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| A picture containing text, clipart  Description automatically generated | ASIA-PACIFIC TELECOMMUNITY | **Document No:** |
| **The 5th Meeting of the APT Conference Preparatory****Group for WRC-23 (APG23-5)** | **APG23-5/OUT-38** |
| 20 – 25 February 2023, Busan, Republic of Korea | 25 February 2023 |

Working Party 5

**PRELIMINARY VIEWs on WRC-23 agenda item 10[[1]](#footnote-1) (Fixed, mobile and imt issues)**

**Agenda Item 10:**

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

**1. Background**

Agenda item 10 requests WRC-23 to recommend to the Council items for inclusion in the agenda for WRC-27, 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 and Resolution **804 (Rev.WRC-19)**.

WRC-19 has established the preliminary agenda for WRC-27 which includes 13 preliminary agenda items (see Resolution **812 (WRC-19)**).

Further agenda items for WRC-27 will be considered based on inputs from the APT Members.

The principles for development of agendas of WRCs are included in Annex 1 of Resolution 804 (Rev. WRC-19) that 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-19) and Resolution 80 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference, with a view to addressing potentially difficult issues well before a WRC.

The principles also encourage to 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.

List of relevant ongoing studies in AWG: Working document toward a new APT Report on current status and future plan of usage in the frequency ranges of 7.125-24 GHz and 92-300 GHz in Asia Pacific region ([AWG-30/TMP-63(Rev.1)](https://www.apt.int/sites/default/files/2022/09/AWG-30-TMP-63R1_Working_Document_toward_a_New_APT_Report_on_Current....docx)).

This document is related to following matters under WRC-23 Agenda Item 10:

1- Preliminary agenda items 2.1, 2.9 and 2.12 contained in Resolution **812 (WRC-19)**,

2- Proposal for agenda item for WRC-27: WPT (Wireless Power Transmission),

3- Proposal for agenda item for WRC-27: Allocation in 275-325 GHz,

4- Proposal for agenda item for WRC-27: IMT.

**2. Documents**

Following documents are received to the APG23-5 for WRC-23 agenda item 10:

* Input Documents APG23-5/INP-[07](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-07_Liaison_Statement_from_AWG.docx) (AWG), [21(Rev.1)](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-21Rev.1_Japan-WP5-Preliminary_View_on_WRC-23_Agenda_Item_10.docx) (J), [31](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-31_India_WP5-Identification_of_frequency_bands_for_IMT_in_portions_of_the_frequency_ranges_7.125-24_GHz_and_92-275_GHz.docx) (IND), [42](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-42_Iran-WP5-Preliminary_View_on_WRC_23_Agenda_Item_10.docx) (IRN), [62](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-62_Australia-WP5-Preliminary_View_on_WRC-23_Agenda_Item_10.docx) (AUS), [67](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-67_Rep_of_Korea-WP5-Preliminary_Views_on_WRC-23_Agenda_Items_9.1Topic_b_and_10.docx) (KOR), [69](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-69_Multicountry-WP5-Preliminary_View_on_WRC-23_Agenda_Item_10.docx) (KOR, J, VTN), [76](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-76_New_Zealand-WP5-Preliminary_Views_on_WRC-23_Agenda_Items_8_and_10.docx) (NZL) and [92 (Rev.1)](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-92Rev.1_China-WP5-Preliminary_Views_on_WRC-23_Agenda_Items_2_4_9.1Topic_b_and_10.docx) (CHN)
* Information Documents APG23-5/INF-[01](https://www.apt.int/sites/default/files/2023/01/APG23-5-INF-01_WMO_Position_on_WRC-23_Agenda.docx) (WMO, 2.1 of Res 812), [11](https://www.apt.int/sites/default/files/2023/02/APG23-5-INF-11_Brief_on_AI10.docx) (DG Co-Chairs), [24](https://www.apt.int/sites/default/files/2023/02/APG23-5-INF-24_Views_on_WRC-23_for_mobile.docx) (GSMA), [25](https://www.apt.int/sites/default/files/2023/02/APG23-5-INF-25_Preliminary_views_on_the_need_for_additional_IMT_identification_in_7-24_GHz_frequency_range_under_WRC-23_Agenda_Item_10.docx) (GSOA), [26](https://www.apt.int/sites/default/files/2023/02/APG23-5-INF-26_IMT-2030_6G_spectrum_need_analysis.docx) (GSA), [27 (Rev.1)](https://www.apt.int/sites/default/files/2023/02/APG23-5-INF-27Rev.1_The_development_of_IMT_towards_2030_and_beyond.docx) (Multi company), [28](https://www.apt.int/sites/default/files/2023/02/APG23-5-INF-28_FiRa_and_CCC_positions_on_a_proposal_for_an_IMT_Agenda_Item_10.docx) (Multi company), [38](https://www.apt.int/sites/default/files/2023/02/APG23-5-INF-38_ITU_Conference_Proposal_Interface_and_Proposal_Management_web_tools_for_CPM23-2_and_WRC-23.pdf) (BR), [39](https://www.apt.int/sites/default/files/2023/02/APG23-5-INF-39_Status_of_CEPT_preparation_for_WRC-23_and_RA-23.pdf) (CEPT, 2.1 and 2.12 of Res 812), [43](https://www.apt.int/sites/default/files/2023/02/APG23-5-INF-43_CITEL_preparation_for_WRC-23.pdf) (CITEL) and [46](https://www.apt.int/sites/default/files/2023/02/APG23-5-INF-46_Myanmar-WP5-Preliminary_Views_on_WRC-23_Agenda_Item_10.pdf) (Myanmar)

**3. Summary of discussions**

**3.1 Summary of APT Members’ views**

**3.1.1 Japan** - **Document APG23-5/INP-21(Rev.1)**

On the WRC-27 preliminary agenda items in Resolution 812 (WRC-19), Japan has the following views on the WRC-27 preliminary agenda items:

* Japan supports the preliminary agenda item 2.1.

On the WRC-27 agenda item candidates proposed at APG23-4, Japan supports the following items with modifications:

* the preliminary agenda item proposal on WPT
* the preliminary agenda item proposal on allocation of 275-325 GHz
* the preliminary agenda item proposal on identification of the frequency bands for International Mobile Telecommunications (IMT) (See a separate joint contribution from the Republic of Korea, the Socialist Republic of Viet Nam and Japan (APG23-5/INP-69))

Japan proposes an agenda item for WRC-27 to modify the RR in order to establish a status of Wireless Power Transmission (WPT) in the RR. Possible issues for such modifications of the RR are provided below for further consideration:

* to add a definition of WPT such as ‘transmission of power from a power source to an electrical load wirelessly using the electromagnetic field’ as described in Question ITU-R 210-4/1, in Recommendations ITU-R SM.2110-1, SM.2129-0 and SM.2151-0, and in the ITU Terms and Definitions ( <http://www.itu.int/ITU-R/go/terminology-database> ),
* to update the definition of the ISM applications towards clarifying the relationship between WPT and the ISM applications,
* to designate, in the Table of Frequency Allocations, frequency ranges for WPT; more specifically, to add one or more footnotes, similar to RR No. 5.138 on the ISM applications, designating the frequency ranges for WPT described in the ITU-R Recommendations mentioned above, and indicating that the use of these frequency ranges for WPT shall be subject to special authorization by the administration concerned.

Japan proposes a new agenda item for WRC-27 which considers new allocations to mobile, fixed, radio astronomy services and Earth exploration satellite services (passive) on a co-primary basis in the frequency range 275-325 GHz in the Table of Frequency Allocations of the RR with the consequential update of RR Nos. **5.138, 5.149, 5.340, 5.564A** and **5.565**. The proposal using the template in accordance with Annex 2 to Resolution **804 (Rev.WRC-19)** is provided in the Attachment.

**3.1.2 India** - **Document APG23-5/INP-31**

* Spectrum is critical and essential for future IMT development for 2030. It is therefore essential that WRC-23 consider the future need of spectrum for 2030 and beyond in a new agenda item for WRC-27.
* IMT for 2030 and beyond is envisaged to expand and support diverse usage scenarios and applications that will continue beyond the current IMT.
* Considering that a large number of frequency bands are available in this frequency range, there exists an opportunity for identification of continuous bandwidth for IMT applications.
* Accordingly, two draft resolutions are provided below for IMT in 7.125-24 GHz and IMT above 92 GHz.

**3.1.3 Iran (Islamic Republic of)** - **Document APG23-5/INP-42**

In terms of preliminary WRC-27 agenda items contained in Resolution 812 (WRC-19), the Administration of Iran (Islamic Republic of) proposes the following draft APT Views and Preliminary APT Common Proposals (PACP) for consideration by WRC-23 under Agenda Item 10 be considered at APG23-5 meeting.

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.

Further discussion is needed at the next APG meeting to develop APT Common Proposals on WRC-27 preliminary agenda items contained in Resolution **812 (WRC-19)** using the following Table. In this Table, the WRC-27 preliminary agenda items indicated with "Low Priority" and even "Medium Priority" could be postpended to WRC-31 based on the distribution of workload between future WRCs. See Attachment 1 for further information.

In terms of proposed new topics by some APT Members for inclusion in the agenda of WRC-27, APG23-4 received and discussed the following new proposed topics for inclusion in the agenda of WRC-27 and forwarded to this meeting for further consideration.

| **Proposed new topics by some APT Members for inclusion in the agenda of WRC-27** | **Responsible Group in ITU-R** | **Priority for APT and reason** | **Preliminary Views** |
| --- | --- | --- | --- |
| **WPT**to modify the RR in order to establish a status of Wireless Power Transmission (WPT) in the RR. The candidates for such modifications of the RR might include:- to designate, in the Table of Frequency Allocation, frequency ranges for WPT,- to add a definition of WPT,- to define a new radio service for WPT, if necessary, - to modify the definition of ISM application to clarify the relationship between WPT and ISM application,- to modify Nos. 15.12 and 15.13 as appropriate. |  | Low Priority | **IRN:** doesn't object to this item |
| **Primary Allocation of 275-300 GHz to MS, FS, RAS and EESS (passive)**to extend frequency ranges in the Table of Frequency Allocations according to technology developments and allocations in the frequency range 275-300 GHz for radiocommunication services to accommodate the current and future requirements for radiocommunication services.See Attachment 5 to this Document |  | Low Priority | **IRN:** doesn't object to this itemAgenda Items must be specific to a few services and allocations; frequency bands/ranges under consideration need to be limited. |
| **IMT for 2030 and beyond**to consider the possibility of the identification of additional frequency bands for IMT including additional primary allocation to MS, in particular frequency bands which have not been studied for IMT at the previous WRCs, taking into account the evolution of IMT technology and the expanding role of IMT such as to bridge the digital divide and to facilitate the digital transformation. |  |  | **IRN:** doesn't support this item.Frequency bands/ranges need to be clarified and specified. |

**3.1.4 Australia** - **Document APG23-5/INP-62**

Australia supports an agenda for WRC-27 that is consistent with Australia’s long-term objectives for spectrum management. In developing new WRC Agenda items, Australia supports the consideration of items that are of international and regional importance, which can only be effectively addressed through a WRC, and which are likely to be resolved within the available time and resources.

Australia is of the view that any future agenda item towards a potential IMT identification needs to be focused on frequency ranges that have been assessed as being feasible for study, taking into account the potential for coexistence with incumbent services. Australia would not support an APT Common Proposal for a new WRC-27 agenda item which proposes that the entire 7 – 24 GHz frequency range be in scope of that item.

**3.1.5 Republic of Korea** - **Document APG23-5/INP-67**

It is noted that ITU-R SG1 has studied WPT since 2012. Especially, under the agenda item 9.1, issue 9.1.6, WRC-19 considered the impact of WPT-EV on radiocommunications and suitable harmonized frequency ranges. As the results of the studies conducted within the ITU-R, frequency ranges for WPT-EV were identified. The result at WRC-19 was no change to the RR.

Several ITU-R Recommendations and Reports address WPT frequency guidance and impact studies. Taking into account above, it is necessary to discuss the necessity of any modifications to the Radio Regulations for WPT at WRC-27.

As a result, it is proposed that APG23-5 discuss the necessity for WPT future agenda item of WRC-27.

**3.1.6 Republic of Korea, Japan and Viet Nam (Socialist Republic of)** - **Document APG23-5/INP-69**

The Republic of Korea, Japan and Viet Nam (Socialist Republic of) propose an agenda item for WRC-27 regarding the study of the identification of additional frequency bands for IMT including additional allocation to mobile service on a primary basis. In addition, it is of the view that the new agenda item should consider the frequency bands that have not been studied for IMT at the previous WRCs, while considering the need to protect existing services and to allow for their continued development in these frequency bands. The specific frequency bands to be included in this new agenda item should be discussed further. In this regard, the Republic of Korea, Japan and Viet Nam (Socialist Republic of) will continue discussion with an aim to provide the specific frequency bands for the discussion of APG23-6. To this input contribution, Lao People's Democratic Republic is also supportive.

* + 1. **New Zealand** - **Document APG23-5/INP-76**

In terms of preliminary agenda items contained in Resolution 812 (WRC-19), New Zealand is still considering the preliminary agenda items contained in Resolution **812 (WRC-19)**.

In terms of new proposal for WRC-27 agenda item, New Zealand is still considering the new proposals for preliminary agenda items but has initial views on the following proposals:

* International Mobile Telecommunications for 2030 and beyond

New Zealand is continuing to closely follow the developments of IMT-2030 and ongoing work within ITU-R WP5D with interest. It is noted that 7.125 – 24 GHz and 92 – 275 GHz frequency bands have been initially discussed. New Zealand is of the view that any potential agenda item needs to have a narrower, more focused set of frequency bands within the 7.125 – 24 GHz and 92 – 275 GHz which are feasible for study.

* Wireless Power Transmission

At this stage New Zealand does not consider that an agenda item on wireless power transmission is necessary. Agenda Item 9.1, Issue 9.1.6 (WRC-19) considered Wireless Power Transmission for electric vehicles. The [Report of the CPM to WRC-19](https://www.itu.int/md/R15-CPM19.02-R-0001/en) stated that further work will continue within the ITU-R and no change to the Radio Regulations was required. WRC-19 did not make any changes to the Radio Regulations on this issue. It is noted that wireless power transmission has been discussed in ITU-R Working Parties 1A and 1B for a number of years and work can continue as part of the ITU-R’s regular work.

**3.1.8 China** - **Document APG23-5/INP-92(Rev.1)**

In terms of new preliminary agenda items for WRC-27, China proposes the studies on a new agenda item to consider identification of frequency bands 6 425-7 025 MHz in Region 3 for the terrestrial component of IMT. The details could be found in Attachment 5 of this document.

In terms of preliminary agenda items listed in Resolution 812 (WRC-19), China proposes to modify preliminary agenda item 2.12 of Resolution **812 (WRC-19)**, to consider removal of the limitation regarding aeronautical mobile in the frequency range 3 400-3 600 MHz for non-safety IMT applications.

In terms of the new proposals in APG23-4, China is of the view that WPT is not a radiocommunication service and the issue raised primarily related to the technical and operational issues other than regulation matter. The ITU-R studies should focus on the impact from WPT to the radiocommunication services. Regarding new allocations to mobile, fixed, radio astronomy services and Erath extrapolation satellite services (passive) on a primary basis in the frequency range 275-300 GHz, China is of the view that further discussion is needed on the necessity to setup a new agenda item.

**3.1.9 Myanmar** - **Document APG23-5/INF-46**

Based on the above justifications and reasons, Myanmar at this stage does not agree with new proposal to conduct ITU-R study regarding possible future IMT identification in the 7 – 24 GHz band for the next WRC-27 study cycle.

**3.2 Summary of issues raised during the meeting**

With regards to the item in §4.4 regarding IMT in band 6 425-7 025 MHz in Region 3, there were concerns to consider as a potential agenda item for WRC-27.

**4. APT Preliminary View(s)**

**4.1 Preliminary agenda items contained in Resolution 812 (WRC-19)**

APT Members agreed to forward WRC-27 preliminary agenda items 2.1, 2.9 and 2.12, including a modification to item 2.12, to the next APG meeting for further consideration (See [Attachment 1](#_Attachment_1) to this Document).

**4.2 New proposal for WRC-27 agenda item: Wireless Power Transmission (WPT)**

APT Members agreed to forward this topic to the next APG meeting for further consideration. (See [Attachment 2](#_Attachment_2) to this Document).

**4.3 New proposal for WRC-27 agenda item: Allocation of 275-325 GHz to MS, FS, RAS and EESS (passive) on a primary basis**

APT Members agreed to forward this topic to the next APG meeting for further consideration (See [Attachment 3](#_Attachment_3) to this Document).

**4.4 New proposal for WRC-27 agenda item: IMT**

APT Members agreed to forward this topic to the next APG meeting for further consideration (See [Attachment 4](#_Attachment_4) and [Attachment 5](#_Attachment_5) to this Document)

**5. Other View(s) from APT Members**

Some APT Members do not consider the item in §4.4 regarding IMT in band 6 425-7 025 MHz in Region 3 as a potential agenda item for WRC-27. Based on ITU-R studies under WRC-23 agenda item 1.2, it has been established that there is a potential interference to the existing services.

Some other APT Members consider there is a great potential to continue exploitation of the band 6 425-7 025 MHz through ITU-R studies for other Regions, taking into account the sharing studies under WRC-23 agenda item 1.2 showing the coexistence is feasible. Therefore, it is supported to consider this item as agenda item for WRC-27.

**6. Issues for Consideration at Next APG Meeting**

APT Members are invited to submit input contributions on this agenda item to the next APG meetings. APT Members are invited to discuss the development of potential PACP(s) for following items:

**6.1** With respect to §4.1 above (Resolution **812 (WRC-19)**), APT Members are invited to submit input contributions on preliminary agendas 2.1, 2.9 and 2.12 for WRC-27 contained in Resolution **812 (WRC-19)** addressed in §4.1 above, by using Attachment 1 to this document.

**6.2** With respect to §4.2 above (proposed agenda item on WPT), APT Members are invited to submit input contributions, by using Attachment 2 to this document.

**6.3** With respect to §4.3 above (proposed agenda item on new allocation in frequency range between 275 GHz and 325 GHz), APT Members are invited to submit input contributions, by using Attachment 3 to this document.

**6.4** With respect to §4.4 above (proposed agenda item on IMT), APT Members are invited to submit input contributions, by using Attachments 4 and 5 to this document. APT Members are also invited to submit a specific set of frequency bands. Based on the inputs, APG23-6 will further discuss to finalize the description of agenda item and its associated WRC Resolution.

**7. Views from Other Organisations**

**7.1 Regional Groups**

**7.1.1 ASMG** - **Document APG23-4/INF-21**

ASMG administrations support the principle of Resolution 812, which aims to set the agenda items for the upcoming radiocommunication conference, to provide administrations with sufficient time for to examine the topics that intended to be included in the work of the next conferences.

Urge the Arab administrations to state the topics to be included in the next conference agenda items.

**7.1.2 ATU** - **Document APG23-4/INF-39**

ATU supports, as a matter of principle, the topics/subjects which will allow for rational and efficient use of the radio frequency spectrum and consistent with ATU’s long-term objectives for spectrum management to be included in WRC-27 agenda. In addition, ATU supports the consideration of items that are of international and regional importance, which can be effectively addressed through the WRC-23, and which are likely to be resolved within the available time and resources.

**7.1.3 CEPT** - **Document APG23-5/INF-39**

CEPT is developing position on preliminary agenda items as included in Resolution **812 (WRC-19)** as well as considering new agenda items.

CEPT is currently supporting the following preliminary Agenda Items:

* 2.1 Radiolocation service 275-700 GHz. Resolution 663 (WRC-19) to be modified.
* 2.12 694-960 MHz removal of limitation of aeronautical mobile. Resolution **251 (WRC-19)** to be modified.

**7.1.4 CITEL** - **Document APG23-4/INF-ZZ**

No information is available in relation to DG10B.

**7.1.5 RCC** - **Document APG23-5/INF-45**

In terms of preliminary agenda item 2.9 of Resolution 812 (WRC-19), the RCC objects inclusion to the WRC-27 agenda item.

**7.2 International Organisations**

**7.2.1 WMO** - **Document APG23-5/INF-01**

In terms of preliminary agenda item 2.1 of Resolution **812 (WRC-19)**, WMO supports the protection of passive remote sensing systems and applications in the frequency range 231.5–700 GHz. If this preliminary agenda item is placed on the Agenda for WRC-27, any changes in support of radiolocation applications should take into account the protection of existing allocations and systems operating under RR No **5.565** and the results of WRC-23 AI 1.14. Also note is given to the fact that this range covers and is adjacent to footnote RR **5.340** frequency bands that need to be protected.

Attachment 1

**Preliminary agenda items 2.1, 2.9 and 2.12 for WRC-27 contained in Resolution 812 (WRC-19)**

**Background and summary of discussion**

There is a growing demand for affordable air to ground and ground to air connectivity, due to the rising expectation for connectivity in airplanes. Several test campaigns have demonstrated that IMT technology can respond to this type of connectivity demand. Moreover, Standards Developing Organizations (SDOs) such as 3GPP are currently standardizing functionalities to support these use cases.

The preliminary WRC-27 agenda item 2.12 will conduct technical and sharing studies, with the view to determine the possibility of removing the aeronautical mobile service exception or other suitable regulatory measures in the frequency ranges 694-960 MHz in Region 1 and 890‑942 MHz in Region 2. There is a potential to conduct similar studies for Region 3.

At APG23-5, a new proposal was proposed to modify preliminary agenda item 2.12 of Resolution **812 (WRC-19)**, to consider removal the aeronautical mobile service exception in the frequency band 3 400-3 600 MHz for non-safety IMT applications.

NOTE: Following table is forward to APG23-6 for further consideration and update.

| **Preliminary agenda for WRC-27 listed in Resolution 812 (WRC-19)** | **Responsible Group in ITU-R** *(See Addendum 1 to CA/251)* | **Priority for APT and reason** | **Preliminary Views** |
| --- | --- | --- | --- |
| 2.1 to consider, in accordance with Resolution **663 (WRC‑19)**,additional spectrum allocations to the radiolocation service on a co-primary basis in the frequency band 231.5-275 GHz and an identification for radiolocation applications in frequency bands in the frequency range 275‑700 GHz for millimetre and sub-millimetre wave imaging systems; | SG 1/SG 5 | IRN (APG23-5-INP/42): Low Priority | [Support/Objection/MOD]CHN (APG23-4-INP/44): SupportJ (APG23-5-INP/21(Rev.1)): SupportIRN (APG23-5-INP/42): Doesn’t object.NZL (APG23-5-INP/76): Under consideration |
| 2.9 to consider possible additional spectrum allocations to the mobile service in the frequency band 1 300-1 350 MHz to facilitate the future development of mobile-service applications, in accordance with Resolution **250 (WRC‑19)**; | SG 5 |  | [Support/Objection/MOD]CHN (APG23-4/INP-44): ObjectionIRN (APG23-5-INP/42): Under considerationNZL (APG23-5-INP/76): Under consideration |
| 2.12 to consider the use of existing International Mobile Telecommunications (IMT) identifications in the frequency range 694-960 MHz, by consideration of the possible removal of the limitation regarding aeronautical mobile in IMT for the use of IMT user equipment by non-safety applications, where appropriate, in accordance with Resolution **251 (WRC-19)**; | SG 5 |  | [Support/Objection/MOD]IRN (APG23-5-INP/42): Under considerationNZL (APG23-5-INP/76): Under considerationCHN (APG23-5-INP/92(Rev.1)): MOD (see an embedded file below) |

Attachment 2

**Proposals on the preliminary agenda item - WPT**

**Background and summary of discussion**

A wide variety of technologies and applications of Wireless Power Transmission (WPT), including Non-Beam WPT and Beam-WPT, are emerging, planned, or already partly put on the market. They are expected to bring great benefits to human society.

Under RR Nos. **15.12 and 15.13**, administrations are obliged to take all practicable and necessary steps to ensure that the WPT does not cause harmful interference to radiocommunication services. Currently, some administrations have established their regulations on WPT, but as the regulations and interpretations on WPT differ from country to country. Therefore, it is necessary to clarify the common recognition of WPT in ITU, which will establish a framework not to cause harmful interference to radiocommunication services, including the radio astronomy service, prior to wide deployment of WPT equipment.

Based on Resolution **958 (WRC-15)**, an urgent study on WPT for electric vehicles (EVs) was conducted by the ITU-R SG 1 in preparation for WRC-19. The Report of the CPM to WRC-19 stated that further work will continue within the ITU-R and no change to the RR was required and subsequently no change to the RR was the decision of WRC-19.

At APG23-5, Some Administrations submitted their views as follows; views that respect the results WRC-19 and do not consider to modify the RR. Other views are considering modification the RR.

In the discussion, following issues are addressed for further discussion at the next APG meeting:

Possible issues for such modifications of the RR are provided below for further consideration:

* to add a definition of WPT such as ‘transmission of power from a power source to an electrical load wirelessly using the electromagnetic field’ as described in Question ITU-R 210-4/1, in Recommendations ITU-R SM.2110-1, SM.2129-0 and SM.2151-0, and in the ITU Terms and Definitions ( <http://www.itu.int/ITU-R/go/terminology-database> ),
* to update the definition of the ISM applications towards clarifying the relationship between WPT and the ISM applications,
* to designate, in the Table of Frequency Allocations, frequency ranges for WPT; more specifically, to add one or more footnotes, similar to RR No. **5.138** on the ISM applications, designating the frequency ranges for WPT described in the ITU-R Recommendations mentioned above, and indicating that the use of these frequency ranges for WPT shall be subject to special authorization by the administration concerned.

Additional information is included in the embedded document below, using a template in accordance with Annex 2 to Resolution **804 (Rev. WRC-19)**.

NOTE: Following is forward to APG23-6 for further consideration.

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Attachment 3

**Proposals on the preliminary agenda item – Allocation in frequency range between 275 GHz and 325 GHz**

**Background and summary of discussion**

ITU-R Working Parties such as 1A, 5A, 5C, 5D, 7C and 7D have studied a number of THz spectrum issues with respect to active and passive services and published many ITU-R Reports to provide THz spectrum information to the future competent WRC agenda item. And some frequency bands in the 275-325 GHz were identified to EESS (passive), SRS (passive), RAS, FS and LMS in accordance with RR Nos. **5.565** and **5.546A**.

The applications supported by the relevant technologies are wireless links for intra-device communication (e.g., board-to-board communication), close proximity communication, wireless data centers, and backhaul/fronthaul links, which correspond to FS and MS applications. Due to the worldwide utilization of those devices in the near future, it would be required to allocate new frequency bands for the MS, FS, RAS and EESS (passive) in the frequency range 275-325 GHz with the consequential update of RR Nos. **5.138, 5.149, 5.340, 5.564A** and **5.565**.

WRC-19 adopted a new footnote No. **5.564A** to identify spectrum for land mobile service (LMS) and fixed service (FS) applications in the 275-450 GHz frequency range.

NOTE: Following is forward to APG23-6 for further consideration.

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Attachment 4

**Proposals on the preliminary agenda item – IMT for 2030 and beyond**

**Background and summary of discussion**

APT Members has considered the following proposal on WRC-27 agenda item related to IMT.

At the past WRCs, while the frequency ranges below 6 GHz and between 24.25 GHz and 86 GHz were extensively discussed for IMT, other frequency ranges were not thoroughly studied. Therefore, it would be useful to study some specific frequency bands for IMT from the frequency ranges that were not fully studied previously considering the needs for IMT to provide broadband capacity together with a certain level of coverage.

There is a gap of timing between the identification of frequency bands for IMT in the ITU Radio Regulations and the implementation and deployment of IMT systems in those bands. Therefore, timely identification of IMT spectrum in the ITU Radio Regulations is important to support the development of IMT, while considering the need to protect existing services and to allow for their continued development.

NOTE: Following is forward to APG23-6 for further consideration.

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Attachment 5

**Proposals on the preliminary agenda item – IMT (6 425-7 025 MHz in Region 3)**

**Background and summary of discussion**

APT Members has considered the following proposal on WRC-27 agenda item related to IMT.

Among all the frequency ranges, the middle frequency band is essential to fulfill the objectives of IMT to provide high data rate communications at anytime and anywhere. The adequate mid-band spectrum for IMT is important for APT countries to support further development of digital economy. The frequency band 6 425-7 125 MHz is another a potential band which also enable a good balance between capacity and coverage.

Global/regional IMT spectrum harmonization is essential for IMT economies of scale and device roaming. Since the frequency band 6 425-7 025 MHz in WRC-23 agenda item 1.2 is mainly considered by Region 1, there is a great potential for continued exploitation of this band through ITU-R studies for other Regions. The identification under the WRC framework is the most effective way to protect the incumbent services.

NOTE: Following is forward to APG23-6 for further consideration.

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1. Based on the scope of DG10B, this document deals with the relevant topics such as preliminary agenda items 2.1, 2.9 and 2.12 of Resolution 812 (WRC-19) and the proposed new items such as WPT, allocation in the frequency range 275-325 GHz and IMT matters. [↑](#footnote-ref-1)