# REPORT OF THE SECOND SESSION OF THE CONFERENCE PREPARATORY MEETING FOR WRC-23
## (GENEVA, 27TH MARCH – 6TH APRIL)

The Second Session of the Conference Preparatory Meeting (CPM23-2) for the ITU World Radiocommunication Conference 2023 (WRC-23) took place in Geneva, Switzerland from 27 March to 6 April.

The Conference Preparatory Meeting (CPM) finalised and approved a consolidated Report with technical, operational, and regulatory material on the ITU-R preparatory studies and possible solutions to the WRC-23 agenda items. The CPM Report will be used in support of the work at WRC-23, which will be held in Dubai, United Arab Emirates from 20 November to 15 December 2023.

A short summary from CPM23-2 on the major outcomes relevant for the CEPT preparation to WRC-23 is provided here below.

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## AGENDA ITEM 1.1 – RR 5.441B (4 800-4 990 MHZ)

*to consider, based on the results of the ITU-R studies, possible measures to address, in the frequency band 4 800-4 990 MHz, protection of stations of the aeronautical and maritime mobile services located in international airspace and waters from other stations located within national territories, and to review the pfd criteria in No. 5.441B in accordance with Resolution 223 (Rev.WRC-19)*

Six Methods are listed in the CPM Report to satisfy this agenda item.

In particular, further to intensive debate, CPM agreed on a new Method E based on either :

a) a pfd criterion imposed on IMT stations together with the application of RR No. **9.21** or

b) only the application of RR No. **9.21**.

Countries currently listed in RR No. **5.441B** and new countries wishing to identify the band for IMT would be able to freely elect to do so by joining one of the two footnotes. The choice will depend on an administration's willingness to apply a pfd limit on IMT stations together with RR No. **9.21** or deeming the application of RR No. **9.21** sufficient instead.

CPM agreed on the consolidation of the three Methods F/G/H in a single Method F, which is based on the application of RR No. **9.21** and bilateral/multilateral coordination agreements with coastal states.

The conditions of the draft ECP to protect AMS and MMS in international airspace and waters are included in the final CPM Report (see Method D with alternative 2 and Method C) and were not challenged at the meeting.

An additional analysis based on an aggregation factor with a higher value was provided to CPM and discussed with no conclusion. Further discussion might take place on this at the next ITU-R Working Party 5D.

## AGENDA ITEM 1.2 – IMT CENTIMETER BANDS

*to consider identification of the frequency bands 3 300-3 400 MHz, 3 600-3 800 MHz, 6 425-7 025 MHz, 7 025-7 125 MHz and 10.0-10.5 GHz for International Mobile Telecommunications (IMT), including possible additional allocations to the mobile service on a primary basis, in accordance with Resolution 245 (WRC-19)*

### 3 300-3 400 MHz (Region 1 footnotes and Region 2)

A new Method by some ATU countries was added for a primary allocation to the mobile service in Region 1 and identification to IMT without any conditions. This new Method is out of scope of the agenda item and does not take into account the coexistence with the radiolocation service and the results of studies showing interference issues.

### 6 425-7 025 MHz (Region 1) and 7 025-7 125 MHz (globally)

A proposal to identify the frequency band 6 425-7 025 MHz for some countries in Region 3 for IMT by creating a new RR footnote was discussed and considered out of scope of the agenda item. Another proposal to include text within the 6 GHz Resolution to address other applications in the mobile services (e.g. WAS/RLAN) was also discussed. Relevant text on these items was added to Section 5 of the CPM Report.

The 6 GHz Resolution was amended, updating the conditions to protect FSS (E-s) with example e.i.r.p. masks.

A summary from a new FSS (E-s) study was included in Section 3.

Methods 4B and 5B were modified to propose a new Resolution without conditions or constraints on IMT deployment. This is not consistent with the CEPT approach.

### 10.0-10.5 GHz (Region 2)

Method 6A, supported by CEPT now contains reasons for the No Change which are in line with the CEPT preliminary position and the draft ECP.

Methods 6B and 6C and the associated Resolution were updated. The Resolution now contains examples to protect the incumbent services that are in line with the Annex contained in the draft CEPT Brief.

## AGENDA ITEM 1.3 – MS 3 600-3 800 MHZ

*to consider primary allocation of the band 3 600-3 800 MHz to mobile service within Region 1 and take appropriate regulatory actions, in accordance with Resolution 246 (WRC-19)*

Five proposals for changes to the Methods were received: three were agreed with minor changes, two were merged into one new Method (Method E). Five Methods A, B, C (with five alternatives), D, E (with two alternatives) were agreed to be included in the CPM Report. All five Methods propose to suppress Resolution **246 (WRC-19)**.

Nine Views were included in the CPM Report and categorised according to three main topics: IMT identification, FSS protection criteria, Methods.

The new Method E proposes IMT identification with conditions, while in the updated version of Method D the wording “except aeronautical mobile” has been deleted.

The preliminary CEPT position is based on Method C2 which was not updated at CPM.

CEPT will evaluate the five Methods to ensure that any possible change to the Radio Regulations would not lead to any modification of CEPT’s current regulatory framework based on ECC Decision (11)06, and that incumbent primary services in Region 1 in the band 3 600-3 800 MHz (FSS and FS) are protected and able to continue operations without undue constraints.

## AGENDA ITEM 1.4 – HIBS

*to consider, in accordance with Resolution **247 (WRC-19)**, the use of high-altitude platform stations as IMT base stations (HIBS) in the mobile service in certain frequency bands below 2.7 GHz already identified for IMT, on a global or regional level*

Four Sub-Methods are proposed to satisfy this agenda item for each of the frequency bands (694-960 MHz, 1 710 – 1 885 MHz, 1 885-1 980 MHz , 2 010-2 025 MHz, and 2 110 – 2 170 MHz).

In addition to the “No Change” proposal of Sub-Method 1, the CPM Report contains three other Sub-Methods which are very similar for every block of frequency ranges:

- Sub-Method 2 proposes to identify the frequency band for the use of HIBS;
- Sub-Method 3 proposes to identify the frequency band for the use of HIBS not claiming protection and additional provisions such as a requirement to notify;
- Sub-Method 4 proposes to identify HIBS on a regional basis.

CEPT supports Sub-Method 3 for the three frequency bands 694-960 MHz, 1 710-1 885 MHz and 2 500-2 690 MHz.

## AGENDA ITEM 1.5 – UHF REVIEW

*to review the spectrum use and spectrum needs of existing services in the frequency band 470-960 MHz in Region 1 and consider possible regulatory actions in the frequency band 470-694 MHz in Region 1 on the basis of the review in accordance with Resolution 235 (WRC-15)*

The meeting considered possibilities to shorten the draft CPM Report through either:

- proposed deletion of some Views, or
- proposed replacement of other Views with condensed paragraphs referencing the source material of the original Views (e.g. pointing towards the relevant parts and Annexes of the TG 6/1 Chairman's Report).

However, following discussions it was agreed to maintain the Views in the Report, and some additional supplementary Views were added to the text. Of particular note in this regard, the newly proposed text originally suggested for inclusion in Section 3.3.1 of the Report (submitted jointly by CEPT administrations, which provided a comparison of co-channel sharing situations between IMT and DTTB), was converted into a View.

A number of proposals concerning Method F were also considered, regarding a possible secondary allocation to the Mobile service within the 470 – 694 MHz band. As an outcome of discussions, 3 alternatives were agreed for inclusion in the CPM Report, including the CEPT proposed *Alternative F1*.

A further proposal to delete Method G (relating to the radioastronomy service) was considered. It was agreed, however, to maintain this Method, albeit with a different title ( "Considerations of the radioastronomy service") and some modified text.

## AGENDA ITEM 1.6 – SUB-ORBITAL VEHICLES

*to consider, in accordance with Resolution 772 (WRC-19), regulatory provisions to facilitate radiocommunications for sub-orbital vehicles*

The draft CPM Report developed in ITU-R Working Party 5B resulted in a single active Method (Method B) which proposed no change to the Table of Allocations, and the adoption of a new Resolution (with three sub-options) that defined the regulatory bounds for operation of radio stations onboard sub-orbital vehicles. A Method for No Change was also included (Method A).

CPM considered the draft Report, in addition to a number of new contributions. The result was the development of Method B, refining the draft new Resolution and identifying a further sub-option, and the addition of a new Method C, which suggests to extend studies and consider the issue again at WRC-27. The main elements of the draft CEPT position were reflected in sub-options of Method B of the CPM Report.

With the exception of the new Method C, there was wide support for a "minimal" approach to regulating sub-orbital vehicles, but differences remain in the exact implementation of this. Method C does not appear to have wide support at this stage and may be treated by WRC-23 as a back-stop in case consensus is not reached during the Conference.

## AGENDA ITEM 1.7 – AMS(R)S 137 MHZ

*to consider a new aeronautical mobile-satellite (R) service (AMS(R)S) allocation in accordance with Resolution 428 (WRC-19) for both the Earth-to-space and space-to-Earth directions of aeronautical VHF communications in all or part of the frequency band 117.975-137 MHz, while preventing any undue constraints on existing VHF systems operating in the AM(R)S, the ARNS, and in adjacent frequency bands*

The number of Methods contained in the CPM Report was increased from three to five, as two more Methods were added under the general umbrella of Method B in support of an allocation for non-geostationary systems limited to internationally standardised systems.

A short summary of the five Methods is now as follow:

- Method A: no change
- Method B1: support of an AMS(R)S allocation in 117.975-137 MHz, with the application of RR No. **9.11A** coordination procedure, modification of Appendix 5 to include a threshold for coordination with AM(R)S

and AM(OR)S, and a pfd limit of -166.6 dB(W/(m² . 14 kHz)) for the unwanted emissions above 137 MHz resulting from AMS(R)S operating in 117.975-137 MHz.

- Method B2: support of an AMS(R)S allocation in 117.975-137 MHz, with the application of RR No. **9.11A** coordination procedure except No. **9.16**, modification of Appendix 5 to include a threshold for coordination with AM(OR)S, a set of three pfd limits associated with three different percentages of time for the unwanted emissions above 137 MHz resulting from AMS(R)S operating in 117.975-137 MHz, and protection of the radioastronomy service in 150.05-153 MHz
- Method B3: support of an AMS(R)S allocation in 117.975-136.8 MHz, with the application of RR No. **9.11A** coordination procedure, modification of Appendix 5 to include a threshold for coordination with AM(OR)S, and a new Resolution providing additional elements on the AMS(R)S regulatory framework.
- Method B4: support of an AMS(R)S allocation in 117.975-136 MHz, with the application of RR No. **9.11A** coordination procedure, modification of Appendix 5 to include a threshold for coordination with AM(R)S, and a footnote indicating that stations in the AMS(R)S shall not cause harmful interference to, nor claim protection from, stations in the AM(R)S.

Although the number of Methods has increased, there are more similarities between the views expressed by contributing CEPT administrations. The way towards a future draft ECP requires a convergence on two main items: the exact extent of the future AMS(R)S allocation, and the detailed regulatory framework of this new allocation.

## AGENDA ITEM 1.8 – RESOLUTION 155

*to consider, on the basis of ITU-R studies in accordance with Resolution **171 (WRC-19)**, appropriate regulatory actions, with a view to reviewing and, if necessary, revising Resolution **155 (Rev.WRC-19)** and No. **5.484B** to accommodate the use of fixed satellite service (FSS) networks by control and non-payload communications of unmanned aircraft systems*

CPM received contributions mainly on revisions to Method B. The discussion was basically focused on the general section of the CPM Report. Two additional Methods to satisfy the agenda Item were added as Method B2 and B3. Method B3 includes proposals reflecting the draft ECP.

## AGENDA ITEM 1.9 - –APPENDIX 27

*to review Appendix **27** of the Radio Regulations and consider appropriate regulatory actions and updates based on ITU-R studies, in order to accommodate digital technologies for commercial aviation safety-of-life applications in existing HF bands allocated to the aeronautical mobile (route) service and ensure coexistence of current HF systems alongside modernized HF systems, in accordance with Resolution **429 (WRC-19)***

Two methods are considered to address this agenda item:

- Method A: No Change to the Radio Regulations;
- Method B: inclusion into RR Appendix **27** of the relevant part of the Rules of Procedure, and explicit recognition of the aggregation of single channels for wideband digital communications.

The outcome from the CPM is in line with the CEPT position. In particular, Method B, supported by CEPT, was further improved and a general support for Method B was shown.

No difficulty is expected in relation to this agenda item at WRC-23.

## AGENDA ITEM 1.10 – AMS NON-SAFETY

*to conduct studies on spectrum needs, coexistence with radiocommunication services and regulatory measures for possible new allocations for the aeronautical mobile service for the use of non-safety aeronautical mobile applications, in accordance with Resolution **430 (WRC-19)***

Agenda item 1.10 is concerned with new allocations to the AM(OR)S (non-safety applications) in the frequency bands 15.4-15.7 GHz and 22-22.21 GHz. The CEPT preliminary position is to support a new allocation in the 15.4-15.7 GHz frequency band and to consider the possibility of a new allocation in the 22-22.21 GHz frequency band.

The CPM Report contains 5 Methods:

- No Change
- Allocation in 15.4-15.7 GHz
- Allocation in 22-22.21 GHz
- Allocations in 15.4-15.7 GHz and 22-22.21 GHz
- Allocations in 15.41-15.7 GHz and 22-22.2 GHz.

The most substantial modifications applied in the finalisation of the CPM Report are the following:

- New Method E with guard bands to protect adjacent services.
- Proposals of e.i.r.p. limits for protection of RAS for Methods B, C and D.
- New footnotes recognising usage of water vapour radiometers in the frequency band 22-22.5 GHz under national arrangements.
- Proposals of pfd masks to protect the FS operating in-band.
- Proposal of pfd limits to protect EESS operations in 22.21-22.5 GHz.

## AGENDA ITEM 1.11 – GMDSS

*to consider possible regulatory actions to support the modernization of the Global Maritime Distress and Safety System and the implementation of e-navigation, in accordance with Resolution **361 (Rev.WRC-19)***

Agenda item 1.11 encompasses regulatory actions for the modernization of the GMDSS (Issue A), the implementation of e-navigation (Issue B) and the introduction of additional satellite service providers into the GMDSS (Issue C).

**Issue A (Modernisation of GMDSS)**

The CPM Report contains a single, comprehensive Method on Issue A and a single No Change Method on Issue B. Both are in line with the preliminary CEPT position.

CPM agreed on the two input contributions on Issue A, concerning the planned automatic connection system for MF and HF. A multi-country proposal from CEPT members proposed changes which are already present in the draft ECP. The remaining proposals are expected to be discussed at the next meetings in CEPT.

**Issue B (e-navigation)**

No contribution was received on Issue B.

**Issue C (Regulatory action due to the introduction of additional satellite systems into the GMDSS by IMO)**

On Issue C, the main result is a new fourth Method for this issue. Methods C2 to C4 propose to add parts of the bands 1 610.0 – 1 621.35 MHz (Earth-to-space) and 2 483.59 – 2 500.0 MHz (space-to-Earth) to Table 15-2 of RR Appendix 15, as well as provisions RR No. **33.50** and RR No. **33.53** of RR Article **33** to

accommodate the new satellite provider. The Methods differ in the amount of spectrum and the applicability of RR No. **4.10** in the uplink band. The preliminary CEPT position on this issue advocates Method C1, no change.

## AGENDA ITEM 1.12 – EESS (ACTIVE) RADAR SOUNDERS

*to conduct, and complete in time for WRC-23, studies for a possible new secondary allocation to the Earth exploration-satellite (active) service for spaceborne radar sounders within the range of frequencies around 45 MHz, taking into account the protection of incumbent services, including in adjacent bands, in accordance with Resolution **656 (Rev.WRC-19)***

The CPM Report on this agenda item was extensively updated, including the Section 3 on the results of sharing studies, with the consideration of additional studies on the sharing between spaceborne radar sounders in the 40-50 MHz band and incumbent services. In particular, a new subsection was included, which provides some elements for the determination of suitable pfd levels for spaceborne radar sounders for the protection of incumbent services.

Five Methods are described in the CPM Report. Most of the discussions focussed on Method A1 (new secondary allocation to EESS (active) in 40-50 MHz, with an associated footnote and a new WRC Resolution addressing the protection of incumbent services) and the text of the corresponding new WRC Resolution. Four options (not necessarily mutually exclusive) are included for the *resolves* part of the Resolution under Method A1.

There is general agreement in CEPT that the draft ECP should be further developed, based on Method A1, Option 3 (set of pfd levels allowing the operation of spaceborne radar sounders while providing protection to the incumbent services).

## AGENDA ITEM 1.13 – SRS 15 GHZ

*to consider a possible upgrade of the allocation of the frequency band 14.8-15.35 GHz to the space research service, in accordance with Resolution **661 (WRC-19)***

Amendments and guidelines for the CPM Report were submitted at the meeting. Discussions occurred concerning the protection of the radio astronomy service from uplink transmissions in the space research service. Further discussion was necessary to clarify the structure of the CPM Report and the representation of the various Methods proposed to satisfy the agenda item. After the applied renumbering, the current Method D is in line with the draft ECP for this agenda item.

## AGENDA ITEM 1.14 – EESS (PASSIVE) 250 GHZ

*to review and consider possible adjustments of the existing or possible new primary frequency allocations to EESS (passive) in the frequency range 231.5-252 GHz, to ensure alignment with more up-to-date remote-sensing observation requirements, in accordance with Resolution 662 (WRC-19)*

The CPM Report was revised editorially without changing the substance or the Methods to satisfy this agenda item. Method B is still the predominantly presented Method in the CPM Report. This Method is supported by CEPT and is the basis for the draft ECP. ASMG and ATU presented proposals for maintaining the Method C (No Change), but this does not imply that this will be their proposal at WRC-23.

During the discussions significant support was expressed for Method B, and no arguments were brought forward which would speak against this Method supported by CEPT.

## AGENDA ITEM 1.15 – GSO ESIM KU-BAND

*to harmonize the use of the frequency band 12.75-13.25 GHz (Earth-to-space) by earth stations on aircraft and vessels communicating with geostationary space stations in the fixed-satellite service globally, in accordance with Resolution **172 (WRC-19)***

CPM considered several contributions attempting to resolve existing open points in the draft CPM Report: status of the ESIM downlink; use of supporting assignments recorded in the MIFR with favourable finding under § **6.25** of Article **6** of the Appendix **30B**; identification of the notifying administration in different scenarios; the regulatory procedure to be followed for ESIM submissions and the required ESIM hardware and software capabilities. Additionally, the Bureau provided and introduced material regarding current assignments in the Appendix **30B** List. All the open items were discussed at length and items related to the regulatory procedure were resolved.

Additional open issues were identified:

- qualified favourable finding, or other transitional measures, in case the methodology for the BR to examine A-ESIM characteristics to ensure conformity with the pfd limits is not finalised;
- interference management system(s) and monitoring facilities (NCMC);
- the minimum distance beyond which an M-ESIM can operate without the prior agreement of any administration;
- the pfd limits on the earth surface for A-ESIM.

All open issues are reflected as Options in the CPM Report.

## AGENDA ITEM 1.16 – NGSO ESIM KA-BAND

*to study and develop technical, operational and regulatory measures, as appropriate, to facilitate the use of the frequency bands 17.7-18.6 GHz and 18.8-19.3 GHz and 19.7-20.2 GHz (space-to-Earth) and 27.5-29.1 GHz and 29.5-30 GHz (Earth-to-space) by non-GSO FSS earth stations in motion, while ensuring due protection of existing services in those frequency bands, in accordance with Resolution 173 (WRC-19)*

The CPM Report contains two Methods: Method A with No Change to the Radio Regulations and Method B, which proposes a draft Resolution to set the conditions for the operation of ESIMs communicating with non-GSO satellite systems.

Under Method B, there are several open issues that are reflected as notes, views and options in the CPM Report. Such open points are related to:

- The title of the Resolution to include or not “aeronautical and maritime” ESIMs;
- The need for a detailed description of the interference management procedures, including the identification of the notifying administration of the satellite system in case of unacceptable interference;
- The description of the monitoring facilities (NCMC) dealing with the cessation of transmission over territories where ESIM operation is not authorised;
- The details on how an affected administration could reach or contact an aircraft or vessel within its territory;
- The availability of the methodology to verify compliance of A-ESIMs with pfd limits for the protection of terrestrial services in time for WRC-23 or, in case the methodology is not available, the required transitional measures for the BR to perform the examination;
- The regular publication by the BR of those countries that authorised ESIMs operation in their territory as a means to facilitate identification of the notifying administration;
- The minimum distance from the low-water mark beyond which M-ESIMs can operate without the prior agreement of any administration;
- The protection of the EESS (passive) in the frequency band 18.6-18.8 GHz;
- The inclusion of Annex 4 of the draft Resolution containing ESIMs requirements/capabilities

## AGENDA ITEM 1.17 – INTER-SATELLITE LINKS

*to determine and carry out, on the basis of the ITU-R studies in accordance with Resolution **773 (WRC-19)**, the appropriate regulatory actions for the provision of inter-satellite links in specific frequency bands, or portions thereof, by adding an inter-satellite service allocation where appropriate*

The preliminary CEPT position is reflected in the output document of the CPM.

There are only two Methods remaining in the CPM Report: "No Change" and "Allocation only in the Ka band"; the Ku band is not considered anymore.

For the allocation, the processes to ensure the protection of incumbent services are described in five Annexes, which will be discussed in CEPT:

- Annex 1: the cone to operate the service is limited to the usual cone for LEO-LEO and LEO-MEO; the expanded cone can be considered only for LEO-GSO (when the LEO faces its GSO relay).
- Annex 2: protection of terrestrial services in the downlink direction will be ensured either with the existing mask from Article **21**, or with the new mask from Resolution **169 (WRC-19)** (supported by CEPT).
- Annex 3: protection of EESS (passive) in the adjacent band 18.6-18.8 GHz will be ensured either with the limits based on the studies by ESA (supported by CEPT), or with other limits proposed outside Europe.
- Annex 4: protection of NGSO constellations in the uplink is the most debated topic and several options for hard limits are proposed, amongst which "e.i.r.p. on-axis limited between -15 and -17.5" (possibly bandwidth related) and "altitude-based protection" (expressed by a chart or a paragraph, possibly limited in time).
- Annex 5: protection of GSO satellites in the uplink will be ensured by a step-by-step process using a pfd limit yet to be decided upon (-163 or -165 dBW/m²/40 kHz).

The allocation can be either "FSS space-to-space" or "ISS". The options for "footnote **5.A117**" include the possibility to retain RR No. "**9.11A** Coordination", if no compromise is reached on hard limits, and also the possibility to limit the use of No.**1.17** to the services "Earth exploration", "space operations" and "scientific & research".New lines in Appendix 4 on a "service area" were also proposed.

## AGENDA ITEM 1.18 – MSS DATA COLLECTION

*to consider studies relating to spectrum needs and potential new allocations to the mobile-satellite service for future development of narrowband mobile-satellite systems, in accordance with Resolution 248 (WRC-19)*

There are three Methods to satisfy WRC-23 agenda item 1.18:

- Method A: No change to the Radio Regulations and suppression of Resolution **248 (WRC-19**).
- Method B: No change to any Articles of the Radio Regulations and the Appendices thereof, except revision of Resolution **248 (WRC-19)**. An example draft Resolution was provided under Method B for information and was neither fully reviewed nor agreed. Different views were expressed as to whether this example draft Resolution was an invocation of a consequential future agenda item or not, while others viewed the consideration of such an example draft Resolution as out of the scope of WRC-23 agenda item 1.18. Additionally, it was considered that there is a need for addressing the shortcomings of the existing Resolution to support studies in determining the possibility for new primary allocations to the MSS under the existing, a modified or future Resolution, for the development of narrowband mobile-satellite systems, based on related input contributions to WRC-23.
- Method C: Primary allocation to the mobile-satellite service in the frequency band 2 010-2 025 MHz (Earth-to-space) in Region 1. This Method considers primary allocation to the mobile-satellite service (Earth-to-space) in the frequency band 2 010-2 025 MHz in Region 1 with two alternatives as follows. These alternatives consider either the MSS narrowband use or a MSS allocation; both regulatory measures are addressed either regard to Region 1 or a list of countries in Region 1 (through a footnote). Protection to

other services would be ensured applying in Region 2 the same technical and regulatory conditions as for Region 1.

## AGENDA ITEM 1.19 – FSS 17 GHZ

*to consider a new primary allocation to the fixed-satellite service in the space-to-Earth direction in the frequency band 17.3-17.7 GHz in Region 2, while protecting existing primary services in the band, in accordance with Resolution 174 (WRC-19)*

Two new Methods were included in the CPM Report.

Method B, on which the draft ECP has been developed, is now renamed as Method D. The new Method B contains several new Options proposing additional protection to the BSS Appendix **30A** in Regions 1 and 3 (pfd hard limit) and also modifications to Table **22-4B**. The new Method C limits the new FSS identification only to GSOs. The renamed Method D was slightly modified.

## AGENDA ITEM 2 – RECOMMENDATIONS INCORPORATED BY REFERENCE

*to examine the revised ITU-R Recommendations incorporated by reference in the Radio Regulations communicated by the Radiocommunication Assembly, in accordance with Resolution 28 (Rev.WRC-15), and to decide whether or not to update the corresponding references in the Radio Regulations, in accordance with the principles contained in Annex 1 to Resolution 27 (Rev.WRC-12)*

There was a short discussion about the relevant part of the Report of the Director of the BR. During the current study cycle, ITU-R Recommendation M.585-9 incorporated by reference to the Radio Regulations has been approved and published. Furthermore, Lists of RR provisions and footnotes containing references to ITU-R Recommendations as well as of WRC Resolutions containing references to ITU-R Recommendations have been developed and are part of output documents.

It is not necessary to make any changes in the existing draft ECP.

## AGENDA ITEM 4 – REVIEW OF WRC RESOLUTIONS AND RECOMMENDATIONS

*in accordance with Resolution 95 (Rev.WRC-07), to review the resolutions and recommendations of previous*

The main discussion regarded the relevant part of the Report of Director of the Bureau. Intense discussion took place on the course of action on Resolution **85 (WRC-03)** and Resolution **170 (WRC-19)**. Further discussion was related to Resolution **5 (Rev.WRC-15)**, Resolution **22 (WRC-19)**, Resolution **75 (Rev.WRC-12)**, Resolution **140 (Rev. WRC-15)**, Resolution **156 (WRC-15)**, Resolution **427 (WRC-19)** and Resolution **762 (WRC-15)**. Administrations are invited to submit proposals to WRC-23, taking into account the CPM Report.

CEPT will need to work further to establish a course of action for all the Resolutions/Recommendations. It is also necessary to develop draft proposals for those Resolutions/Recommendations for which CEPT has agreed on modifications or suppression.

**Resolution 655 (WRC-15)**

The discussion on Resolution **655 (WRC-15)** was addressed under agenda item 9.1. There is currently no compromised solution between the proposal from CEPT and the view of others. This was reflected in the CPM Report.

## AGENDA ITEM 7 – SATELLITE PROCEDURES

*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*

**Topic A - Tolerances for non-GSO orbital characteristics**

Extensive discussions took place on the Methods to satisfy this Topic, but the tolerances values were not discussed. The CPM Report still contains 4 Methods, in which Method A2 has several options as all the proposed modifications of the initial draft CPM Method A2A were merged in a new Method A2A and the old Method A2B was replaced by a new Method proposing a 2-step approach. Some modifications were also made to the draft CPM Methods A3 and A4.

**Topic B - Non-GSO BIU post-milestone procedure**

There was limited discussion on the methodology to satisfy the Topic and debates focused more on the different proposed thresholds for small non-GSO constellations with extensive support for reduced thresholds. Further work is required to define the maximum number of satellites in such small constellations. The CPM Report still contains 2 Methods. The meeting endorsed the proposed modifications in Method B2 as suggested by CEPT, except with regards to the threshold value.

**Topic C- Protection of GSO MSS from non-GSO emissions in 7/8 and 20/30 GHz**

The CPM Report still contains 3 Methods, including Method C2 with alternatives. Methods C2 and C3 show how the concept of RR No. **22.2** could be applied to GSO MSS without contradicting RR No. **9.21** in the X-band MSS.

**Topic D**

This Topic contains three sub-Topics D1 (Modifications to Appendix 1 to Annex 4 of AP **30B**), D2 (New Appendix 4 parameters for Recommendation ITU-R S.1503 updates) and D3 (BR reminders for BIU and BBIU) that together constitutes the CPM Report on Topic D with one Method each suggesting changes to satisfy the Topic.

- The CPM Report on sub-Topic D1 was approved without modifications and a single Method is included, suggesting changes.
- Changes were agreed on sub-Topic D2, with inclusion of the alpha table methodology parameters and consequential clarifications as suggested by CEPT.
- With regard to sub-Topic D3, changes to the new footnotes and modified texts were agreed in the single Method, suggesting that the Bureau initiate reminders for BIU and BBIU.

**Topic E - Improved procedures under AP 30B for new ITU member States**

A new Method E3 to replace the existing Method E3 was accepted after some discussions. The CPM Report still contains 3 Methods.

**Topic F - Excluding uplink service area in Appendix 30Afor Regions 1 & 3 and in Appendix 30B**

Modifications to Method F4 were agreed after limited discussions. The CPM Report still contains 4 Methods.

**Topic G - Resolution 770 (WRC-19) GSO protection from single entry non-GSO in Q/V bands**

Modifications to Method G3, aligned with the draft ECP, was agreed after limited discussions. The CPM Report still contains 3 Methods.

**Topic H - Enhanced protection of Appendices 30and 30Ain Region 1 and 3 and Appendix 30B**

The Topic contains two separate issues:

- H1 on implicit agreements: a third Method was included in addition to the existing 2.
- H2 on EPM tolerance degradation: the CPM Report still contains 2 Method. Additional information on why the EPM degradation should be kept at the current level was discussed and accepted.

**Topic I - Special agreements under Appendix 30B**

A minor update of the description of the Method was agreed after limited discussions. The CPM report still contains 2 Methods with the Method suggesting changes generally being considered straightforward and commonly agreed.

**Topic J - Modifications to Resolution 76 (Rev. WRC-15)**

Extensive discussions took place on the Methods to satisfy this Topic. The CPM Report still contains five Methods. Methods J2, J3 and J4 propose modifications to Resolution **76 (Rev. WRC-15)** to introduce the concept of "consultation process/meetings" among administrations with non-GSO FSS systems, so that they can agree cooperatively to reduce their aggregate epfd if there is an exceedance. There are several options within these Methods with main differences being the participation at the meetings and the triggers for starting the consultation process. Method J5 calls for further study so no finalisation would be achieved at WRC-23.

**Topic K - Modifications to Resolution 553 (Rev. WRC-15)**

A minor update was approved. The CPM Report still contains two Methods with the Method K2 suggesting changes generally being considered straightforward and commonly agreed.

## AGENDA ITEM 9.1 – CONSIDER AND APPROVE THE BR DIRECTOR´S REPORT

*to consider and approve the Report of the Director of the Radiocommunication Bureau, in accordance with Article 7 of the Convention on the activities of the Radiocommunication Sector since WRC-15*

**Topic a) – Space weather sensors**

*in accordance with Resolution 657 (Rev.WRC-19), review the results of studies relating to the technical and operational characteristics, spectrum requirements and appropriate radio service designations for space weather sensors with a view to describing appropriate recognition and protection in the Radio Regulations without placing additional constraints on incumbent services*

The discussions during CPM focused mostly on the possibility of applying regulatory changes to the Radio Regulations during WRC-23 in order to achieve appropriate recognition of space weather sensors. This resulted in editorial changes to the main body of the CPM Report, as well as the addition of the two Views C and D.

Accordingly, the CPM Report now includes three Views on how to achieve appropriate recognition of space weather sensors and one view (View C) on the issue regarding the notification of space weather stations. The CEPT position is represented in View B.

**Topic b) – Amateur-RNSS at 1 300 MHz**

*review of the amateur service and the amateur-satellite service allocations in the frequency band 1 240-1 300 MHz to determine if additional measures are required to ensure protection of the radionavigation-satellite (space-to-Earth) service operating in the same band in accordance with Resolution **774 (WRC-19)***

CPM received a proposal for modifications to Resolution **774 (WRC-19)** on the protection of EESS and RNSS space-to-space from amateur emissions. This was considered out of the scope for this agenda item. while it could be possibly considered under agenda item 10.

It was consequently agreed to provide views on this topic. One View was included from the proponent and two counter Views were added to the CPM Report.

**Topic c) – FS-IMT**

*study the use of International Mobile Telecommunication system for fixed wireless broadband in the frequency bands allocated to the fixed services on primary basis, in accordance with Resolution **175 (WRC-19)***

The draft CPM Report was updated to consolidate, as much as possible, the different views under this topic. CEPT was successful in negotiating and this is reflected in the Revised Alternative 2 and Revised Approach

2. However, difference in views remained with countries in the Arab Region who continued to support Approach 1 and Alternative 1 (i.e. to have ITU-R/WRC new/Revised Resolution to continue studies on this topic in ITU-R and to start with development of new ITU-R deliverables).

The CPM Report reflects these different views for final consideration at the Radiocommunication Assembly and/or WRC-23, as appropriate.

**Topic d) – EESS (passive) 37 GHz**

*Protection of EESS in the frequency band 36-37 GHz from non-GSO space stations (See WRC-19 Document 535, 2nd section of the Annex*

The CPM Report contains only one Method that proposes to use the value of -31 dBW/GHz to protect the passive band 36-37 GHz from FSS emission in the adjacent band.

Some discussions took place on the proposed value of 30 dB to define the satellite fuselage losses. Finally it was accepted by consensus that these losses are at least equal to 18 dB (value of the exceedance of the EESS protection criteria).

The CEPT proposal to limit the usage of the limit (-31 dBW/GHz) for satellite between 400 and 2000 km (NGSO LEO satellites only) was accepted. Some discussion took place on the proposal by CEPT to mention that WRC-23 could consider whether any action should be taken at this Conference.

## AGENDA ITEM 9.2– INCONSISTENCIES IN THE RR

*o consider and approve the Report of the Director of the Radiocommunication Bureau, in accordance with Article 7 of the Convention on any difficulties or inconsistencies encountered in the application of the Radio Regulations*

The draft Report of the Director of the Radiocommunication Bureau was provided to CPM for information. The final version of this Report is expected to become available prior to WRC-23.

## AGENDA ITEM 9.3 – DUE DILIGENCE

*to consider and approve the Report of the Director of the Radiocommunication Bureau, in accordance with Article 7 of the Convention on action in response to Resolution 80 (Rev.WRC-07)*

The ITU Radio Regulation Board provided for information to CPM their draft Report to WRC-23. This draft Report addresses issues the Board and the Bureau have faced since WRC-19. Comments are invited from administrations to finalise the Report at the next RRB meeting in June.

## AGENDA ITEM 10 – FUTURE AGENDA

*to recommend to the Council items for inclusion in the agenda for the next WRC, and items for the preliminary agenda of future conferences, in accordance with Article 7 of the Convention and Resolution 804 (Rev.WRC-19)*

The CPM23-2 meeting received several contributions on agenda item 10 only for information, commenting and proposing changes to the preliminary agenda items as included in Resolution 812 (WRC-19), as well as on ideas for totally new agenda items to be included in the agenda of WRC-27.

Links to the documents proposing the previous issues were included in Annex 1 to the CPM report. In addition, some contributions addressed possible approaches to enhance the process of developing agenda items in accordance with Resolution 804 (Rev.WRC-19) as well as the process of studies on WRC agenda items by ITU-R. These issues are addressed in Annex 1 of CPM Report.