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| Subject: | | Draft CEPT Brief on WRC-19 Agenda Item 10 | |
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| Summary: | | | |
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| Proposal: | | | |
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DRAFT CEPT BRIEF ON AGENDA ITEM 10

10 to recommend to the Council items for inclusion in the agenda for the next WRC, and to give its views on the preliminary agenda for the subsequent conference and on possible agenda items for future conferences, in accordance with Article 7 of the Convention.

# ISSUE

This Agenda Item is a standing item on the agenda of every World Radiocommunication Conference (WRC) and its purpose is to recommend items to the Council for inclusion in the agenda of the next WRC, as well as possible agenda items for future WRCs.

# Preliminary CEPT position

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.

CEPT is further considering the preliminary Agenda item 2.4 as well as proposals for new Agenda items.

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).

# Background

The preliminary agenda for the next World Radiocommunication Conference (WRC-23) is contained in the Resolution 810 (WRC-15), and in particular in resolves 2, issues 2.1 - 2.5 (see below) proposes new Agenda items. Further agenda items for WRC-23 will be mainly developed within the Regional Organisations and be proposed by the ITU member administrations for the consideration and decision of WRC-19.

The principles which give guidance to the development of the WRC agenda items are included in Annex 1 of Resolution 804 (Rev. WRC-12). These include the reference to the preparatory work in the regional groups that efforts should be made to:

* encourage regional and interregional coordination on the subjects to be considered in the preparatory process for the WRC, in accordance with Resolution 72 (Rev.WRC-07) and Resolution 80 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference, with a view to addressing potentially difficult issues well before a WRC;
* include, to the extent possible, agenda items that are prepared within regional groups, taking into account the equal right of individual administrations to submit proposals for agenda items;

The preliminary (new) agenda items for WRC-23 as contained in Resolution 810 (WRC-15):

2.1 to consider possible spectrum needs and regulatory actions to support Global Maritime Distress and Safety System (GMDSS) modernization and the implementation of e-navigation, in accordance with Resolution 361 (WRC-15);

2.2 to conduct, and complete in time for WRC-23, studies for a possible new allocation to the Earth exploration-satellite (active) service for space-borne radar sounders within the range of frequencies around 45 MHz, taking into account the protection of incumbent services, in accordance with Resolution 656 (WRC-15);

2.3 in accordance with Resolution 657 (WRC-15), to 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 providing appropriate recognition and protection in the Radio Regulations without placing additional constraints on incumbent services;

2.4 study of spectrum needs and possible new allocations to the fixed-satellite service in the frequency band 37.5-39.5 GHz (Earth-to-space), in accordance with Resolution 161 (WRC-15);

2.5 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).

## Preliminary agenda items (RES810)

### GMDSS

WRC-19 has Agenda Item 1.8 on GMDSS: "to consider possible regulatory actions to support Global Maritime Distress Safety Systems (GMDSS) modernization and to support the introduction of additional satellite systems into the GMDSS, in accordance with Resolution 359 (Rev.WRC‑15)."

The preliminary agenda item for WRC-23 related to the GMDSS Modernization refers besides the regulatory actions also the spectrum needs and the implementation of e-navigation:

“to consider possible spectrum needs and regulatory actions to support Global Maritime Distress and Safety System (GMDSS) modernization and the implementation of e-navigation, in accordance with Resolution 361 (WRC-15);”.

### Space borne radar sounders 45 MHz

Resolution 656 (WRC-15) was adopted to explore a possible allocation to the Earth exploration-satellite service (active) for spaceborne radar sounders operating in the range of frequencies around 45 MHz. The Resolution invites ITU-R to conduct studies on spectrum needs and sharing studies between the Earth exploration satellite (active) service and the radiolocation, fixed, mobile, broadcasting and space research services in the 40-50 MHz frequency range in order to support an allocation for the EESS (active) service for this operation.

The mission scientific objectives of a spaceborne radar sounder operating in the 40-50 MHz frequency band are 1) to understand the global thickness, inner structure, and the thermal stability of the Earth’s ice sheets and 2) to understand the occurrence, distribution and dynamics of the earth fossil aquifers in desertic environments.

Preliminary studies, provided in Report ITU-R RS.[VHF\_SOUNDER], were performed to assess sharing and compatibility with existing services allocated to, and adjacent to, the 40-50 MHz band, which include fixed, mobile, space research, broadcasting and radiolocation services. The sounding radar’s operating parameters and geographical limitations, coupled with the preliminary study results, show that further studies need to be conducted to determine if the sounding radar can operate to collect important subsurface data without causing harmful interference to incumbent services.

### Space weather sensors

Space weather refers to the physical processes occurring in the space environment. It is influenced by the solar wind and the interplanetary magnetic field (IMF) carried by the solar wind plasma. The solar wind and solar disturbances interact with the Earth's magnetic field and outer atmosphere in complex ways, causing strongly variable energetic particles and electric currents in the Earth’s magnetosphere, ionosphere and surface.

The effects of Space Weather can impact a number of activities, services and global infrastructure (for communication, transport, energy supplies, etc.) at the Earth’s surface, airborne, or in space. Resolution 657 (WRC-15) calls for the ITU-R to document the technical and operational characteristics of space weather sensors, and determine their appropriate radio service designations, in time for WRC-19 so that the Conference may decide on the matter of recommending to Council that this matter be included in the agenda for WRC-23.

To address the requirements established in Resolution 657 (WRC-15), the ITU-R has developed Report ITU-R RS.[Space\_Weather\_Sensors] – Technical and operational characteristics of RF‑based space weather sensors. This ITU-R Report documents the information called for by Resolution 657 (WRC-15) to support studies to be performed under a possible agenda item on space weather at WRC-23. This Report also includes an assessment of potentially applicable radio services to the space weather sensor applications.

### Fixed satellite service 37.5 - 39.5 GHz

Resolution 161 (WRC-15) resolves to invite ITU-R to conduct, and complete in time for WRC-23:

* studies considering additional spectrum needs for development of the fixed-satellite service, taking into account the frequency bands currently allocated to FSS, the technical conditions of their use and the possibility of optimizing the use of these frequency bands with a view to increasing spectrum efficiency;
* sharing and compatibility studies with existing services, on primary and secondary basis, including in adjacent bands as appropriate, to determine the suitability of new primary allocations to the FSS in the frequency band 37.5-39.5 GHz (Earth-to-space, limited to FSS feeder links only) for both GSO and non-GSO orbit use;
* studies towards possible revision of Resolution 750 (Rev.WRC-15) so that systems operating in the passive frequency band 36-37 GHz are protected,

The frequency band 37.5 - 39.5 GHz is covered also by Agenda Item 1.13 of WRC-19.

### Review of 470 - 960 MHz in region 1

Resolution 235 (WRC-15) resolves to invite ITU-R, after the 2019 World Radiocommunication Conference and in time for the 2023 World Radiocommunication Conference:

* to review the spectrum use and study the spectrum needs of existing services within the frequency band 470-960 MHz in Region 1, in particular the spectrum requirements of the broadcasting and mobile, except aeronautical mobile, services, taking into account the relevant ITU Radiocommunication Sector (ITU-R) studies, Recommendations and Reports;
* to carry out sharing and compatibility studies, as appropriate, in the frequency band 470-694 MHz in Region 1 between the broadcasting and mobile, except aeronautical mobile, services, taking into account relevant ITU-R studies, Recommendations and Reports;
* to conduct sharing and compatibility studies, as appropriate, in order to provide relevant protection of systems of other existing services.

## PROPOSALS for New Agenda items to be considered

A comprehensive information of proposed new agenda items is included in an annex to this brief. Currently this list includes:

* Use of the bands 17.7-20.2 GHz (space-to-Earth), 27.5-30.0 GHz (Earth-to-space), 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 NGSO ESIM.
* Study the technical and regulatory issues associated with a possible revision to footnote No. 5.522B regarding non-geostationary Fixed-Satellite Service satellite systems with an apogee below 20 000 km that operate in the 18.6-18.8 GHz (space-to-Earth) band.

These proposed agenda items received comments at September PTA meeting and will be reviewed at April 2019 meeting of PTA.

## view on proposals from other regional organisations

## The regulatory process at WRC-19

In conformity of the past WRCs actions, normally the resolution containing the preliminary agenda for the following conference, i.e. Resolution 810 (WRC-19), will be suppressed and the WRC-19 will approve a new resolution containing the agenda for WRC-23 for consideration by the Council.

# List of relevant documents

ITU-Documentation (Recommendations, Reports, other)

CEPT and/or ECC Documentation (Decisions, Recommendations, Reports)

EU Documentation (Directives, Decisions, Recommendations, other), if applicable

ETSI Documentation

# Actions to be taken

# Relevant information from outside CEPT

## European Union (date of proposal)

## Regional telecommunication organisations

APT (March 2018)

General Issues

* Preliminary Views: In developing new WRC Agenda items, APT Members supports the ‘Principles for establishing agendas for WRCs’ as detailed in Annex 1 to Resolution 804 (Rev.WRC-12) and encourages the use of the Template for the submission of proposals for agenda items (Annex 2 of the Resolution).
* Issues to be considered at Next APG Meeting: APT members are encouraged to consider the WRC-23 preliminary agenda items included in Resolution 810(WRC-15) and provide their views to the next APG meeting.

Standing Agenda Item 7

* Preliminary Views: APT Members are of the view that it is required to develop a course of action such as establishment of a deadline for submitting proposals under WRC standing agenda item 7. The identified issues need to 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 only those issues which have been adequately studied by ITU-R and included in the CPM Report.
* Issues to be considered at Next APG Meeting: In view of the above, APT Members are of the view that Resolution 86 (Rev. WRC-07) need to be modified. An example for this approach is provided for further consideration by the next APG meeting with a view to have an APT common proposal.

Standing Agenda Item 9.1

* Preliminary Views: APT Members are of the view that issues which are identified by WRC resolutions to be studied by ITU-R and the results of which to be included in the Report of the Director of the Radiocommunication Bureau to the future WRC 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 regular WRC agenda item, if the Conference agrees.

Standing Agenda Item 9.2

* Preliminary Views: APT Members are of the view that this standing WRC agenda item 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 Radiocommunication Bureau for appropriate action, and should not be considered by the Conference under this standing WRC agenda item.

ATU (date of proposal)

Arab Group (date of proposal)

AI 10 to be discussed at the next ASMG meeting.

CITEL (July 2018)

PRELIMINARY PROPOSALS:

Brazil proposes to include a WRC-23 agenda item that deals of the space weather sensors in accordance of the Resolution 657 (WRC-15).

Brasil proposes the suppression of Resolution 657 (WRC-15) and the development a new resolution in order to possibility complete the space weather studies with a view to present the technical basis for the work of WRC-23.

Canada proposes to consider the use of the frequency bands 17.7-20.2 GHz and 27.5-29.1 GHz and 29.5-30.0 GHz by earth stations on mobile platforms communicating with non-geostationary space stations in the fixed-satellite service, in accordance with Draft New Resolution XXX.

RCC (15 March 2018)

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.

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".

## International organisations

IARU (date of proposal)

IATA (date of proposal)

ICAO (date of proposal)

IMO (date of proposal)

NATO (date of proposal)

SFCG (date of proposal)

WMO and EUMETNET (February 2018)

WMO and EUMETNET support retention of both of the preliminary agenda items on the WRC-23 Agenda, related to EESS (active) around 45 MHz and to space weather sensors.

## Regional organisations

ESA (date of proposal)

Eurocontrol (date of proposal)

## OTHER INTERNATIONAL AND REGIONAL ORGANISATIONS

EBU (date of proposal)

GSMA (date of proposal)

CRAF (date of proposal)

ETNO (September 2018)

ETNO strongly supports to keep the preliminary agenda item on the UHF band for WRC-23 (as contained in Res. 810 (WRC-19)) to enable the discussion on a mobile allocation in the band 470-694 MHz or part thereof In Region 1.

As the identification and release of spectrum bands is a long and complex technical and regulatory process, ETNO would like to encourage stakeholders to start early with the identification of potential additional new IMT bands. This exercise should take into account the experiences from initial 5G deployments and trials. One example could be the bands below 24GHz.

ETNO supports reconsideration of a possible IMT identification in the 3.8 GHz - 24 GHz range at the WRC-23.

ETNO supports further work in the frequency range 3.8 – 24 GHz currently not covered by any 5G discussions. In particular, ETNO supports initiatives to consider mobile use especially in the band 3.8 – 4.2 GHz to extend the resources from the band below and thus to create up to 800 MHz of contiguous spectrum for high data rate services. In addition, ETNO supports studies in the 6 GHz range.

1. Proposals for new agenda items for WRC23.

The items are included as separate attachments within the embedded file.

