS and SRS (space-to-Earth) in the band 25.5-27 GHz and FSS in the bands 24.75-25.25 GHz and 27-27.5 GHz. This includes the appropriate protection of the mobile service in the band 24.25-27.50 GHz as results of consideration under WRC-19 agenda item 1.13. • CEPT is of the view that any consideration of the frequency band 24.25-27.5 GHz in Region 2 under this Agenda item should not limit the possibility to identify the band for IMT on a global level under Agenda item 1.13.

Agenda Item 1.14 High Altitude Platform Systems (HAPS)

<p>CITEL (2019-04-12)</p>	<p>Preliminary Proposals</p> <p>For the bands 6 440-6 520 MHz and 6 560-6 640 MHz, maintain the existing designation for HAPS without modifications.</p> <p>Add a footnote allowing HAPS to operate in the fixed service allocation in the 21.5-22 GHz band. The 21.4-21.5 GHz band is excluded due to sharing results with aeronautical mobile service operations.</p> <p>Add a new Resolution specifying the operating requirements for HAPS to protect other services.</p> <p>Add new footnotes to identify the frequency ranges 27.9 – 28.2 GHz and 31-31.3 GHz for use by HAPS. If the bands 27.9-28.2 GHz and 31-31.3 GHz are modified as proposed, there would need to be consequential modifications and/or suppression of Nos. 5.537A and 5.543A.</p> <p>Add a footnote to the fixed service allocation in support of worldwide HAPS use in the 38-39.5 GHz band.</p> <p>Modify footnote 5.552A to reference an updated Resolution 122, which addresses the current worldwide HAPS designation in the 47.9-48.2 GHz band.</p> <p>Draft Inter-American Proposal</p> <p>Add a footnote that aims to facilitate the use of HAPS downlink on a global level in the bands 6 440-6 520 MHz by identifying the band for HAPS downlink and protect incumbent services with an associated new Resolution.</p> <p>Add a footnote to the fixed service allocation in support of a HAPS identification in the 27.9-28.2 GHz and 31-31.3 GHz bands and to suppress the existing HAPS related footnote.</p> <p>Draft Inter-American Proposal</p> <p>Add a primary fixed service allocation to the 24.25-25.25 GHz band and a new identification for HAPS in the band 24.25-25.25 GHz in Region 2. The limitation of the use of HAPS in the HAPS-to-ground direction in the 24.25-25.25 GHz band is to ensure the protection of the:</p> <ul style="list-style-type: none">• FSS (E-s) operating in the 24.75-25.25 GHz band;• ISS operating in the 24.45-24.75 GHz band;• EESS (passive) operating in the 23.6-24 GHz band. <p>Draft Inter-American Proposal</p> <p>The allocation to the fixed service in the bands 47.2-47.5 GHz and 47.9-48.2 GHz is identified for use by high altitude platform stations (HAPS). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated on a co-primary basis and does not establish priority in the Radio Regulations. Such use of the fixed-service allocation in bands 47.2-47.5 GHz and 47.9-48.2 GHz by HAPS shall be in accordance with the provisions of Resolution 122 (Rev.WRC-19)</p> <p>Amend the existing Resolution 122 (WRC-19) to take into account last technological improvement of HAPS technology.</p> <p>Modify Article 11 to reflect the new footnotes.</p>
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Agenda Item 1.14 High Altitude Platform Systems (HAPS)

<p>RCC (2019-01-25)</p>	<p>Preliminary Position</p> <p>The RCC Administrations support necessary modifications to existing RR Article 5 footnotes and related WRC Resolutions as well as the development of the new Radio Regulations Article 5 footnotes and related WRC Resolutions to ensure the protection and the possibility of further development for existing services, including other applications of fixed service, having allocations in these and adjacent frequency bands, as well as to facilitate HAPS development (see Annex 1.4).</p> <p>The RCC Administrations consider that HAPS should not claim more protection from other stations of existing services than that provided in the Radio Regulations for the terrestrial stations in the fixed service, while not exceeding the interference level to stations of the existing services as the stations on the Earth's surface in the fixed service do.</p>
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Agenda Item 1.15 Land Mobile and Fixed Services Footnote Between 275-450 GHz

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<p>SFCG</p>	<p>SFCG supports the concept that no actual allocations will be made to any service above 275 GHz at WRC-19. However, SFCG supports the conclusions of the technical studies performed in ITU-R showing that a large amount of spectrum within the 275-450 GHz range could be identified for FS and MS applications, with the exception of the bands 296-306 GHz, 313-318 GHz and 333-356 GHz that, as a result of ITU-R compatibility studies, were deemed incompatible with the existing Earth exploration-satellite service (passive). Thus, SFCG does not oppose either Method D1 or E from the draft CPM text, as both provide identification of the frequency ranges for land-mobile and fixed service use that will not cause harmful interference to the passive services while maintaining the requirement for active users to take all practicable steps to protect passive applications.</p>
<p>APT (2019-08-06)</p>	<p>Preliminary Position</p> <p>APT View:</p> <p>APT Members support to consider identification of frequency bands for use by the land mobile and fixed service applications operating in the frequency range 275-450 GHz, taking into account the study results conducted by the relevant ITU-R WPs, provided that the protection of passive services identified in No. 5.565 is ensured. APT Members support adding a new footnote to the relevant part of the Radio Regulations.</p> <p>APT Members are also of the view that, in the bands identified for RAS in RR No. 5.565 (275-323 GHz, 327-371 GHz, 388-424 GHz and 426-442 GHz), separation distances and/or avoidance angles between RAS stations and FS stations should be considered depending on the deployment environment of FS stations.</p> <p>APT Preliminary Common Proposal:</p> <p>APT Members agreed to establish a new footnote 5.X115 for identification of frequency bands for use by administrations for the land-mobile and fixed services applications operating in the frequency range 275-450 GHz.</p> <p>The new footnote 5.X115 in the proposal is as follows:</p> <p>5.X115 The following frequency bands are identified for use by administrations for the implementation of the following active service applications:</p> <ul style="list-style-type: none"> – land mobile service applications: 275-296 GHz, 306-313 GHz, 320-330 GHz and 356-450 GHz; – fixed service applications: 275-296 GHz, 306-313 GHz, 320-330 GHz and 356-450 GHz. <p>The above-mentioned identification for implementation does not establish priority over other applications of radio services in the range of 275-450 GHz.</p> <p>Administrations wishing to make these above-mentioned frequency bands available for land mobile and/or fixed service applications are urged to take all practicable steps to protect passive services operating according to No. 5.565 until the date when the Table of Frequency Allocations is established in the 275-1 000 GHz frequency range. Considering the protection of the Earth exploration-satellite service (passive), the bands 296-306 GHz, 313-320 GHz and 330-356 GHz should not be used for land mobile and fixed services.</p> <p>In the frequency bands 275-296 GHz, 306-313 GHz, 318-323 GHz, 327-333 GHz, and 388-424 GHz, mitigation measures (e.g. minimum separation distances and/or avoidance angles) should be implemented as appropriate to ensure protection of radio astronomy sites from land mobile and/or fixed service applications, on a case-by-case basis. (WRC-19)</p>

Agenda Item 1.15 Land Mobile and Fixed Services Footnote Between 275-450 GHz

	<p>Reasons: Report ITU-R SM.2450-0 shows that sharing is feasible between fixed service/land mobile service applications and the EESS (passive)/RAS in the particular bands (275-296 GHz, 306-313 GHz, 320-330 GHz and 356-450 GHz). For the other frequency bands current studies have shown that sharing between FS/LMS applications and EESS (passive)/RAS applications is not feasible. Considering Terahertz technology continues to evolve and new applications are foreseen to use some parts of 275-450 GHz in the future, identification for implementation of FS/LMS applications in this frequency range should not cause constraints to the use of new applications in the future.</p> <p>No Change is proposed to footnote 5.565</p> <p>Reasons: Modifications to RR No. 5.565 are not necessary as the addition of fixed and land mobile services to the 275-450 GHz frequency range can be accomplished through the addition of a new footnote, which identifies frequency bands for use by LMS/FS applications that exceed spectrum needs</p>
<p>ASMG (2018-12-13)</p>	<p>Method C: This method suggests adding a new footnote to identify the 275-450 GHz frequency range for use by FS/LMS applications, while protecting EESS (passive) and RAS using the evolving guidance of ITU-R Recommendations and Reports, taking into account that there are no service allocations above 275 GHz.</p>
<p>ATU (2018-09-17)</p>	<p>Make Method C as the African preliminary position which suggest modifying RR No 5.565 for use by Fixed service Land Mobile service applications in portions of the 275 – 450GHz band, while considering the evolving guidance of ITU-R Recommendations and Reports. Studies that evaluated the entire 275-450GHz range show that sharing is feasible between applications in the land mobile/fixed service, and applications in the Earth explorations satellite service (passive)/radio astronomy service in the particular frequency bands: 275 -296 GHz, 306 -313 GHz, 320 -330 GHz and 56 – 450GHz.</p> <p>Note that ECOWAS having reviewed the draft CPM report and the proceedings of the meetings of APM 19-3 reviewed its position to align with the ATU preliminary position of Method C.</p>
<p>CEPT (2019-05-24)</p>	<p>European Common Proposal (ECP) adopted</p> <p>Position</p> <p>CEPT supports the inclusion of a new footnote to Article 5 of the Radio Regulations identifying the following frequency bands for fixed and mobile service applications in the range 275-450 GHz while maintaining the protection of the passive services identified in No. 5.565:</p> <ul style="list-style-type: none"> • 275-296 GHz • 306-313 GHz • 318-333 GHz • 356-450 GHz <p>With a total bandwidth of 137 GHz proposed to be identified above 275 GHz, CEPT stresses that this is exceeding the assessed spectrum requirements of 50 GHz for the land mobile and fixed services, each (with possibility of overlap). In particular, the band 356-450 MHz provides a large contiguous bandwidth of 94 GHz and, with the 23 GHz already allocated to land mobile and fixed services in the lower adjacent band 252-275 GHz, the identification of the band 275-296 GHz also allows for providing a large contiguous bandwidth of 44 GHz.</p> <p>On the basis of the results of compatibility studies with EESS (passive), CEPT does not support land mobile and fixed services identification in the EESS (passive) bands 296-306 GHz, 313-318 GHz and 333-356 GHz (as identified in No 5.565) due to their incompatibility with EESS (passive) in these parts of the spectrum.</p>

Agenda Item 1.15 Land Mobile and Fixed Services Footnote Between 275-450 GHz

	<p>Active services other than land mobile and fixed services are not subject to WRC-19 Agenda item 1.15. Consequently, CEPT is of the view that the corresponding regulatory provisions to other active services in No. 5.565 have to remain unchanged.</p> <p>The CEPT position is hence consistent with Method E of the CPM Report which provides a clear guidance to administrations in which bands land mobile and fixed services applications should operate.</p>
<p>CITEL (2019-04-12)</p>	<p>Draft Inter-American Proposal</p> <p>The frequency band 275-450 GHz is identified for use for fixed and land mobile service applications:</p> <p>In the frequency bands 275-296 GHz, 306-313 GHz, 320-330 GHz and 356-450 GHz, no specific conditions are necessary by fixed and land mobile service applications to protect Earth exploration-satellite service (passive) applications.</p> <p>In the frequency bands 275-323 GHz, 327-371 GHz, 388-424 GHz and 426-442 GHz, depending on the case, it may be necessary to adopt specific conditions (such as minimum separation distances and/or avoidance angles) to ensure the protection of radio astronomy stations from fixed and land mobile service applications.</p> <p>In the frequency bands 296-306 GHz, 313-320 GHz, 330-356 GHz, specific conditions are necessary (such as shielding) in order to ensure the protection of Earth exploration-satellite service (passive) applications from fixed and land mobile service applications.</p> <p>Reasons: The ITU-R studies on the compatibility of passive and active services have shown that, depending on the specific sub-band of the 275-450 GHz frequency range and combination of active/passive service application combination, coexistence can be achieved either without needing specific conditions or with the implementation of mitigation techniques such as minimum separation distances and avoidance angles. Adequate shielding has not been ruled out as an effective mitigation technique to protect EESS. ITU-R Recommendations and Reports on coexistence between active and passive service applications are expected to evolve over time to reflect technological developments.</p> <p>Draft Inter-American Proposal</p> <p>SUP Resolution 767 (WRC-15) Reasons: The studies can continue in ITU-R without the need for a WRC Resolution and the results published in ITU-R Recommendations and Reports.</p> <p>Draft Inter-American Proposal</p> <p>The following frequency ranges are identified for use by administrations for land-mobile and fixed service applications: 275-296 GHz, 306-313 GHz, 320-330 GHz and 356-450 GHz.</p> <p>NOC to footnote 5.565</p> <p>Reason: Taking in to account the ITU-R studies, which demonstrated that sharing was feasible in the above bands between LMS/FS active services and EESS (passive) and RAS, these specific ranges are identified for LMS/FS in the new footnote. Bands where studies have not demonstrated that sharing is feasible are not included in the footnote. Additionally, special attention is called to the RAS site operating in the identified ranges.</p> <p>Draft Inter-American Proposal SUP Resolution 767 (WRC-15). Reasons: Consequential action. Studies have been completed and frequency bands for FS/LMS applications have been identified.</p>

Agenda Item 1.15 Land Mobile and Fixed Services Footnote Between 275-450 GHz

<p>RCC (2019-01-25)</p>	<p>Preliminary Position</p> <p>The RCC Administrations consider it reasonable that identification of frequency bands for land-mobile and fixed service applications in 275-450 GHz band in the RR No. 5.565 will facilitate global harmonization of radio frequencies for development and introduction of land mobile and fixed service applications above 275 GHz.</p> <p>The RCC Administrations consider that when identifying frequency bands for active services in 275-450 GHz range, a balance of interests has to be observed in the use of this frequency range by both active and passive services, ensuring possibility for future development of new active service applications while excluding interferences to the passive services in the frequency bands already identified in No. 5.565 of the Radio Regulations.</p> <p>The RCC Administrations support inclusion in the new RR footnote of the frequency bands 275–296 GHz, 306–313 GHz, 318–333 GHz and 356–450 GHz to be used by applications in the land mobile and fixed services and the related modifications to RR No. 5.565 .</p>
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Agenda Item 1.16 RLANs Studies at 5150-5925 MHz

Agenda Item 1.16 RLANs Studies at 5150-5925 MHz

<p>SFCG</p>	<p>The primary SFCG frequency bands of interest under this agenda item are 5250-5350 MHz and 5350 -5470 MHz and SFCG has particular concerns with the identification of these bands due to the results of studies in WP 5A. SFCG members have been deeply involved in ITU-R studies related to the sharing studies between RLAN 5 GHz and EESS (active) in both the 5250-5350 MHz band and 5350-5470 MHz bands showing that a change of RLAN technical conditions in the first band and a new mobile service allocation for RLAN in the second band would not be compatible with all EESS(active) instrument types (altimeters, scatterometers and SAR).</p> <p>Therefore, SFCG supports no change to Radio Regulations, which is the single method currently identified in the draft CPM text for these two frequency bands, 5250-5350 MHz and 5350-5470 MHz.</p>
<p>APT (2019-08-06)</p>	<p>Preliminary Position</p> <ul style="list-style-type: none"> - APT Members are of the view that the protection of incumbent services including their current and planned use in the frequency bands 5 150-5 350 MHz, 5 350-5 470 MHz, 5 725-5 850 MHz and 5 850-5 925 MHz should be ensured, without adversely affecting these services. - In the frequency bands 5 250-5 350 MHz, 5 350-5 470 MHz and 5 850-5 925 MHz, APT Members support NOC to the Radio Regulations for the use of WAS/RLAN to protect incumbent services. - In the frequency band 5 725-5 850 MHz, APT Members support to allocate the 5 725-5 850 MHz frequency band to the mobile service on a primary basis in Regions 3. - In the frequency band 5150-5250 MHz, APT Members do not support Method A2, A4, A5 and A6. Moreover no consensus was reached on either Method A1 or A3. However APT Members support further consideration and investigation on the possibility of outdoor WAS/RLANs operation under the condition that incumbent services including the future development of these services are fully protected.
<p>ASMG (2018-12-13)</p>	<p>Frequency band A, 5 150-5 250 MHz: Method A2: Revision to Resolution 229 (Rev.WRC-12) to enable outdoor</p> <p>Frequency band B, 5 250-5 350 MHz Method B: No change to the RR</p> <p>Frequency band C, 5 350-5 470 MHz Method C: No change to the RR</p> <p>Frequency band D, 5 725-5 850 MHz requency band D, 5 725-5 850 MHz Method D2: A new Regional primary MS allocation</p> <p>Allocate the 5 725-5 850 MHz frequency band to the mobile service on a primary basis in some Regions to accommodate WAS/RLAN use restricted to indoor operation with e.i.r.p. limits up to 200 mW including associated mitigation techniques and together with the revision of Resolution 229 (Rev.WRC-12).</p> <p>Frequency band E, 5 850-5 925 MHz Method E: No change to the RR</p> <p>Only one method is proposed, with no change to the RR, except suppression of Resolution 239</p>

Agenda Item 1.16 RLANs Studies at 5150-5925 MHz

<p>ATU (2018-09-17)</p>	<p>Preliminary Position</p> <p>A.) For the band 5150-5250 MHz (Band A)</p> <ul style="list-style-type: none"> ○ Support Method A1 (NOC) or Method A3: consideration of this agenda in respect of the two Methods would continue at Sub-regional and WG2 level with a view to achieve consensus. ○ Note the view of Egypt that “Resolution 239 (WRC-15 invites to address the possibility of enabling outdoor WAS/RLAN operations incl possible associated conditions in the frequency band 5150-5350MHz. Therefore Egypt supports Method A3 to revise Resolution 239 (RevWRC-12) and enable outdoor RLAN operations by applying the same conditions of use as defined for the 5250-5350Mhz band in resolves 4 of Resolution 229 (Rev WRC-12) <p>B.) For the band 5250 -5350Mhz (Band B)</p> <p>Take Method B (No Change) as the African preliminary position.</p> <p>C.) For the band 5350-5850MHz Band C</p> <p>Take Method C (No Change) as the African preliminary position</p> <p>D.) For the band 5725-5850MHz (Band D)</p> <ul style="list-style-type: none"> ● Take Method D (No Change) as the African preliminary position while, continuing the consideration of Method D2 at sub-regional and WG2 levels. ● Note the view of Egypt that “Resolution 239 (WRC-15) invites to consider potential mobile service allocations to accommodate WAS/RLAN operations in 5725 – 5850MHz frequency band. Egypt supports Method D2 to allocate the 5725 – 5850MHz band to the mobile services on a primary basis worldwide in Region 1 with the associated conditions. Furthermore, Egypt and the 46 countries listed in RR No. 5.453 are already having primary allocation for MS in the considered band, the suggested method would benefit those administrations that are not part of the footnote and wish to operate WAS/RLAN under MS Primary allocation.” <p>E.) For the band 5850-5925 MHz (Band E)</p> <p>Take Method E1 (No Change) as the African preliminary position</p>
<p>CEPT (2019-05-24)</p>	<p>ECPs adopted on NOC for the bands 5250-5350 MHz, 5350-5470 MHz and 5850-5925 MHz.</p> <p>Preliminary Position</p> <p>In the 5 150-5 250 MHz band, CEPT notes that an uncontrolled outdoor relaxation to WAS/RLAN would affect the operation of the MSS feeder links, aeronautical radionavigation and aeronautical telemetry (see No. 5.446C). However, CEPT already allows the use of WAS/RLAN systems inside vehicles (aircraft, trains and automobiles) in ECC Decision (04) 08 and supplementary explanatory document published on the ECC website (see http://www.efis.dk/documents/44659). Moreover, CEPT supports in-car usage up to 40 mW with appropriate penetration losses. CEPT is still discussing limited outdoor relaxation (up to maximum 200 mW e.i.r.p) under the condition that administrations take appropriate measures that will ensure protection of the incumbent services.</p>

Agenda Item 1.16 RLANs Studies at 5150-5925 MHz

	<p>In the 5 250-5 350 MHz band, CEPT notes that the current studies have shown difficulties in achieving co-existence with incumbent services and therefore supports no change to the RR in this band.</p> <p>In the 5 350-5 470 MHz band, CEPT supports no change to the RR in this band.</p> <p>In the 5 725-5 850 MHz band, CEPT would support a new mobile allocation to accommodate WAS/RLANs use if sharing and compatibility studies can demonstrate the effectiveness of any new proposed interference mitigation techniques to ensure the protection of radars, fixed service (see No 5.455) and FSS space station receivers. It is to be noted that CEPT will take into account compatibility studies between RLAN and specific applications within CEPT (e.g. road tolling systems). At this time, no effective mitigation techniques has been proposed to enable co-existence with certain modes of frequency hopping radars operated in this band in some CEPT countries.</p> <p>In the 5 850-5 925 MHz band, CEPT notes that the current studies have shown difficulties in achieving co-existence with other incumbent services without imposing any additional constraints on existing services such as FSS (space station receivers) and existing applications under the mobile service such as ITS (including urban rail). Therefore, CEPT supports no change to the RR in this band.</p>
<p>CITEL (2019-04-12)</p>	<p>Preliminary Position</p> <p>No change to the Table of Frequency Allocations in the band 5 150-5 250 MHz as further study of currently available mitigation measures indicate that is difficult to find mitigation techniques to facilitate sharing between outdoor RLAN and Aeronautical Radionavigation (Aeronautical Mobile Telemetry).</p> <p>Preliminary Position</p> <p>The band 5 150-5 250 MHz is the only worldwide harmonized spectrum for RLANs in the 5 GHz range that is not subject to the dynamic frequency selection constraint. Some studies confirm that RLAN operations outdoors in the band 5 150-5 250 MHz will not cause harmful interference to other operations in the band. The results of these studies are further confirmed by the real-world operational experience with some countries allowing RLAN operations outdoors in the 5 150-5 250 MHz with appropriate constraints, e.g. maximum number of outdoor RLANs. Allowing RLAN access to outdoor use in the band 5 150-5 250 MHz with appropriate technical rules would address the growing demand for continuous and ubiquitous connectivity.</p> <p>Preliminary Position</p> <p>There is a footnote (5.453) with the additional attribution on a primary basis for the mobile service, so some countries have deployed applications using WAS/RLAN technologies operating at various power levels using various mitigation techniques for coexistence between services involved in this band. In other countries, the allocation to the mobile service on a secondary basis has been adopted</p> <p>Preliminary Position</p> <p>There is a footnote (5.453) with the additional attribution on a primary basis for the mobile service, so some countries have deployed applications using WAS/RLAN technologies operating at various power levels using various mitigation techniques for coexistence between services involved in this band.</p>

Agenda Item 1.16 RLANs Studies at 5150-5925 MHz

	<p>Draft Inter-American Proposal</p> <p>WAS/RLAN already operate in various countries throughout the world within the frequency band 5 725-5 850 MHz. In Region 2, the band 5 725-5 825 MHz is also used by WAS/RLAN.</p> <p>Inter-American Proposals</p> <p>The band 5 150-5 250 MHz is the only worldwide harmonized spectrum for RLANs in the 5 GHz range that is not subject to the dynamic frequency selection constraint. Studies confirm that RLAN operations outdoors in the band 5 150-5 250 MHz will not cause harmful interference to other operations in the band. The results of these studies are further confirmed by the real-world operational experience with some countries allowing RLAN operations outdoors in the 5 150-5 250 MHz with appropriate constraints. Allowing RLAN access to outdoor use in the band 5 150-5 250 MHz would address the growing demand for continuous and ubiquitous connectivity.</p> <p>Inter-American Proposal</p> <p>Since the adoption of Resolution 229 (Rev. WRC-12) at WRC-03, millions of WAS/RLAN (such as Wi-Fi) devices have been deployed in the band 5 250-5 350 MHz. Studies in response to invite c of Resolution 239 (WRC-15) have shown that changing the WAS/RLAN operating conditions in the band 5 250-5 350 MHz would not ensure protection of incumbent radiodetermination services and EESS (active) sensors.</p> <p>Inter-American Proposals</p> <p>No change to the Table of Frequency Allocations in the band 5 350-5 470 MHz as further study of currently available mitigation measures indicate that there are no viable mitigation techniques to facilitate sharing between Radio Local Area Networks (RLAN) and the Earth Exploration Satellite Service (active) or radiolocation systems in the band 5 350-5 470 MHz.</p> <p>Inter-American Proposals</p> <p>WAS/RLAN already operate in various countries throughout the world within the frequency band 5 725-5 850 MHz. In Region 2, the band 5 725-5 825 MHz is also used by WAS/RLAN.</p> <p>Inter-American Proposals</p> <p>No change to the Table of Frequency Allocations in the 5- 850-5- 925 MHz frequency band, because the mobile service is co-primary and applications are already implemented in this segment.</p> <p>Inter-American Proposals</p> <p>No change to the Table of Frequency Allocations in the 5 850-5 925 MHz frequency band, because the mobile service is co-primary and applications are already implemented in this segment.</p>
<p>RCC (2019-01-25)</p>	<p>Preliminary Position</p> <p>The RCC Administrations are in favour of necessary protection from potential WAS/RLAN interference for all the services having allocations in the considered frequency bands, first of all for systems in radiolocation and aeronautical radionavigation services used for the safety of flights.</p> <p>The RCC Administrations oppose reduction of restrictions for the use of WAS/RLAN in the frequency bands 5 150-5 250 MHz and 5 250-5 350 MHz , since the conducted ITU-R studies did not reveal mitigation methods ensuring sharing between outdoor WAS/RLAN and the systems in existing services in the considered frequency bands.</p>

Agenda Item 1.16 RLANs Studies at 5150-5925 MHz

	<p>The RCC Administrations consider the possibility of WAS/RLAN systems operation in the frequency band 5150-5250 MHz inside vehicles provided they have compatibility with systems in existing services, achieved through limiting power of WAS/<u>RLAN</u> systems' transmitters and additional absorption by vehicle body.</p> <p>The RCC Administrations oppose the use of WAS/RLAN in the frequency bands 5 350–5 470 MHz, 5 725–5 850 MHz and 5 850–5 925 MHz, since the studies conducted by ITU-R , showed that sharing between WAS/RLAN and the systems in existing services in the considered frequency bands is not ensured.</p>
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Agenda Item 7 Resolution 86 – Satellite Regulatory Procedures

Agenda Item 7 Resolution 86 – Satellite Regulatory Procedures

<p>SFCG</p>	<p>SFCG supports possible changes to the Radio Regulations to improve the handling of the advance publication, coordination, notification and recording procedures for satellite networks. SFCG shall monitor all the issues covered under this agenda item to ensure that any possible change will not adversely impact space science services.</p> <p>There are currently issues A through N under this Agenda Item. Issues B, C, E through G, I through L, and N do not concern the SFCG. So far SFCG has identified several issues of specific interest to space science services:</p> <p>Issue A: This issue involves development of a general definition of: 1) bringing into use (BIU) for NGSO systems and 2) the implementation of a milestone based deployment approach for specific services and bands.</p> <p>SFCG is of the opinion that the proposed changes should only be applicable to FSS or MSS non-GSO constellations or systems subject to coordination under Section II of Article 9, or to RR Article 22, supporting adoption of revisions that would not impose undue constraints in operation of satellites with science missions.</p> <p>Therefore, SFCG supports Option C of the draft CPM text (Working Party 4A Chairman Report Doc. 826, Annex 32) with respect to BIU and with respect to the milestone based deployment approach, SFCG supports Option 1 of the draft CPM text which limits the applicability of the milestone approach to only FSS and MSS systems. SFCG should oppose any changes in BIU which include a continuous deployment period for the space science services or inclusion of the space science services in the milestone based approach. Additionally under Issue A is the ideal of orbital tolerances for the inclination, apogee, perigee and argument of perigee. This should not be supported by the SFCG unless there is a clear understanding of how this will impact mission in the space science services which may not have the adequate propulsion resources to perform such station keeping and whose orbit will degrade over time.</p> <p>Issue D: SFCG does not oppose either Method D2 or D3 (Working Party 4A Chairman Report Doc. 826, Annex 33) of the draft CPM text. This issue relates to publication of a list of potentially affected networks at the time of coordination which may be useful for SFCG members.</p> <p>Under method D2, it is proposed to add the requirements to have:</p> <ul style="list-style-type: none">a) a pre-compiled list of potentially affected satellite networks and/or systems, published for information only, included in the CR/C Special Section for coordination under RR Nos. 9.12, 9.12A and 9.13, by stipulating it in RR No. 9.36.1;b) the definitive list of affected satellite networks or systems to be considered when effecting coordination under RR Nos. 9.12, 9.12A and 9.13 to be included in the CR/D Special Section by stipulating it in RR No. 9.53A. <p>Under method D3, it is proposed to add the requirements to have the list of satellite networks or systems potentially affected included in the CR/C Special Section for coordination under RR Nos. 9.12, 9.12A and 9.13 for information only, by stipulating it in RR No. 9.36.1.</p> <p>Issue H: This issue introduces additional orbital data in the NGSO API describing a non-GSO satellite when submitting an API and/or CR/C package, for sun synchronous satellites, as the orbital elements for such satellites are mission dependant and would be known at the API stage. This would allow the proper modelling of the orbit of new satellite network filings and may also be of use to SFCG members. SFCG supports the initiative which is the only Method in the draft CPM text.</p> <p>At the July meeting of WP 4A, several Administrations have proposed a new issue to address short-duration missions. SFCG does not support any simplification of the Radio Regulations that would have a negative impact on the use of the bands such as the 2 GHz data links bands for EESS and SRS.</p>
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Agenda Item 7 Resolution 86 – Satellite Regulatory Procedures

	<p>Issue M: This issue involves a simplified regulatory regime for short duration missions, defined specifically as mission with less than [10] satellites with period of validity less than three years. SFCG does not support modifying the procedures for filing satellites under RR Articles 9 and 11 unless sufficient safeguards are in place to ensure a simplified and/or expedited filing process cannot be exploited. Further issues such as cost recovery for such as process should also be considered.</p>												
<p>APT (2019-08-06)</p>	<p>Preliminary Position APT members hold the following views:</p> <p>Issue A - Non-GSO BIU:</p> <p><u>BIU definition:</u></p> <p>APT members are of the view that the definition of the BIU of frequency assignments to non-GSO systems should be in accordance with the current practice as contained in the Rules of Procedure, which means to keep a continuous period of 90 days for frequency assignments of the FSS/MSS/BSS, and no fixed period for frequency assignments other than the FSS/MSS/BSS.</p> <p>With respect to the regulatory provision No. 11.44C of the BIU, notified orbital planes, APT Members could support Option 2, as outlined in the CPM19-2 report.</p> <p><u>Milestone-based approach</u></p> <p><u>This issue is one of the most complex and critical subjects that WRC-19 would need to address and decide upon.</u></p> <p><u>Due to the provisional nature of several items associated with Milestone-based approach and because of strong interrelation of some of these factors with each other's, individual decision on one element without agreement of other element(s) seems inappropriate and counterproductive since such decision undermine the flexibility that WRC-19 should have at its disposal to make an overall evaluation of all elements of Milestone-based approach taking into account dependency of each element to others elements as well as through analysis of the most possible alternatives.</u></p> <p>_____</p> <p><u>APT decided to submit range of most probable options in order to permit WRC-19 to freely and clearly analyze the situation without being biased by any specific option make although analysis of the situation and decides accordingly taking into account the results of negotiation to be carried out between the existing and immediate potential users/operators of the NGSO Milestone-based approach.</u></p> <p><u>These range of most probable options is contained in the table:</u></p> <table border="1" data-bbox="402 1444 1393 1837"> <thead> <tr> <th data-bbox="402 1444 625 1623">Milestones</th> <th data-bbox="625 1444 1117 1623">Milestone timing (Number of years after the end of the seven-year regulatory period or after 1st January 2021, whichever falls later)</th> <th data-bbox="1117 1444 1393 1623">Minimum required % of satellites deployed to meet the milestone</th> </tr> </thead> <tbody> <tr> <td data-bbox="402 1623 625 1696">1st</td> <td data-bbox="625 1623 1117 1696">2 to 3 years</td> <td data-bbox="1117 1623 1393 1696">10%</td> </tr> <tr> <td data-bbox="402 1696 625 1770">2nd</td> <td data-bbox="625 1696 1117 1770">4 to 5 years</td> <td data-bbox="1117 1696 1393 1770">30-50%</td> </tr> <tr> <td data-bbox="402 1770 625 1837">3rd</td> <td data-bbox="625 1770 1117 1837">7 years</td> <td data-bbox="1117 1770 1393 1837">90-95% /100%</td> </tr> </tbody> </table>	Milestones	Milestone timing (Number of years after the end of the seven-year regulatory period or after 1st January 2021, whichever falls later)	Minimum required % of satellites deployed to meet the milestone	1 st	2 to 3 years	10%	2 nd	4 to 5 years	30-50%	3 rd	7 years	90-95% /100%
Milestones	Milestone timing (Number of years after the end of the seven-year regulatory period or after 1st January 2021, whichever falls later)	Minimum required % of satellites deployed to meet the milestone											
1 st	2 to 3 years	10%											
2 nd	4 to 5 years	30-50%											
3 rd	7 years	90-95% /100%											

Agenda Item 7 Resolution 86 – Satellite Regulatory Procedures

Note:

The WRC-19 Conference when considering the ranges of Milestones and associated deployment factors in the above table, may consider allowing a degree of flexibility to Non-GSO satellite operators if they missed the percentage criterion in the milestone 1 or 2 above, it would need to achieve those criteria's at the subsequent Milestone.

Transitional Measures

APT Members could support Option 1, the commencement date of the milestone process to be 1 Jan. of 2021, at this stage.

Frequency bands and services for application of the milestone-based approach

APT Members support application of the milestone-based approach to non-GSO systems operating in the FSS, BSS and MSS, but not those operating in the RNSS.

APT Members do not object, at this stage to the application of the approach to the following MSS frequency bands for which no consensus was reached and listed in the CPM Report: 137-137.025 MHz, 137.025-137.175 MHz, 137.175-137.825 MHz, 137.825-138 MHz, 148-149.9 MHz, 149.9-150.05 MHz (This band 149.9-150.05 MHz appears to have been mistakenly listed in the CPM Report as 137-138 MHz), 399.9-400.05 MHz, and 400.15-401 MHz.

Milestone based approach – consequences of non-submission of milestone information (resolves 11 to 11ter)

APT members expressed preference for Option 1.

Milestone based approach – reuse of spacecraft to BIU or count towards milestones of other systems (resolves 12)

APT members expressed slight preference for Alternative 2(NOC), at this stage.

Bringing into use – tolerances in orbital characteristic values

APT Members do not support the application of tolerance values at this stage, because no technical basis has been developed within the ITU-R in this study cycle to determine how much deviation could be tolerated between the characteristics of the notified orbital planes and the characteristics of the orbital planes associated with any deployed space stations.

Issue D – Identification of those specific satellite networks and systems with which coordination needs to be effected under RR Nos. 9.12, 9.12A and 9.13:

APT Members support the Method D1 for the Issue D, as outlined in the CPM19-2 Report.

Issue H – Modifications to RR Appendix 4 items to be provided for non-geostationary satellite systems not subject to the procedures of Section II of RR Article 9:

APT Members support the single Method for the Issue H, as outlined in the CPM19-2 Report.

Issue I – Simplified regulatory regime for non-GSO satellite systems with short duration missions:

APT members support the Method I2 in the CPM Report to develop a new WRC Resolution together with an associated regulatory procedure for non-GSO satellite systems with short-duration missions.

APT members are of the view that the simplified regulatory regime for non-GSO satellite systems with short-duration missions should not place additional burden on potentially affected administrations.

APT members support the retention of the typical 4 month commenting period from the date of BR IFIC containing information published under No. **9.2B**.

Agenda Item 7 Resolution 86 – Satellite Regulatory Procedures

	<p>APT members are of the view that this Resolution should apply only to non-GSO networks or systems identified by the notifying administrations as short duration mission. AP4 to RR should be modified to accommodate this indication of the administration's identification.</p>
<p>ASMG (2018-12-13)</p>	<p>Issue A - Non-GSO BIU: Factors related to the bringing into use of frequency assignments of non-GSO systems subject to coordination</p> <p>Support single method (comprises two separate elements with various options)</p> <p>1. BIU of frequency assignments for Non-GSO</p> <p>-Support Option A: deployment for a continuous period of at least 90 days in a notified orbital plane of a satellite with the capability of transmitting or receiving the frequency assignments.</p> <p>2. Milestones for maintaining the recording in the MIFR</p> <p>No Specific Views Issue B – Application of coordination arc in the Ka-band, to determine coordination requirements between the FSS and other satellite services</p>
<p>ATU (2018-09-17)</p>	<p>Preliminary Position</p> <p>APM 19-3 agreed to:</p> <p>1. Note that the July 2018 meeting of Working party 4A made the following structural changes to its work:</p> <ul style="list-style-type: none"> • The suppression of <ul style="list-style-type: none"> ○ Issue E (Harmonization of RR App 30B with RR Appendix 30 & 30A) And ○ Issue F (Concerns with the lack of implementation of certain provisions of the RR and that can lead to difficulties during the entering of an assignment onto APP 30B list). • Creations of new issue E (Resolution related to RR Appendix 30B) • Renaming of Issue N as new Issue F. <p>2. Note the creation of new Issue M (Simplified regulatory regime for non-GSO satellite systems with short duration missions).</p> <p>Issue A</p> <p>Studies relating to the BIU of frequency assignments to non-GSO satellite systems, and consideration of a milestone based deployment approach for non-GSO FSS satellite systems in certain bands</p> <p>APM 19-3 agreed to:</p> <p>Take the Only Method, as the African preliminary position, proposed for BIU and milestone approach for deployment of Non-GSO systems:</p> <p>1. Regarding BIU, APM 19-3 may consider maintaining the current 90 days for Non –GSO satellite to be fully operational.</p> <p>2. ATU members are encouraged to further consider options proposed for milestone approach which will provide a balance between avoiding paper satellites and providing some flexibility to NGSAs operator for deployment of the system.</p> <p>Issue B</p> <p>Application of coordination arc in the Ka-band, to determine coordination requirements between the FSSS and other satellite services,</p>

Agenda Item 7 Resolution 86 – Satellite Regulatory Procedures

Take Method B2 as an African preliminary position the use of the coordination arc with a value of 8 degrees as the coordination criteria , to determine if coordination is required between FSS and MSS systems and between MSS systems in the frequency band 29.5 -30GHz (Earth-to-Space)

19.7-20.2 GHz (space-to-Earth), in all 3 Regions, replacing the existing coordination criteria $\Delta T/T > 6\%$

Issue C

Issues for which consensus was readily achieved in the ITU-R.

APM19-3 agreed to:

1. **Support, as a matter of an African preliminary position, the methods proposed** for each matter under this issue considering that the matters are non-contentious and consensus has already been achieved at the ITU-R WP4A on all matters on how best to resolve them.

2. **Note** that matters under this issue (i.e. Issue C) are non-contentious and consensus has already been achieved at the ITU-R WP4A on all matters on

Issue D

Identification of those specific satellite networks and systems with which coordination needs to be effected under RR Nos 9.12, 9.12A and 9.1.

APM19-3 agreed to:

Take Method D2 as the African preliminary position – to include the list of potentially affected networks in CR/C and in addition to give a room for potentially affected Administrations to include additional Satellite networks which might have been omitted in CR/C and publish them in CR/D.

Issue E

Resolution related to RR Appendix 30B

APM19-3 agreed to:

Take the Only Method, as the African preliminary position, which proposes the development of a new WRC Resolution to facilitate those Administrations who don't have a frequency assignment in the Appendix 30B and wish to provide an economically viable satellite service to its national territory as initially considered when the allotment Plan was established in 1988.

Issue F

Measures to facilitate entering new assignments into the RR Appendix 30B List

APM19-3 agreed to:

Take Method F1 as the African preliminary position, which proposes to update the coordination, triggers to take into account technological advances and avoid some unnecessary coordination while assuring adequate

Agenda Item 7 Resolution 86 – Satellite Regulatory Procedures

protection of other satellite networks.

Issue G

Updating the reference situation for networks under RR Appendices 30 and 30A when Provisional recording is used.

APM19-3 agreed to:

1. **Take Method G1 as the African preliminary position**, which provides that when a network enters the List of Appendix 30 or 30A, the reference situation of the interfered with the network shall only be updated if-and-when the Bureau is informed that the agreement has been obtained. RR Provision 4.1.18 must be modified to reflect this view.

2. **Noted** that EACO is of the view that Method G2 is the appropriate method to address this agenda item.

Issue H

Modifications to RR Appendix 4 data elements to be provided for non- geostationary Satellite networks/systems

APM19-3 agreed to:

Take the Only Method, as the African preliminary position, proposed in WP 4A which provides additional items to include in RR Appendix 4 for APIs for frequency assignments to NGSO satellite systems in bands not subject to coordination under Section II of RR Article 9 for facilitating modelling of NGSO.

Issue I

Additional RR Appendix 4 data items to be provided for non- geostationary satellite systems with multiple orbital planes

APM19-3 agreed to:

Take the Only Method, as the African preliminary position, in WP 4A which proposes two additional items in RR Appendix 4 for the provision of information relating to the multiple orbital planes and their relationship with respect to the NGSO satellite system.

Issue J – pfd limit in Section 1, Annex 1 of RR Appendix 30

APM19-3 agreed to:

Take Method J2as the African preliminary position, which proposes no change to the Radio Regulations since the pfd limit referred to in the first paragraph of Section 1 of Annex 1 to RR Appendix 30 is hard limit that shall not

Agenda Item 7 Resolution 86 – Satellite Regulatory Procedures

be exceeded in order to protect BSS assignments from interference that may be caused by BSS networks located outside an arc of $\pm 9^\circ$ around a wanted BSS network.

Issue K –

Difficulties for Part
B examinations
under § 4.1.12 or
4.2.16 of RR
Appendices 30 and
30A and § 6.21 c) of
RR Appendix 30B

APM19-3 agreed to:

Take the Only Method, as the African preliminary position, proposed which intends to make satellite coordination easier and to allow satellites networks opportunity of additional examination that have received unfavourable finding.

Issue L – Update to

Appendix 4 data
elements required
for RR Article 22
epfd verification
after revision of
Recommendation
ITU-R S.1503

APM19-3 agreed to:

Take the Only Method, as the African preliminary position, proposing changes to RR Appendix 4 which reflects the amendments on Recommendation ITU-R S.1503.

Issue M –

Simplified
regulatory regime
for non-GSO
satellite systems
with short-duration
missions

Agenda Item 7 Resolution 86 – Satellite Regulatory Procedures

	<p><i>APM19-3 agreed to:</i></p> <p>Take adoption of the new WRC Resolution as the African preliminary position, together with an associated regulatory regime for non-GSO satellite systems with short duration missions as proposed in the draft CPM text.</p>
<p>CEPT (2019-05-24)</p>	<p>ECPs adopted on Issue D and H</p> <p>Position (Issues D and H), Preliminary Position (Issues A and I (formerly M))</p> <p>CEPT is studying possible improvements of the coordination and notification procedures for space services. CEPT supports retaining the current process of continuing evolution at successive WRCs of the regime governing space services. CEPT intends to develop specific positions susceptible to bring improvement to the regulatory process.</p> <p>CEPT favours the review of any RR provision which can bring accurate solutions to specific detected inconsistencies and develop new improved provisions with emphasis on solving the most urgent issues, i.e. well characterized issues whose improvement is urgent and impacting.</p> <p>CEPT also favours a stable and predictable regulatory framework for efficient and economical use of spectrum and orbit resources.</p> <p>CEPT supports to include into consideration under WRC agenda item 7 only the issues considered by the relevant Working Parties prior to the deadline for the draft CPM Report and included into the draft CPM Report, in order to give administrations and regional organizations sufficient time to draw up a position and develop regulatory texts.</p> <p>See below for a detailed position on the individual issues relevant for SFCG: issues A, D, H and I.</p> <p>Issue A - Bringing into use of frequency assignments to all non-GSO satellite systems, and consideration of a milestone-based approach for the deployment of non-GSO satellite systems in specific bands and services:</p> <p>CEPT supports that a solution to address this issue should follow the eight principles established by CPM19-2 meeting in February 2019 (CPM-19-2/243-E, Section 3/7/1.3).</p> <p>CEPT supports that the definition of the BIU of frequency assignments to non-GSO systems in accordance with the current practice as contained in then RoP adopted by the 73rd meeting of the RRB to be left unchanged from the current practice. This means that CEPT supports considering that the frequency assignments to a non-GSO system be brought into use with the deployment of one of its satellites in one of the notified orbital planes with the operational capability of transmitting or receiving those frequency assignments. CEPT supports that a continuous 90-day period is required to confirm bringing into use.</p> <p>At the same time, CEPT supports a milestone-based approach for the maintenance of the recording in the MIFR of assignments to non-GSO systems associated with a minimum number of satellites to be deployed over time. In assessing milestone timelines and objectives, CEPT will seek a balance between the need to prevent spectrum warehousing, the proper functioning of coordination mechanisms and the operational requirements related to the deployment of a non-GSO satellite system.</p> <p>CEPT supports that any milestone-based approach should be applicable to FSS/BSS/MSS and to the frequency bands 10.7-13.25, 13.75-14.8, 15.43-15.63, 17.3-20.2, 21.4-22, 24.65-25.25, 27-30, 37.5-42.5, 47.2-50.2 and 50.4-51.4 GHz. CEPT also support further consideration of applying any milestone-based approach to the frequency bands 1.98-2.01, 2.17-2.20, 3.4-4.2, 5.091-5.150, 5.15-5.25, 5.725-5.85, 5.85-6.70, 6.70-6.725, 6.725-7.025, 7.025-7.075, 7.250-7.375, 7.900-8.025, 8.025-8.400, 20.2-21.2, 30-31, 42.5-43.5 and 43.5-47 GHz. For other bands, CEPT does not support applying any milestone-based approach.</p>

Agenda Item 7 Resolution 86 – Satellite Regulatory Procedures

CEPT believes that the milestone-based approach gives regulatory certainty to administrations and operators, and gives recognition that constellations of non-GSO satellites may generally take time to deploy. CEPT supports the adoption of a unique method encompassing all types of constellations operating in the bands and services listed in the previous paragraph.

CEPT supports three milestones to be applied to systems recorded in the MIFR. Recognizing that some constellations may deploy some satellites but may fail to meet the milestones, a provision is proposed to reduce the maximum number of satellites recorded in the MIFR while preserving the rights for the already in-orbit satellites. The reduction of the characteristics of the constellation recorded in the MIFR should be based on the number of actual satellites deployed.

CEPT supports the only option in the CPM text with regards to the modifications as a result of failure to meet the milestones.

CEPT supports that frequency assignments of those systems having reached the end of their regulatory period, but not fully deployed before the 1st January [2021/2023], will have the same regulatory certainty as that available to frequency assignments of those systems which will reach the end of their regulatory period after this date. CEPT supports a methodology that would ensure that at one point in time after WRC-19, the recorded frequency assignments and their associated characteristics must reflect the actual deployment of such systems. Appropriate transitional measures are needed in order to allow administrations having systems with frequency assignments reaching the end of their regulatory period, brought into use and notified before the 1st January [2021/2023] to have sufficient time to adapt their current development and deployment schedules to meet milestones that WRC-19 is likely to define. CEPT supports the first option, established by CPM-2 meeting held in February 2019 (CPM19-2/243-E, Section 3/7/1.3.2.2), to address the transitional measures and supports that the date of the commencement of the milestone process is 1st January [2021/2023].

CEPT also supports that option for the milestone-based approach, as described in the next table, is associated to the date of January 1st, [2021/2023] for the commencement of the milestone process in order to obtain the application of the first milestone on 1st January [2023/2025].

Table 1: CEPT method for milestone-based approach for non-GSO systems

Milestones	Milestone timing	Minimum required % of satellites deployed to meet the milestone
1st	2 years	10%
2nd	4 years	30%
3rd	7 years	90%

CEPT supports that the Radio Regulations should not be used to eliminate real non-GSO constellations and WRC-19 should not be used as a tool to reduce the number of competing non-GSO systems.

CEPT supports that the suspension of frequency assignments does not extend the milestone period nor reduce the requirements associated with any of the remaining milestones.

CEPT supports the adoption of a new Resolution by WRC-19 based on the principles and methodology set out above to address this issue.

CEPT also recognizes the need to provide necessary visibility for the operators that have already started the deployment of their non-GSO system and emphasize that coordination activities should be conducted in good faith, based on operational parameters of the systems with the use of appropriate technical criteria and tools in order to depart from worst case analysis, and should be finalized in proper time so as to enable these constellations to come to fruition.

Agenda Item 7 Resolution 86 – Satellite Regulatory Procedures

	<p>Issue D - Identification of those specific satellite networks and systems with which Coordination needs to be effected under RR Nos 9.12, 9.12A and 9.13:</p> <p>CEPT proposes that the Bureau publish in the CR/D special section the “definitive lists” of those specific GSO networks or non-GSO systems, as appropriate, with which coordination under Nos 9.12, 9.12A or 9.13 needs to be effected, similarly to what is currently done under the provisions of No 9.36.2, as outlined in Method D1 in the CPM text.</p> <p>Issue H - Modifications to RR Appendix 4 data elements to be provided for non-GSO satellite systems not subject to the procedures of Section II of RR Article 9: CEPT supports the single method proposed for agenda item 7 Issue H.</p> <p>Issue I - Simplified regulatory regime for non-GSO satellite systems with short duration missions: CEPT supports the method I2 in principle proposing a modified regulatory procedure for non-GSO-satellite networks and systems with short duration missions not subject to Section II of RR Article 9.</p>
<p>CITEL (2019-04-12)</p>	<p>Issue A</p> <p>Draft Inter-American Proposal</p> <p>Include in Article 11 provisions for addressing the bringing into use of all non-GSO systems, and to add “system” to align the wording of the first sentence with the rest of the provision.</p> <p>Add non-GSO systems to No. 11.44.2; the GSO period remains specified in No. 11.44B.</p> <p>Provide a fixed period for continuous deployment with the capability of transmitting/receiving frequency assignments to constitute BIU of frequency assignments to non-GSO systems. The start of the period [duration TBD] must be before the end of regulatory period.</p> <p>Create an exception to the general rule requiring deployment into a notified orbital plane for frequency assignments to non-GSO systems that do not specify the Earth as the reference body in Appendix 4. Here, due to the variety of potential systems, mostly of a scientific nature, there is no fixed period required for confirmation of BIU by the notifying administration.</p> <p>Add a new Resolution that contains and implements the milestone-based deployment approach for frequency assignments to certain FSS, BSS and MSS non-GSO systems in specific frequency bands.</p> <p>Issue B</p> <p>Draft Inter-American Proposal</p> <p>Modify Appendix 5 to the Radio Regulations based on the single method of the CPM report on WRC-19 agenda item 7, Issue B.</p> <p>Issue C4</p> <p>Draft Inter-American Proposal</p> <p>Allow the submission of a single notice for both the entry in the Appendix 30 List in Regions 1, 2 and 3, and Notification</p> <p>Issue C5</p> <p>Draft Inter-American Proposal</p> <p>Add instruction that the Bureau shall reflect the resubmission within 30 days of receipt on the ITU website, so as to implement the requirement for reminders during the six-month period and reduce the risk of a resubmission beyond the end 6-month period.</p> <p>Issue C7</p> <p>Draft Inter-American Proposal</p>

Agenda Item 7 Resolution 86 – Satellite Regulatory Procedures

<p>Add an additional option to obtain a coordination agreement for a specific period, in order to facilitate the notification of frequency assignments, as well as harmonize the provisions of the Appendices 30, 30A and 30B of the RR.</p> <p>Issue D</p> <p>Draft Inter-American Proposal</p> <p>Revise 9.36.1 In the case of coordination under Nos. 9.12, 9.12A and 9.13, the Bureau shall also identify the satellite networks or systems with which coordination may need to be effected. The list of administrations identified by the Bureau under Nos. 9.11 to 9.14 and 9.21, and the list of satellite networks or systems identified by the Bureau under Nos. 9.12, 9.12A and 9.13 are only for information purposes, to help administrations comply with this procedure.</p> <p>Revise 9.52C For coordination requests under Nos. 9.11 to 9.14 and 9.21, an administration not responding under No. 9.52 within the same four-month period shall be regarded as unaffected and, in the cases of Nos. 9.11 to 9.14, the provisions of Nos. 9.48 and 9.49 shall apply. Furthermore, for coordination under Nos. 9.12, 9.12A and 9.13, any satellite networks or systems identified under No. 9.36.1 but not confirmed in the response provided by the administration under No. 9.52 within the same four-month period shall be regarded as unaffected and the provisions of Nos. 9.48 and 9.49 shall also apply.</p> <p>Reasons: <i>This modification is required in order to have the list of potentially affected satellite networks or systems published in addition to the list of administrations.</i></p> <p>Issue E</p> <p>Draft Inter-American Proposal</p> <p>Agree with the method proposed by the ITU-R because the Resolution that is being proposed would be applicable to Regions 1, 2, and 3. In addition, the proposed method would address the issue that the procedure would only be used once by an administration and would be confined to the national service and coverage area; the request would be examined with a priority date; and relaxed coordination would apply to certain network categories, aimed at avoiding unnecessary coordination. In addition, a reduced coordination arc with the same values as those adopted by WRC-15 for the non-planned bands is included as part of the proposed solution to further alleviate the coordination burden for submissions made under the Resolution.</p> <p>Issue F</p> <p>Preliminary Proposal</p> <p>Provide updated protection criteria in the frequency bands of Appendix 30B of the RR that avoid unnecessary coordination, and at the same time protect existing adjudications, which would reduce the burden on administrations and facilitate the treatment of the Radiocommunication Bureau for the conversion of allotments to assignments under the aforementioned Appendix.</p> <p>Preliminary Proposal</p> <p>Modify the coordination trigger in Annex 4 of RR Appendix 30B to protect existing allotments and systems while facilitating modified allotments and new entries.</p> <p>Issue G</p> <p>Draft Inter-American Proposal</p> <p>Given that WRC-19 Agenda Item 7, Issue G is a Regions' 1 and 3 only issue, no change is proposed for Region 2. Furthermore, any changes made to the Radio Regulations under WRC-19 agenda item 7 Issue G must not impact the Region 2 Plan in Appendix 30.</p> <p>Issue H</p> <p>Draft Inter-American Proposal</p>

Agenda Item 7 Resolution 86 – Satellite Regulatory Procedures

	<p>Modifies RR Appendix 4 to allow Administrations to have enough information to identify potential interference scenarios, taking into account the flexibility that may be required for non-GSO satellites with short duration missions and satellites for scientific or experimental purposes. Also, with information related to several orbital planes and their relationship with respect to the non-GSO system; and to align Appendix 4 with the most recent revision of Recommendation UTR-S.1503</p> <p>Issue I</p> <p>Draft Inter-American Proposal</p> <p>Add notes to reduce the period between the date of publication of the advance publication information (API) and the earliest possible date of receipt for notification information and the period between the receipt of the API and its actual publication in the BR IFIC.</p> <p>Issue J</p> <p>In order to protect the services offered in Region 2, changes that are made only in Regions 1 and 3 should not modify the procedural conditions for Region 2 within the framework of the matter. Therefore, it is proposed not to implement any change (NOC) that could affect the procedures in Region 2.</p> <p>Issue K</p> <p>Draft Inter-American Proposal</p> <p>Adds one more examination under § 4.1.12 of RR Appendix 30 such that should any remaining affected networks whose assignments have been entered in the List before the submission under § 4.1.12 of RR Appendix 30, the Bureau shall further examine if the remaining corresponding assignments in the List are still considered as being affected. The network being examined will not be subject to any new requirements beyond those specified in its Part A publication.</p>
<p>RCC (2017-05-16)</p>	<p>Preliminary Position</p> <p>The RCC Administrations consider it necessary further improvements in the notification, coordination and recording procedures for frequency assignments to satellite networks in different services in order to ensure equitable access of ITU Member States to orbital and frequency resource.</p> <p><i>Issue A – Bringing into use of frequency assignments to all non-GSO systems, and consideration of a milestone-based approach for the deployment of non-GSO systems in specific frequency bands and services.</i></p> <p align="center">Bringing into use</p> <p>With regard to bringing into use of non-GSO systems, the RCC Administrations support that frequency assignment to space station of non-GSO satellite systems shall be considered as having been brought into use, when notifying administration informed the Bureau that at least one space station with the confirmed capability of transmitting or receiving, has been deployed on one of the notified orbital planes of the non-GSO satellite system, irrespective of the notified number of orbital planes and satellites per orbital plane in the system. The RCC Administrations do not support identification in the Radio Regulations a continuous period of 90 or less days of deployment of a satellite, when bringing into use frequency assignments to non-GSO system.</p> <p>Orbital tolerance elements shall take into account different types of orbits for non-GSO-systems and application of these systems.</p> <p>The procedure of the milestone-based deployment approach</p> <p>With regard to milestone-based approach to the deployment of multi-satellite non-GSO system, the RCC Administrations support adoption of new WRC-19 Resolution for fixed-satellite service (FSS) and mobile-satellite service (MSS) only in specific frequency bands (Ku-, Ka-, Q/V-bands). This Resolution shall identify the requirements for the implementation of each milestone of</p>

Agenda Item 7 Resolution 86 – Satellite Regulatory Procedures

deployment (time period and percentage of the satellites deployed for each milestone) and restrictive measures applied to systems failed to meet the milestone (appropriate reduction in number of system satellites notified in the MIFR).

The RCC Administrations consider that time period and per cent of satellites deployed for each milestone of the system deployment and duration of the transition period shall ensure the balance between the capability to implement the non-GSO satellite system and effective use of the orbital and frequency resources, in order to prevent spectrum reservation by multi-satellite systems, which do not have real capability to implement the satellite grouping with notified characteristics.

RCC Administrations consider that the procedure for the the milestone-based approach of deployment shall not be applied to frequency assignments to non-GSO satellite systems/networks used for safety of human life.

Issue B - Application of coordination arc in the Ka-band, to determine coordination requirements between the FSS and other satellite services

The RCC Administrations support introducing the coordination arc mechanism in Ka-band to identify the need in the coordination between MSS and FSS geostationary satellite networks, as well as between MSS geostationary satellite networks, while maintaining the possibility of applying RR No. 9.41 (Method B2).

Issue C – Issues for which consensus was achieved in ITU-R and a single method has been identified

Issue C1 - Discrepancy and/or inconsistency between the regulatory provisions dealing with any changes to the characteristics of an assignment.

The RCC Administrations consider that the existing discrepancy between provisions of Articles in RR Appendices 30, 30A and 30B and the terminology of RR Article 11 provisions do not lead to complications when applying the relevant provisions of the Radio Regulations.

Issue C2 – Using a part of the Appendix 30B frequency band.

The RCC Administrations support the proposal on possible notification of frequency assignments blocks with bandwidth of 250 MHz each for additional systems in Ku-band within Appendix 30B.

Agenda Item 9.1.1 Implementation of IMT at 1885-2025 MHz and 2110-2200 MHz

Agenda Item 9.1.1 Implementation of IMT at 1885-2025 MHz and 2110-2200 MHz

<p>SFCG</p>	<p>SFCG should continue to monitor the developments of this issue in WPs 4C and 5D for any potential outcomes that could degrade the use of the 2200-2290 MHz and 2025-2110 MHz bands by the space science services. It is to be noted that unwanted emissions by SRS/EESS/SOS (Earth-to-space) may in turn interfere with terrestrial IMT and satellite-based IMT (MSS) in the 1885-2025 MHz band.</p>
<p>APT (2019-08-06)</p>	<p>Preliminary Position</p> <p>APT Members recognize the ITU-R studies on possible technical and operational measures to ensure coexistence and compatibility between the terrestrial component of IMT (in the mobile service) and the satellite component of IMT (in the mobile service and the mobile-satellite service) in the frequency bands 1 980–2 010 MHz and 2 170–2 200 MHz in different countries, in accordance with Resolution 212 (Rev.WRC-15).</p> <p>With respect to the regulatory actions and associated views, while there was more supports for View 2 as contained in the CPM Report according to the input documents, however no consensus was reached on either of these two Views.</p> <p>In view of the above, no consensus was reached on any action to be taken in regard with WRC-19 agenda item 9.1 issue 9.1.1 consequently no PACP is agreed at this stage.</p>
<p>ASMG (2018-12-13)</p>	<p>No change to RR. (View 2)</p>
<p>ATU (2018-09-17)</p>	<p>Preliminary Position</p> <p>Invite ATU administrations and sub-regions to continue with consideration of this issue with a view to secure technical, operational and regulatory measures that ensure compatibility between the terrestrial and satellite components of IMT systems in the frequency bands 1885-2025 MHz and 2110-2200 MHz. In this instance, Administrations and sub-regions were invited to refer to the Draft CPM Text for details of studies conducted by the ITU-R with respect to this issue.</p> <p>Task WG1 to continue considering the issue and develop a recommendation to APM19-4.</p> <p>Pledge that ATU would work towards a harmonized position regarding use of the band.</p>
<p>CEPT (2019-05-24)</p>	<p>Preliminary Position</p> <p>CEPT supports adequate measures to ensure the compatibility and co-existence of the satellite and terrestrial components of IMT, taking into account that the bands 1980-2010 MHz and 2170-2200 MHz are prioritised for MSS (mobile satellite service) use in CEPT (see Decisions ECC/DEC/(06)09, ECC/DEC/(06)10, and European Commission Decision 2007/98/EC) while MSS and MS (mobile service) have co-primary status in the RR. There are four interference scenarios to be considered.</p>

Agenda Item 9.1.1 Implementation of IMT at 1885-2025 MHz and 2110-2200 MHz

	<p>CEPT is of the view that protection of the MSS uplinks in CEPT countries (Interference scenario A1) is not ensured by the current Radio Regulations (RR). There is currently no provision in the RR that would prevent interference from IMT base stations to IMT space stations and there is no coordination process between the administration responsible for MS and the administration responsible for MSS and no process to identify the concerned administrations. Therefore potential revisions to the RR should be developed at least for Region 1 and 3:</p> <ul style="list-style-type: none"> • limiting the e.i.r.p. of IMT base stations in the uplink band (1980-2010 MHz) <p>CEPT is of the view that potential interference in the frequency band 2170-2200 MHz from terrestrial IMT base stations to MES (MSS earth stations) (Interference scenario A2) can be regulated by the current provisions on border coordination which are contained in Article 9 and Appendix 7 of the Radio Regulations.</p> <p>CEPT is of the view that potential interference in the frequency band 1980-2010 MHz from MES to IMT systems (Interference scenario B1) can be addressed by the current provisions on of border coordination which are contained in Article 9 of the Radio Regulations. Additions to Appendix 7 are proposed to include relevant parameters for digital modulation required for the determination of coordination distance for a transmitting earth station.</p> <p>CEPT is of the view that potential interference in the frequency band 2 170-2 200 MHz from MSS satellites to IMT terrestrial systems (Interference scenario B2) can be addressed by establishing a new coordination threshold pfd level in Table 5-2 of Appendix 5, for instance – 108.8 dB(W/(m²/MHz) together with creating a new Note 11. Furthermore CEPT has the opinion that Note 3 to the existing power flux-density (pfd) coordination threshold values in Table 5-2 of Appendix 5 of the Radio Regulations for other terrestrial services contains some ambiguity regarding the protection of the terrestrial component of IMT. Therefore CEPT propose to modify Note 3.</p> <p>In summary, CEPT supports View 1 in the CPM Report.</p>
<p>CITEL (2019-04-12)</p>	<p>Inter-American Proposal</p> <p>NOC to Radio Regulations Volumes 1 and 2</p> <p>Reasons: A change to the Radio Regulations would limit the flexibility for deployments by individual countries and therefore it is not necessary to make changes in volumes 1 and 2 of the Radio Regulations.</p> <p>MOD Resolution 212 to reflect that the studies responsive to this agenda item will be complete by WRC-19 and will document technical and operational measures to promote compatibility between the terrestrial and satellite components of IMT in different countries.</p>
<p>RCC (2019-01-25)</p>	<p>Preliminary Position</p> <p>To facilitate compatibility between IMT terrestrial component (in mobile service) and IMT satellite component (in mobile-satellite service) in the frequency bands 1 980-2 010 MHz and 2 170-2 200 MHz, the RCC Administrations support adoption of relevant ITU-R Recommendations and Reports and also relevant RR provisions facilitating such compatibility.</p> <p>The RCC Administrations are of view that compatibility between IMT terrestrial component (in mobile service) and IMT satellite component (in mobile-satellite service) may be achieved through application of existing provisions of RR Article 9 and introduction of appropriate modifications to RR Appendices 5 and 70 to identify coordination thresholds between stations in mobile and mobile-satellite services in the frequency bands under consideration.</p> <p>The RCC Administrations support adoption of relevant modifications of RR Appendices 5 and 7, based on the materials of Report ITU-R M.2292.</p>

Agenda Item 9.1.4 Stations Onboard Sub-Orbital Vehicles

Agenda Item 9.1.4 Stations Onboard Sub-Orbital Vehicles

<p>SFCG</p>	<p>SFCG members will continue to monitor the developments of this issue in WP 5B for any spectrum requirements identified that could impact space science service operations.</p> <p>It is important that any regulatory changes associated with this agenda item will not adversely impact the operation of launch vehicles or sounding rockets. Launch vehicle operations during the first minutes of low orbit must not be limited beyond the current regulations.</p>
<p>APT (2019-08-06)</p>	<p>Preliminary Position</p> <ul style="list-style-type: none"> - APT Members are of the view that no changes to the Radio Regulations (RR) are required at WRC-19 - APT Members support the on going ITU-R studies through revised Resolution 763 (WRC-15) or under new Resolution - APT Members support to suppress Resolution 763
<p>ASMG (2018-12-13)</p>	<ul style="list-style-type: none"> • Support the proposed conclusion of "no change in the radio regulations"
<p>ATU (2018-09-17)</p>	<p>Preliminary Position</p> <p>Take No Change, as the African preliminary position, to the Radio Regulations at WRC-19 and consider this matter as a possible agenda item for WRC-23.</p> <p>Note that EACO supports the conclusion of No Change to the RR is proposed for WRC-19 cycle. Further operational, technical and regulatory issues may need to be addressed which require continuing studies, in particular of the status of the stations aboard sub-orbital vehicles and type of applications through the appropriate mechanism;</p> <p>Note that ITU-R is studying the impact of the future deployments of sub-orbital vehicles on radiocommunications regulations and some aspects would require further operational, technical and regulatory issues may need to be addressed, which require continuing studies, in particular of the status of the station aboard suborbital vehicles and type of applications, through the appropriate mechanism;</p> <p>Support the ongoing studies and encourage active participation in order to positively influence the outcomes of the studies.</p>
<p>CEPT 2019-05-24)</p>	<p>Preliminary Position</p> <p>CEPT recognizes that:</p> <ul style="list-style-type: none"> • the delimitation between atmosphere and outer space has not been legally defined at an international level by the competent organisations;

Agenda Item 9.1.4 Stations Onboard Sub-Orbital Vehicles

	<ul style="list-style-type: none"> • the definitions of status of the stations for suborbital flights for radiocommunication purpose by ITU-R do not prevent the competent international organisations (ICAO, UNOOSA) to potentially propose in the future, relevant definitions or other orientations concerning the kind of law (Air law, Space law, Sui generis) which could be applicable for the various types of suborbital systems concepts and projects.] • the current satellite/space launch systems including re-usable part are already operated under the Radio Regulation <p>CEPT is of the view that:</p> <ul style="list-style-type: none"> • no change to the Radio Regulations is required for WRC-19.
<p>CITEL (2019-04-12)</p>	<p>Inter-American Proposal</p> <p>SUP Resolution 763 because the studies conducted in the ITU-R study groups on this issue have been concluded; therefore, Resolution 763 is no longer necessary.</p>
<p>RCC (2019-01-25)</p>	<p>Preliminary Position</p> <p>The RCC Administrations consider that stations ensuring sub-orbital flights shall be operated within the frameworks of existing radio services and these stations shall be subject to regulatory, technical and procedural provisions currently in force for these radio services.</p> <p>The RCC Administrations consider that any modifications to the Radio Regulations provisions related to regulation of using stations on board sub-orbital vehicles at this stage are not necessary. The RCC Administrations also consider it necessary to develop additional technical and operational measures which would help to avoid harmful interference to radiocommunication services from stations ensuring sub-orbital flights when existing measures will be insufficient. The developed technical and operational measures shall be specified in the new ITU-R Recommendation and shall not impose additional constraints on the operation of stations used during spacecraft launch and delivery in orbit.</p>

Agenda Item 9.1.6 Urgent Studies for Wireless Power Transfer (WPT) for Electric Vehicles

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<p>SFCG</p>	<p>While past work on the topic of WPT for electric vehicles has focused on bands below 400 kHz, and in the 6 765-6 795 kHz band, Resolution 958 (WRC-15) does not limit the studies to those bands. SFCG should continue to monitor the developments of this issue for any spectrum requirements identified that could impact space science services operations.</p>
<p>APT (2019-08-06)</p>	<p>Preliminary Position</p> <p>APT Members are of the view that all radiocommunication services must be protected from harmful interference that may be generated by WPT-EV, both at the fundamental frequency and from unwanted emissions.</p> <p>APT Members are of the view that the Item 1) of Annex to Resolution 958 (WRC-15) should be suppressed and that the ITU-R studies on WPT-EV, including studies on unwanted emissions, should be continued under the most recent version of Question ITU-R 210/1.</p> <p>APT Members are of the view that there is no need to change the Radio Regulations at WRC-19.</p> <p>APT Members are of the view that ITU-R will need to continue to closely collaborate with standards developing organizations to ensure that appropriate frequency ranges and technical limits are incorporated into standards to protect radiocommunication services.</p>
<p>ASMG (2018-12-13)</p>	<p>There is no need for activity related to WRC-19 to amend the RR</p>
<p>ATU (2018-09-17)</p>	<p>Preliminary Position</p> <p>APM19-3 agreed to</p> <ol style="list-style-type: none"> 1. Support the ongoing sharing and compatibility studies between Wireless Power Transfer (WPT) systems and existing services. 2. Note that ongoing studies related to the impact of WPT for EV are considering the following frequency bands <ul style="list-style-type: none"> ○ 19-25kHz ○ 55-65kHz ○ 79-90kHz ○ 81.38-90kHz 3. Note that the 85kHz band is the preferred band with high probability of harmonization and is the least likely to cause interference to other services. 4. Note that WPT systems have the capability to interfere with the broadcasting service applications in the range 148.5-283.5kHz under the GE75 Broadcasting plan. 5. Urge administrations to contribute to and actively participate in the on-going studies to ensure that existing services are protected from spurious and out-of-band emissions from WPT applications, and to positively influence the outcome of the studies. 6. Note the ICAO, EBU and IARU concerns regarding the potential interference to existing radio services by WPT-EV unwanted emissions. 7. Note that WP 1B Report ITU-R SM.2303 contains the potential impact/effects of radiation from WPT systems and invited administrations to consider the information. 8. Invite administrations to study the draft CPM19-2 txt which concludes that WPT-EV operating on 55-65kHz will cause harmful interference to SFTS operating to 60kHz. Due to this

Agenda Item 9.1.6 Urgent Studies for Wireless Power Transfer (WPT) for Electric Vehicles

	it may be possible to define two separate frequency ranges below and above 60kHz to create an exclusion within the 55-65kHz range to mitigate the impact.
CEPT (2019-05-24)	<p>ECP adopted (NOC to RR Article 5, SUP Resolution 958)</p> <p>Position</p> <p>CEPT is of the view that no regulatory action to the RR will be required in order to resolve AI 9.1, issue 9.1.6.</p> <p>ITU-R Report SM.[WPT-EV.IMPACT] and Recommendations ITU-R SM.2110 and ITU-R SM.[WPT-UNWANTED], as appropriate, are considered sufficient to specify suitable frequency bands and limits on unwanted emissions for WPT-EV, along with determination of the related centre frequencies.</p>
CITEL (2019-04-12)	<p>Inter-American Proposal</p> <p><u>NOC</u> RR volumes 1 and 2</p> <p>Reasons: The existing regulatory framework in Nos. 15.12, 15.12.1, 15.13, 15.13.1, and regional and national administration’s requirements, guided by applicable ITU-R Recommendations, can be applied for WPT-EV. Therefore, no changes are necessary to the Radio Regulations. It is necessary that the studies on the wireless power transmission for electric vehicles must ensure the protection of the existing, planned, and future radiocommunication services against harmful interferences, including unwanted emissions and harmonics, important conditions to be satisfied by developing applicable ITU-R Recommendations and Reports.</p> <p>SUP Resolution 958 (WRC-15)</p>
RCC (2019-01-25)	<p>Preliminary Position</p> <p>The RCC Administrations consider that any modifications to the Radio Regulations provisions related to regulation of using wireless power transmission devices are not necessary. The RCC Administrations are in favour of harmonizing frequency bands to be used for Wireless Power Transmission (WPT) for electric vehicles, which could be implemented by the development of relevant Recommendation ITU-R.</p> <p>The RCC Administrations support the development of conditions for use of the frequency band 79-90 kHz by WPT devices, which would provide protection to stations of radiocommunication services from possible interference, and which have relevant allocations in the Radio Regulations on a primary or secondary basis.</p>

Agenda Item 9.1.8 Urgent Studies for Machine Type Communications (MTC)

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SFCG	SFCG should continue to monitor the developments of this issue in WP 5D for any spectrum requirements identified that could impact space science services operations and supports the position that no need for changes to the Radio Regulations are required. Although no specific frequency ranges are identified to exclusively provide for the enhanced services, these services may be considered to be within the definition of IMT-2020 and, as such, add to the total amount of spectrum sought under AI 1.13.
APT (2019-08-06)	<p>Preliminary Position</p> <p>APT Members support no change to the Radio Regulations as indicated in the conclusion of the CPM Report to WRC-19.</p>
ASMG (2018-12-13)	<ul style="list-style-type: none"> ○ No change to RR. And consider recommended frequency arrangements in ITU-R M.2440-0.
ATU (2018-09-17)	<p>Preliminary Position</p> <p>APM 19-3 agreed to:</p> <p>Take No Change approach as the African preliminary position.</p> <p>Note that the existing frequency arrangements for IMT as detailed in Rec. ITU-R M.1036 are sufficient to help enable a wide range of narrowband and broadband MTC applications and devices, both above and below 1 GHz, and a consequence.</p> <p>Emphasize the need for and support harmonized use of spectrum to support the implementation of narrowband and broadband MTC.</p>
CEPT (2019-05-24)	<p>ECP adopted (NOC to RR Volume 1, SUP Resolution 958)</p> <p>Position</p> <p>CEPT supports studies on the technical and operational aspects of radio networks and systems, as well as spectrum needed, including possible harmonized use of spectrum to support the implementation of narrowband and broadband machine-type communication infrastructures, in order to develop Recommendations, Reports and/or Handbooks, as appropriate. CEPT is of the view that no modifications to the Radio Regulations are required in order to resolve Agenda item 9.1 issue 9.1.8.</p> <p>CEPT supports the consideration of IMT technologies within Agenda item 9.1 issue 9.1.8 as well as the consideration of non-IMT technologies in the purview of WPs 1B and 5A related to machine-type communications.</p>

Agenda Item 9.1.8 Urgent Studies for Machine Type Communications (MTC)

<p>CITEL (2019-04-12)</p>	<p>Inter-American Proposal</p> <p>NOC Radio Regulations Volumes 1 and 2</p> <p>Reasons: Analysis of the current and future spectrum use for narrowband and broadband machine type communications (MTC), also known as machine-to-machine (M2M) or Internet of Things (IoT), concluded that there is no need to identify specific spectrum for those applications. Therefore, no change to the Radio Regulations or regulatory action is required.</p> <p>SUP ANNEX TO RESOLUTION 958 (WRC-15): Urgent studies required in preparation for the 2019 World Radiocommunication Conference, item 3.</p> <p>Reasons: Analysis of the current and future spectrum use for narrowband and broadband machine type communications (MTC), also known as machine-to-machine (M2M) or Internet of Things (IoT), concluded that there is no need to identify specific spectrum for those applications. Therefore, no change to the Radio Regulations or regulatory action is required. No changes also apply to RR Volume 3, apart from the suppression proposed to parts of Resolution 958 (WRC-15).</p>
<p>RCC (2019-01-25)</p>	<p>Preliminary Position</p> <p>The RCC Administrations consider that any modifications to the Radio Regulations provisions related to regulation of using narrowband and broadband machine-type communication applications are not necessary.</p> <p>The RCC Administrations support the development of ITU-R Recommendations, Reports and/or Handbooks on technical and operational aspects of using different radio networks and systems, as well as on spectrum needed and experience in spectrum use, to support the implementation of narrowband and broadband machine-type communication infrastructures.</p>

Agenda Item 9.1.9 FSS (↑) Studies at 51.4-52.4 GHz

Agenda Item 9.1.9 FSS (↑) Studies at 51.4-52.4 GHz

<p>SFCG</p>	<p>The SFCG objective is to ensure that any allocation in the band 51.4-52.4 GHz will not adversely impact the EESS (passive) allocation in the bands 52.6-54.25 GHz and 50.2-50.4 GHz (both covered under RR No. 5.340).</p> <p>SFCG does not support an allocation until out of band sharing studies have been completed that show the EESS (passive) is not adversely affected and any required revision to Resolution 750 (rev. WRC 15) is agreed.</p>
<p>APT (2019-08-06)</p>	<p>Preliminary Position</p> <p>APT Members support a new primary allocation to the fixed-satellite service (Earth-to-space) in the frequency band 51.4-52.4 GHz limited to FSS gateway links for geostationary orbit use subject to regulatory provisions to ensure protection of currently allocated services in the same frequency band and in adjacent frequency bands.</p>
<p>ASMG (2018-12-13)</p>	<ul style="list-style-type: none"> ○ Support allocation of the frequency band 51.4-52.4 GHz to the fixed-satellite service (Earth-to-space)
<p>ATU (2018-09-17)</p>	<p>Preliminary Position</p> <p>APM19-3 agreed to:</p> <ol style="list-style-type: none"> 1. Support an allocation of the frequency band 51.4-52.4 GHz to the fixed-satellite service (Earth to space), limited to FSS gateway links for geostationary orbit use while protecting currently allocated services in the same frequency band and in adjacent bands as proposed in the draft CPM text. 2. Support studies on evaluation of additional spectrum needs for development of FSS in accordance with resolves to invite ITU-R 1 of Resolution 162 (WRC 15). 3. Support sharing and compatibility studies with existing services for the consideration of a new primary allocation to the FSS in the frequency band 51.4-52.4 GHz (Earth-to-space) limited to FSS feeder links for geostationary orbit use. 4. Note that ECOWAS is yet to formulate a position on this agenda item.
<p>CEPT (2019-05-24)</p>	<p>Preliminary Position</p> <p>Based on the results of studies on additional spectrum needs for development of the fixed-satellite service and on the sharing and compatibility studies conducted in accordance with Resolution 162 (WRC-15), CEPT supports the additional allocation of 1 GHz spectrum in 51.4-52.4 GHz band for the GSO FSS (Earth-to-space) gateways.</p> <p>To ensure the protection of the EESS (passive) operating in the band 52.6-54.25 GHz, CEPT is proposing an unwanted emission limit of -37 dBW/100MHz associated to a maximum elevation angle of 75° for FSS earth stations that would operate in the 51.4 - 52.4 GHz band. For elevation angles equal or higher than 75° the proposed unwanted emission limit is -52 dBW/100MHz. This assumes a 3 dB apportionment of the EESS (passive) protection criterion to take into account the aggregate interference from all the active services allocated in the 51.4-52.4 GHz band.</p>

Agenda Item 9.1.9 FSS (↑) Studies at 51.4-52.4 GHz

	<p>Regarding the protection of future GSO EESS (passive) sensors, CEPT supports additional unwanted emission limits depending on the orbital separation between GSO FSS and GSO EESS (passive) space stations, ranging from -84 dBW/100 MHz to -34.2 dBW/100 MHz.</p> <p>FSS earth stations shall operate with a minimum antenna diameter of [4.5] m.</p>
<p>CITEL (2019-04-12)</p>	<p>Draft Inter-American Proposal</p> <p>MOD Resolution 750 to limit the unwanted emissions from the FSS Earth stations falling in the frequency band 52.6-54.25 GHz so as to protect the EESS (passive) according Preliminary View of USA</p> <p>NOC to the table of frequencies for the frequency band 51.4-52.4 GHz (Earth-to-space), because the ITU-R studies have shown that coexistence between the fixed-satellite service (FSS) Earth-to-space and the incumbent active services can be achieved, but any assignment must ensure the protection of passive services.</p>
<p>RCC (2019-01-25)</p>	<p>Preliminary Position</p> <p>The RCC Administrations pursuant to the results of studies of additional spectrum needs for the development of the fixed-satellite service and the sharing and compatibility studies carried out by ITU-R under Resolution 162 (WRC-15) do not oppose the new allocation of the frequency band 51.4-52.4 GHz on the primary basis to the GSO FSS (Earth-to-space), limited to gateway earth stations using a minimum antenna diameter of 4.5 m, provided the mandatory protection is granted to EESS (passive) – Example 1 in draft CPM Report.</p> <p>The RCC Administrations consider that the technical conditions and regulatory provisions for use of the new allocation to the FSS (Earth-to-space) in the 51.4-52.4 GHz band, limited to communication links for gateway earth stations in GSO FSS satellite networks, shall ensure protection of existing services and systems in the considered and adjacent frequency bands and development of possible related regulatory measures, including revision of Resolution 750 (Rev. WRC-15), based on the relevant EESS (passive) protection criteria in the frequency band 52.6-54.25 GHz.</p> <p>The RCC Administrations consider that the permissible aggregate out-of-band interference level from all active services, stated in Recommendation ITU-R RS.2017, should be distributed between the active services which could be the potential interferers to EESS (passive) sensors in the frequency band 52.6-54.25 GHz, including taking into account the potential impact of IMT systems' second harmonic, considered under WRC-19 agenda item 1.13</p>

Agenda Item 10 Future Conference Agenda Items

Agenda Item 10 - Future Conference Agenda Items

<p>SFCG</p>	<p><i>General principles</i></p> <p>It is very important to ensure that before any new agenda item is agreed at WRC-19, the following elements are already available:</p> <ol style="list-style-type: none"> 1. Clear demonstration and quantification of the spectrum requirements. 2. Technical and operational parameters of the new systems for which modification of the RR is proposed. 3. Identification of the exact bands to be considered for regulatory changes. 4. Preliminary studies on the feasibility of sharing in these bands. <p>Taking into account Resolution 804 (rev. WRC-12), SFCG is of the view that adherence to these principles should be made conditional for adoption of any new WRC agenda item. It should be noted that application of these principles by the space sciences community is demonstrated in the WRC-23 preliminary agenda items 2.2 and 2.3 discussed below.</p> <p>SFCG also supports the inclusion of the following item on the WRC-23 agenda:</p> <p>Agenda Item X.X1 to consider a mechanism in RR Appendix 10 to improve the reporting of interference to passive sensors in accordance with Resolution YYY (WRC-19).</p> <p>The SFCG supports studies examining the possibility of establishing a mechanism in Appendix 10 to report harmful interference to EESS (passive) sensors.</p>
<p>APT (2019-08-06)</p>	<p>Preliminary Position</p> <p>APT Members are of the view that the volume of the agenda of a WRC and the workload of the preparatory work needed to be kept at a manageable level and that issues that can be resolved under the standing agenda items of WRCs or through the regular activities of ITU-R should not be converted into separate agenda items of WRCs.</p> <p>WRC standing agenda item 7 (Satellite procedures)</p> <p>APT Members are of the view that it is required to develop a course of action such as establishment of a deadline to identify and study issues under WRC standing agenda item 7. Therefore it is proposed that the identified issues under this agenda item should be studied by ITU-R before the second session of the CPM and required regulatory examples be included into the draft CPM Report. The Conference should consider under WRC agenda item 7 those issues which have been studied by ITU-R and included in the CPM Report.</p> <p>In view of the above, APT Members propose modifications to Resolution 86 (Rev. WRC-07) to satisfy the matter.</p> <p>WRC standing agenda item 9.1</p> <p>APT Members are of the view that issues which are identified by WRC resolutions to be studied by ITU-R, the results of which are to be included in the Report of the Director of the Radiocommunication Bureau to the Conference, should not propose any changes to the Radio Regulations. Those issues that may lead to a modification to the Radio Regulations should not be included in the list of issues under agenda item 9.1. Instead, they should be considered as a regular WRC agenda item, if agreed by the Conference.</p> <p>WRC standing agenda item 9.2</p> <p>APT Members are of the view that standing WRC agenda item 9.2 is strictly limited to the Report of the Director on any difficulties or inconsistencies encountered in the application of the Radio Regulations and the comments from administrations. The difficulties or inconsistencies encountered by administrations in the application of the Radio Regulations should be sent to the</p>

Agenda Item 10 Future Conference Agenda Items

	<p>Radiocommunication Bureau for appropriate action, and should not be considered by the Conference under this standing WRC agenda item.</p> <p>Availability of proposed items for inclusion in the agenda of future WRC under WRCs standing Agenda Item 10</p> <p>APT Members are of the view that administrations and regional groups need sufficient time to examine the proposed items for inclusion in the agenda of future WRC to prepare their views and proposals to the Conference.</p> <p>One option to resolve the above mentioned difficulty could be to modify Resolution 804 (Rev. WRC-12) and encourage administrations and regional groups to submit their proposals under WRC standing agenda item 10 to the second session of the CPM and invite the CPM to include these proposals in its Report to the Conference. This may also need to modify Resolution ITU-R-2.</p> <p>Preliminary WRC-23 agenda items (Resolution 810 (WRC-15))</p> <p>APT Members support the preliminary items 2.1 (modernisation of GMDSS).</p> <p>APT Members could support the preliminary items 2.2 (spaceborne radar sounders in 45 MHz), 2.3 (space weather sensors) and 2.5 (review of 470-960 MHz in Region 1), and object to preliminary item 2.4 as included in Resolution 810 (WRC-15) as WRC-23 agenda items.</p> <p>APT Members support the following items to be included in the agendas of WRC-23:</p> <ul style="list-style-type: none"> - Studies on frequency-related matters for identification of International Mobile Telecommunications in the frequency range of 7 025-7 125 MHz, or part thereof, for the future development of International Mobile Telecommunications for 2020 and beyond. - to consider identification of certain frequency bands below 2.7 GHz identified for IMT for use by high altitude platform station as IMT base stations (HIBS), and whether changes are needed to the set of existing bands identified for use by HIBS. <p>APT Members recognize that India is facing the issue of interference to MSS from the terrestrial IMT systems in the 2 655-2 690 MHz frequency band.</p> <p>APT Members support the inclusion of the following items in the agendas of WRC-23:</p> <ol style="list-style-type: none"> a) to consider improvement of efficiency in the use of the VHF maritime frequency bands 156.0125-157.4375 MHz and 160.6125-162.0375 MHz in the maritime mobile service. b) to consider an AMS(R)S allocation for both the uplink and downlink of aeronautical VHF applications in the frequency band 117.975 – 137 MHz, while ensuring that any harmful interference is not caused or any additional constraints are not placed on incumbent services in the same and adjacent bands, especially the AM(R)S (117.975 – 137 MHz) and the ARNS (108 – 117.975 MHz). c) to consider that further operational, technical and regulatory issues may need to be addressed, which require continuing studies, on the status of the station aboard suborbital vehicles and type of applications, and on the potential interference to be considered with regards to radiocommunication systems operating on suborbital vehicles.
<p>ASMG (2018-12-13)</p>	<p>Preliminary Position</p> <p>ASMG Position:</p> <ul style="list-style-type: none"> o ASMG administrations are invited to study this matter to discuss it further in the next ASMG meeting based on proposals received at ASMG-22meeting.

Agenda Item 10 Future Conference Agenda Items

<p>ATU (2018-09-17)</p>	<p>Preliminary Position</p> <p><i>APM19-3 recommends ATU member states to:</i></p> <ol style="list-style-type: none"> 1. Actively consider possible issues for discussion under this agenda item with a view to resolving any possible arising issues at an early stage: doing so would avoid the past experience whereby AI 10 issues are raised during the concluding stages of WRC thereby presenting significant challenges in the thorough considerations of the issues. 2. Let WG 6 spearhead considerations of possible issues under this agenda item and advise future APMs on possible causes of action. 3. Pay extra attention to the proposed agenda on review of the use of UHF band in view of the fact that majority of African countries plan to extensively use the 470 – 694MHz band for broadcasting. Also, in view of the fact DTT broadcasting remains a key service in the majority of the African countries, hence the preservation of this band for unconstrained use of the DTT services.
<p>CEPT (2019-05-24)</p>	<p>CEPT supports the inclusion of the preliminary Agenda items 2.1, 2.2, 2.3 and 2.5, as contained in Resolution 810 (WRC-15) and the corresponding Resolutions for the Agenda of WRC-23.</p> <p>CEPT is further considering the preliminary Agenda item 2.4 as well as proposals for new Agenda items.</p> <p>CEPT is of the view that agenda item 9.1, shall not include issues that are intended to be addressed through modifications to the Radio Regulations, including issues related to frequency allocation for radiocommunication services and/or changing the conditions of their use. In order to implement the above proposals, CEPT proposes to modify Resolution 804 (Rev. WRC-12).</p>
<p>CITEL (2019-04-12)</p>	<p>Draft Inter-American Proposal</p> <p>ADD Agenda Item to study the use of the frequency bands 17.7-20.2 GHz, 27.5-30.0 GHz, 37.5-42.5 GHz, 47.2-50.2 GHz, and 50.4-51.4 GHz for earth stations on mobile platforms communicating with non-geostationary space stations in the fixed-satellite service, in accordance with Resolution [NGSO ESIM].</p> <p>Draft Inter-American Proposal</p> <p>ADD Agenda Item [Space Weather] to consider studies relating to the technical and operational characteristics, spectrum requirements and appropriate radio service designations and protection for space weather sensors, including possible additional spectrum allocations and regulatory provisions, without placing additional constraints on incumbent services in accordance with Resolution.</p> <p>Reasons: To enable the adequate protection of the RF-based sensors used for detection of solar activity and the impact of solar activity on the Earth, its atmosphere and its geospace, as well to consider the development of this scientific service with additional allocations if it's necessary, while ensuring protection of incumbent services.</p> <p>Draft Inter-American Proposal</p>

Agenda Item 10 Future Conference Agenda Items

	<p>ADD Agenda Item to allow revisions to the Radio Regulations, to provide regulations for radiocommunications for sub-orbital vehicles and to facilitate the safe integration of sub-orbital vehicles into the existing air traffic management system.</p> <p>Preliminary Proposal</p> <p>SUP Resolution 810, Preliminary agenda for the 2023 World Radiocommunication Conference, is no longer needed, and proposes a new Resolution with the Agenda for the 2023 World Radiocommunication Conference.</p> <p>Preliminary Proposal</p> <p>ADD Agenda Item to consider a new primary allocation to the fixed satellite service in the 17.3-17.7 GHz band in Region 2, while protecting existing primary services in the band, so as To allow a more efficient use of the 17.3.17.7 GHz band for satellite services.</p> <p>Preliminary Proposal</p> <p>ADD Agenda Item to develop regulatory provision for non-geostationary satellite systems in the fixed-satellite service in the frequency bands 71-76 GHz (space-to-Earth) and 81-86 GHz (Earth-to-space), limited to gateway links only, and consider a possible new allocation to the fixed-satellite service (Earth-to-space) in the 71-76 GHz band limited to only gateway Earth stations, based on studies of technical and operational issues in accordance with Resolution.</p> <p>Preliminary Proposal</p> <p>SUP proposed agenda item 2.4 on FSS “reverse band” operation in the frequency band 37.5-39.5 GHz, because Resolution 161 (WRC-15) is being suppressed given the extensive use of this frequency band by fixed service stations globally, the consideration of this band under WRC-19 Agenda Item 1.13 for IMT, and the need to ensure passive service protection in the 36-37 GHz band.</p> <p>Preliminary Proposal</p> <p>ADD Agenda Item to study the technical and regulatory provisions for non-geostationary systems in the fixed satellite service operating in the frequency band 18.6-18.8 GHz with an orbit whose apogee is less than 20,000 km.</p>
<p>RCC (2019-01-25)</p>	<p>Preliminary Position</p> <p>The RCC Administrations consider it reasonable to include in the WRC-23 agenda the item on upgrading the allocation of the frequency band 14.8-15.35 GHz for the SRS.</p> <p>The RCC Administrations are in favour of the improvement WRC-23 standing agenda items 7, 9.1 and 9.2 activities according to principles of the document entitled "Proposals towards drawing up issues under some World Radiocommunication Conferences agenda items", see Annex 1.3</p>

WRC-23 Draft Agenda Item 2.2 EESS (Active) Around 45 MHz

WRC-23 Draft Agenda Item 2.2 EESS (Active) Around 45 MHz

SFCG	The SFCG supports studies examining the compatibility of the proposed EESS (active) operations with the incumbents. SFCG supports inclusion of this agenda item in the WRC-23 agenda.
Preliminary Positions and Proposals	
APT (2019-08-06)	APT Members could support the preliminary items 2.2 (spaceborne radar sounders in 45 MHz), 2.3 (space weather sensors) and 2.5 (review of 470-960 MHz in Region 1), and object to preliminary item 2.4 as included in Resolution 810 (WRC-15) as WRC-23 agenda items.
ASMG (2017-12-13)	No Preliminary view yet.
ATU (2017-05-16)	
CEPT (2019-05-24)	CEPT supports the inclusion of the preliminary Agenda item 2.2, as contained in Resolution 810 (WRC-15) and the corresponding Resolution for the Agenda of WRC-23.
CITEL (2019-04-12)	No Preliminary View on this agenda item yet.
RCC (2019-01-25)	

WRC-23 Draft Agenda Item 2.3 Spectrum requirements and radio service designations for space weather sensors

WRC-23 Draft Agenda Item 2.3 Spectrum requirements and radio service designations for space weather sensors	The SFCG supports studies under this agenda item to determine appropriate recognition and protection for space weather sensors in the Radio Regulations without placing additional constraints on incumbent services. SFCG supports inclusion of this agenda item in the WRC-23 agenda.
Preliminary Positions and Proposals	
APT (2019-08-06)	APT Members could support the preliminary items 2.2 (spaceborne radar sounders in 45 MHz), 2.3 (space weather sensors) and 2.5 (review of 470-960 MHz in Region 1), and object to preliminary item 2.4 as included in Resolution 810 (WRC-15) as WRC-23 agenda items.
ASMG (2018-12-13)	No Preliminary position yet.
ATU (2018-09-17)	No Preliminary View on this agenda item yet.
CEPT (2018-11-30)	CEPT supports the inclusion of the preliminary Agenda item 2.3, as contained in Resolution 810 (WRC-15) and the corresponding Resolution for the Agenda of WRC-23.
CITEL (2019-05-24)	<p>Proposal from B</p> <p>ADD Agenda Item</p> <p>1.[Space Weather] To consider studies relating to the technical and operational characteristics, spectrum requirements and appropriate radio service designations and protection for space weather sensors, including possible additional spectrum allocations and regulatory provisions , without placing additional constraints on incumbent services in accordance with Resolution [Space Weather] (WRC 19)</p>
RCC (2019-01-25)	

WRC-23 Draft Agenda Item 2.4 FSS (↓) in 37.5-39.5 GHz

SFCG	SFCG supports the study of this topic. However, SFCG will only support this agenda item being placed on the final WRC-23 agenda, if sufficient consideration of protection of the space science service bands has been made during the WRC-19 study cycle.
Preliminary Positions and Proposals	
APT (2019-08-06)	APT Members could support the preliminary items 2.2 (spaceborne radar sounders in 45 MHz), 2.3 (space weather sensors) and 2.5 (review of 470-960 MHz in Region 1), and object to preliminary item 2.4 as included in Resolution 810 (WRC-15) as WRC-23 agenda items.
ASMG (2018-12-13)	No position yet.
ATU (2017-09-15)	
CEPT (2018-11-30)	CEPT is further considering the preliminary Agenda item 2.4
CITEL (2019-04-12)	No preliminary position on this agenda item yet.
RCC (2019-01-25)	

RCC position on individual issues under AI 7

Annex 1.2

RCC position on individual issues under AI 7

Issue A – Bringing into use of frequency assignments to all non-GSO satellite systems, and consideration of a milestone-based deployment approach for non-GSO satellite systems in specific bands and services

With regard to bringing into use of non-GSO systems, the RCC Administrations support that frequency assignment to space station of non-GSO satellite systems shall be considered as having been brought into use, when notifying administration informed the Bureau that at least one space station with the confirmed capability of transmitting or receiving, has been deployed on one of the notified orbital planes of the non-GSO satellite system, irrespective of the notified number of orbital planes and satellites per orbital plane in the system. The RCC Administrations do not support identification in the Radio Regulations a continuous period of 90 or less days of deployment of a satellite, when bringing into use frequency assignments to non-GSO system.

With regard to milestone-based approach to the deployment of multi-satellite non-GSO system, the RCC Administrations support adoption of new WRC-19 Resolution based on the following:

- the procedure of the milestone-based approach of deployment of FSS and MSS multi-satellite non-GSO systems will be applied to specific frequency bands and establish requirements to the implementation of the milestone-based approach of deployment of such non-GSO systems as well as contain restrictive measures applied to non-GSO systems failed to meet the milestone.

- the procedure for the the milestone-based approach of deployment shall not be applied to frequency assignments to non-GSO satellite systems/networks used for safety of human life.

Issue B - Application of coordination arc in the Ka-band, to determine coordination requirements between the FSS and other satellite services

The RCC Administrations consider that introducing the coordination arc would increase the efficiency of coordination procedure.

The RCC Administrations support introducing the coordination arc mechanism in Ka-band to identify the need in the coordination between MSS and FSS geostationary satellite networks, as well as between MSS geostationary satellite networks, while maintaining the possibility of applying RR No. 9.41.

Issue C – Issues for which consensus was achieved in ITU-R

Issue C1 - Discrepancy and/or inconsistency between the regulatory provisions dealing with any changes to the characteristics of an assignment

The RCC Administrations consider that the existing discrepancy between provisions of Articles in RR Appendices 30, 30A and 30B and the terminology of RR Article 11 provisions do not lead to complications when applying the relevant provisions of the Radio Regulations.

Issue C2 – Using a part of the Appendix 30B frequency band

The RCC Administrations do not oppose to the proposal on possible notification of frequency assignments blocks with bandwidth of 250 MHz each for additional systems in Ku-band within Appendix 30B.

Issue C3 – Modification of Article 6 §§ 6.13 and 6.15 of Appendix 30B

The RCC Administrations do not oppose the modification of RR Article 6 §§ 6.13 and 6.15 of Appendix 30B taking into account the Rules of Procedure under RR § 6.6 of Appendix 30B.

Issue C4 – Submission of a single notice for inclusion into the List and Notification under Appendices 30/30B

The RCC Administrations support the proposal on submitting and processing a single notice for a new assignment to be included into the List under § 4.1.12 and recorded under §§ 5.1.1 and 5.1.2 for the networks in the RR Appendices 30/30A in Regions 1 and 3.

Issue C5 – Timely notification of an administration that the 6-month period under RR No. 11.46 has expired

RCC position on individual issues under AI 7

The RCC Administrations support the proposal that Radiocommunication Bureau should timely notify the administration on expiration of the 6-month deadline after the unfavorable finding was sent under RR No. 11.37 or No. 11.38.

Issue C6 – Submission of a single notice for an assignment to be included into the List and recorded under Appendix 30B

The RCC Administrations do not oppose to the proposal that for satellite networks in the RR Appendix 30B administrations would submit a single notice for a new assignment to be included into the List and recorded.

Issue C7 – The agreements concluded within the Appendix 30B for a specific period of time

Taking into account that existing provisions of the Radio Regulations allow Administrations to conclude agreements with the affected Administrations for a specific period of time, the RCC Administrations do not oppose the harmonization of RR Appendix 30B with § 4.1.13 and § 4.2.17 of Appendices 30/30A.

Issue D - Identification of those specific satellite networks and systems with which coordination needs to be effected under RR Nos. 9.12, 9.12A and 9.13

The RCC Administrations support the identification of specific GSO or non-GSO satellite networks which need coordination only according to RR Nos. 9.11A, 9.12, 9.12A or 9.13 as well as modification of relevant RR provisions.

Issue E - Harmonization of RR Appendix 30B with RR Appendices 30 and 30A

The RCC Administrations consider that the issue of harmonization of Appendix 30B and Appendices 30/30A should be studied based on the practical difficulties of Administrations applying existing procedures of the Appendix 30B revised by WRC-07.

The RCC Administrations consider that any modification of the Appendix 30B shall not result in the complication of the regulatory procedures and shall ensure protection of allotments in the Plan and frequency assignments in operation.

The RCC Administrations do not support the proposal to limit the period of validity of frequency assignments to satellite network to 15 years in the Appendix 30B with the possibility of single extension for another 15 years (harmonization of Appendix 30B with § 4.1.24 of Appendices 30/30A for Regions 1 and 3).

Issue F – Concerns with the lack of implementation of certain provisions of the Radio Regulations that can lead to difficulties during the process of entering an assignment into the RR Appendix 30B List

The RCC Administrations do not support the proposal to include in the RR Appendix 30B provisions relating to alignment of coverage area with service area in the conversion of national allotments with modification of characteristics, due to the complexity of practical implementation of the proposal.

Issue G - Updating the reference situation for Regions 1 and 3 networks under RR Appendices 30 and 30A when provisionally recorded assignments are converted into definitive recorded assignments

The RCC Administrations consider it unreasonable to modify No. 4.1.18 of RR Appendices 30 and 30A, where the reference situation of the victim satellite network would be updated only after the agreement is reached between the Administration notifying the network and the Administration notifying interfering new network.

Issue H – Modifications to RR Appendix 4 items to be provided for non-geostationary satellite systems not subject to the procedures of Section II of RR Article 9

The RCC Administrations support the inclusion of additional data elements of the RR Appendix 4 submitted for non-GSO systems at the advance publication stage in the frequency bands not subject to coordination.

The RCC Administrations are studying the relevance of insertion into RR Appendix 4 information about right ascension of the ascending node (RAAN) and additional data indicating belonging of non-geostationary satellite orbit to solar-synchronous orbit (for systems not subject to coordination) and also maximum communication distance for inter-satellite links in each specific non-GSO/GSO system.

Issue I – Additional RR Appendix 4 data items to be provided for non-geostationary satellite systems with multiple orbital planes

RCC position on individual issues under AI 7

The RCC Administrations are studying the relevance of insertion into RR Appendix 4 additional provisions under which information on configuration of non-GSO systems should be provided during notification of new non-GSO systems with several orbital planes.

Issue J – pfd limit in Section 1, Annex 1 of RR Appendix 30

The RCC Administrations are studying consequences of exceeding pfd limit by frequency assignments in Regions 1 and 3 (Section 1, Annex 1 of RR Appendix 30) on the territory of notifying Administration in relation to ensuring the protection of assignments in the Plan and in the List of RR Appendix 30 serving territories of other countries.

Issue K – Difficulties for Part B examinations under § 4.1.12 or 4.2.16 of RR Appendices 30 and 30A and § 6.21 c) of RR Appendix 30B

The RCC Administrations support re-examination of notices under § 6.21 c) of RR Appendix 30B at the stage of publication relating to IFIC Part B in the case when networks which were the basis for the unfavourable finding were included in the List with decreased by results of coordination characteristics.

RCC Administrations also are studying the possibility to extend the above-mentioned approach to Appendices 30/30A.

RCC proposals towards drawing up issues under some World Radiocommunication Conferences agenda items

Annex 1.3

RCC proposals towards drawing up issues under some World Radiocommunication Conferences agenda items

The RCC administrations have reviewed the established practice of drawing up World Radiocommunication Conferences agenda regarding items and some issues related to the Report of the Director of the Radiocommunication Bureau and indicated the following.

In accordance with No. 124 of the ITU Convention, the Conference (WRC) shall "consider and approve the report of the Director of the Bureau on the activities of the Sector since the last conference", and for this purpose WRC adds a standing item into a draft agenda:

9 to consider and approve the Report of the Director of the Radiocommunication Bureau, in accordance with Article 7 of the Convention:

9.1 on the activities of the Radiocommunication Sector since WRC

Issues under agenda item 9.1 are considered in accordance with WRC Resolutions which as a rule invite Radiocommunication Sector to carry out appropriate studies and also instruct the Director of the Bureau to include the results of these studies into his Report to WRC.

Analysis of the Resolutions adopted by previous WRCs shows that studies proposed by them contain assessment of additional spectrum needs for development of different services, technical and operational aspects of networks and systems in different services, which may lead to the need for the Radio Regulations modification.

Thus the issues considered in the Report of the Director of the Bureau on the activities of the Radiocommunication Sector actually become valid WRC agenda items and in some cases they do not differ in size and complexity from items directly included into the agenda of the next Conference. Moreover, CPM-19 first session decided that CPM Report on the issues of agenda item 9.1 shall not contain examples of regulatory texts.

Proposal:

Understanding that studying the issues under agenda item 9.1, which modify the Radio Regulations, has no direct relation to the Report of the Director of the Radiocommunication Bureau, such issues should not be included into agenda item 9.1 related to the Director's Report and should be considered as individual agenda items of the next WRC.

Resolution 804 (Rev. WRC-12) should be modified in order to implement the above-mentioned proposals, and these modifications could be applied during preparations to WRC-23.

9.2 - on any difficulties or inconsistencies encountered in the application of the Radio Regulations

The experience of handling the issues presented by the Director of the Bureau under agenda item 9.2 at WRC-15 showed that administrations faced significant difficulties in their consideration. Such difficulties were related to the lack of time for studying and developing an appropriate position, both at the level of administrations and at the level of regional organizations.

Taking into account that the issues identified by the Director of the Bureau regarding the difficulties and inconsistencies encountered in the application of the Radio Regulations are of practical importance for the activities of the Bureau, it is proposed that they should be considered as early as possible, i.e. immediately after such difficulties have been identified. Various mechanisms can be used for this purpose, for example, consideration in the RRB or in the relevant SGs and/or their working parties.

In addition, one of the measures that will help administrations prepare consideration of agenda item 9.2 at WRC could be timely publication of the Director's Report on the difficulties and inconsistencies encountered in the application of the Radio Regulations.

Proposals:

RCC proposals towards drawing up issues under some World Radiocommunication Conferences agenda items

1. The Director of the Bureau to submit issues on difficulties or inconsistencies encountered in the application of the Radio Regulations in the timeframe between two WRCs to the RRB and/or ITU-R SGs for consideration in accordance with their respective scopes and competences, as well as on unresolved difficulties to CPM for information;
2. To publish in all official ITU languages the Report of the Director on unresolved difficulties or inconsistencies encountered in the application of the Radio Regulations, which require consideration by the Conference, preferably five months before the opening of the Conference.

The proposals above do not require modifications to the Radio Regulations and can be proposed to the Director of BR as the RAG recommendations, and this will allow their application during preparation to WRC-19.

7 – "to consider possible changes, and other options, in response to Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference, an advance publication, coordination, notification and recording procedures for frequency assignments pertaining to satellite networks, in accordance with Resolution 86 (Rev. WRC-07), in order to facilitate rational, efficient and economical use of radio frequencies and any associated orbits, including the geostationary-satellite orbit"

Analysis of the number of issues considered at the previous WRCs under agenda item 7 shows that their number always remains high: WRC-12 has considered more than 20 issues under agenda item 7, WRC-15 – more than 14 issues, not taking into account issues raised directly at the Conference. The situation with the number of issues under WRC-19 agenda item 7 is the same, currently WP4A has already identified 17 issues and the proposals continue to arrive.

Issues are generally added according to the proposals which are based on practical experience and reflect urgent problems in the process of coordination, notification and recording of frequency assignments to satellite networks, which require relevant modifications to the Radio Regulations. Thorough consideration of each proposal and finding agreement between stakeholders are therefore required.

Indeed, a large amount of issues being considered under the standing agenda item 7 requires spending significant resources of administrations, both time-consuming and human resources. At the same time the number of issues should not pose difficulties provided the time for their consideration and study is adequate.

In this regard, it is proposed to consider the possibility of establishing a time limit within WP4A for the opening new issues under agenda item 7, for example, by limiting this period to the second session of the CPM.

Obviously, administrations have the right to submit contributions to the Conference on new issues under agenda item 7 and the Conference should consider them and make the relevant decision. However, it is often difficult for administrations to find solutions on such issues because of the lack of relevant studies and the lack of a position agreed at the national or regional levels. As for these issues, the experience of the past conferences shows that due to time limits and difficulties in resolving such issues during the Conference, these issues are discussed and further agreed upon during the next study period.

Proposal:

1. To include into consideration under WRC agenda item 7 only the issues considered by the relevant Working Party (WP4A) in the timeframe before the second session of the CPM and included into the draft CPM Report, in order to give administrations and regional organizations enough time to draw up positions and develop regulatory texts.
2. The issues directly raised at the Conference and which the Conference could not resolve should be studied in the next study period.
3. The issues for which only single Method has been proposed and agreement has been reached in the ITU-R, are proposed to be considered on the first day of the Conference during the Plenary Meeting and, if the Conference agrees, it is proposed to take decisions on them without addressing them at the level of Committees and Working Groups.

To implement the above-mentioned Proposal 1, modification of Resolution ITU-R 2-7 "Conference Preparatory Meeting" may be required and/or Resolution 86 (Rev. WRC-07) and/or Resolution 804 (Rev. WRC-12). Therefore, proposals 1 and 2 can be implemented during preparations to WRC-23.

RCC proposals towards drawing up issues under some World Radiocommunication Conferences agenda items

Proposals 2 and 3 could be implemented already at WRC-19 provided the Conference adopts the relevant decisions.

RCC proposals towards drawing up issues under some World Radiocommunication Conferences agenda items

Annex 1.4

Methods to satisfy WRC-19 agenda item 1.14 supported by RCC Administrations

Frequency bands	Affected services	Method to satisfy WRC-19 agenda item 1.14
6440–6520 MHz	FS, FSS (Earth-to-space), MS, EESS (passive), RAS (in the band 6650–6675.2 MHz noting RR footnote 5.149)	<p>Method B1: Revision of the regulatory provisions for HAPS in the fixed service (FS) with a primary status in band already designated for HAPS using the revised and/or new footnotes to Radio Regulations Article 5 and relevant revised (WRC-12 Resolution 150) and/or new WRC Resolutions.</p> <p>(Sections 1/1.14/4.1 and 1/1.14/5.1 of Draft CPM Report on WRC-19 agenda item 1.14).</p>
6560–6640 MHz	FS, FSS (Earth-to-space), MS, EESS (passive), RAS (in the band 6650–6675.2 MHz noting RR footnote 5.149)	<p>Method A or C: Revision of the regulatory provisions for HAPS in the fixed service (FS) with a primary status in bands already designated for HAPS using the revised and/or new footnotes to Radio Regulations Article 5 and relevant revised (WRC-12 Resolution 150) and/or new WRC Resolutions.</p> <p>(Sections 1/1.14/4.2 and 1/1.14/5.2 of Draft CPM Report on WRC-19 agenda item 1.14).</p>

RCC proposals towards drawing up issues under some World Radiocommunication Conferences agenda items

Frequency bands	Affected services	Method to satisfy WRC-19 agenda item 1.14
21.4–22 GHz (only for Region 2)	FS, MS, EESS (passive), EESS (passive) and RAS (in the band 22.21–22.5 GHz)	<p>Method B2: Revision of the regulatory provisions for bands already allocated for FS, add new designation (s) for HAPS in the specified band for Region 2 using new footnotes to Radio Regulations Article 5 and new WRC Resolutions.</p> <p>(Sections 1/1.14/4.3 and 1/1.14/5.3 of Draft CPM Report on WRC-19 agenda item 1.14).</p>
24.25–25.25 GHz (only for Region 2)	MS, RNS (in the band 24.25–24.65 GHz), RLSS (in the band 24.65–24.75 GHz), MSS, FSS (Earth-to-space)	<p>Method B3: Revision of the regulatory provisions, add new designation (s) for HAPS in FS in the specified band for Region 2 using new footnotes to Radio Regulations Article 5 and new WRC Resolutions.</p> <p>(Sections 1/1.14/4.4 and 1/1.14/5.4 of Draft CPM Report on WRC-19 agenda item 1.14).</p>
25.25–27.5 GHz (only for Region 2)	FS, MS, MSS, FSS (Earth-to-space) EESS/SRS (in the band 25.5–27 GHz)	<p>Method B2: Revision of the regulatory provisions for bands already allocated for FS, add new designation (s) for HAPS in the specified band for Region 2 using new footnotes to Radio Regulations Article 5 and new WRC Resolutions.</p> <p>(Sections 1/1.14/4.5 and 1/1.14/5.5 of Draft CPM Report on WRC-19 agenda item 1.14).</p>

RCC proposals towards drawing up issues under some World Radiocommunication Conferences agenda items

Frequency bands	Affected services	Method to satisfy WRC-19 agenda item 1.14
27.9–28.2 GHz	FS, FSS (Earth-to-space), MS	<p>Method B1: Revision of the regulatory provisions, add designation (s) for HAPS in FS in the specified band for Region 2 using new footnotes to Radio Regulations Article 5 and new WRC Resolutions.</p> <p>(Sections 1/1.14/4.6 and 1/1.14/5.6 of Draft CPM Report on WRC-19 agenda item 1.14).</p>
31.0–31.3 GHz	FS, MS, EESS (passive) and RAS (in the band 31.3–31.8 GHz)	<p>Method B1: Revision of the regulatory provisions for HAPS in the fixed service (FS) with a primary status in band already designated for HAPS using the revised and/or new footnotes to Radio Regulations Article 5 and relevant revised (WRC-12 Resolution 145) and/or new WRC Resolutions.</p> <p>(Sections 1/1.14/4.7 and 1/1.14/5.7 of Draft CPM Report on WRC-19 agenda item 1.14).</p>
38.0–39.5 GHz	FS, MS, FSS (space-to-Earth), SRS (in the band 37.0–38.0 GHz)	<p>Method B2: Revision of the regulatory provisions for bands already allocated for FS, add new designation (s) for HAPS in the specified band using new footnotes to Radio Regulations Article 5 and new WRC Resolutions.</p> <p>(Sections 1/1.14/4.8 and 1/1.14/5.8 of Draft CPM Report on WRC-19 agenda item 1.14).</p>

RCC proposals towards drawing up issues under some World Radiocommunication Conferences agenda items

Frequency bands	Affected services	Method to satisfy WRC-19 agenda item 1.14
47.2–47.5 GHz /47.9–48.2 GHz	FS, MS, FSS (Earth-to-space), RAS (in the band 48.94–49.04 GHz)	<p>Method B1: Revision of the regulatory provisions for HAPS in the fixed service (FS) with a primary status in band already designated for HAPS using the revised and/or new footnotes to Radio Regulations Article 5 and relevant revised (WRC-12 Resolution 122) and/or new WRC Resolutions.</p> <p>(Sections 1/1.14/4.9 and 1/1.14/5.9 of Draft CPM Report on WRC-19 agenda item 1.14).</p>