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| **The 3rd Meeting of the APT Conference Preparatory Group for WRC-23 (APG23-3)** | **APG23-3/OUT-10** |
| 8 – 13 November 2021, Virtual/Online Meeting | 13 November 2021 |

Working Party 1

**PRELIMINARY VIEWs on WRC-23 agenda item 9.1 Topic c)**

**Agenda Item 9.1 topic c):**

*to 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)****;*

**1. Background**

Resolution **175 (WRC-19)** *resolves to invite the ITU Radiocommunication Sector* “to conduct any necessary studies on the use of IMT systems for fixed wireless broadband in the frequency bands allocated to the fixed service on primary basis, taking into account the relevant ITU-R studies, Handbooks, Recommendations and Reports”.

In accordance with the results of CPM23-1, the above studies are being conducted by ITU-R Working Parties 5A (WP 5A) and 5C (WP 5C) jointly. WP 5A is responsible for the fixed wireless access applications in the fixed service and WP 5C is responsible for all the other applications of fixed wireless systems, according to the assignment of work by Study Group 5 to its working parties.

**2. Documents**

* Input Documents
* APG23-2/[INP-18](https://www.apt.int/sites/default/files/2021/04/APG23-2-INP-18_Contibution_AI_1.1__9.1c_-_Final.docx) (THA), [INP-24](https://www.apt.int/sites/default/files/2021/04/APG23-2-INP-24_AUS_contribution_for_WP1_Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.3_1.4_1.5_9.1Topic_c_and_No._21.5.docx) (AUS), [INP-30](https://www.apt.int/sites/default/files/2021/04/APG23-2-INP-30_WP1_kor.docx) (KOR), [INP-38](https://www.apt.int/sites/default/files/2021/04/APG23-2-INP-38_Topic_9.1.c_SNG_NZ.docx) (SGP, NZL)
* APG23-3/[INP-07](https://www.apt.int/sites/default/files/2021/10/APG23-3-INP-07_AUS_contribution_for_WP1_Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.3_1.4_1.5_9.1Topic_c_and_No._21.5_v2.docx) (AUS), [INP-12](https://www.apt.int/sites/default/files/2021/10/APG23-3-INP-12_Thailand_PV_WP1_AI_1.1_1.4_9.1c.docx) (THA), [INP-20](https://www.apt.int/sites/default/files/2021/11/APG23-3-INP-20_New_Zealand_input_to_WP1_AIs_1.1_1.2_1.3_1.5_9.1_Topic_C_Art._No_21.5.docx) (NZL), [INP-24](https://www.apt.int/sites/default/files/2021/11/APG23-3-INP-24_WP1_Kor_1.1_1.2_1.4_9.1Topic_C_21.5.docx) (KOR), [INP-36](https://www.apt.int/sites/default/files/2021/11/APG23-3-INP-36_SNG_WP1__AI1.1_1.2_9.1c.docx) (SNG), [INP-41](https://www.apt.int/sites/default/files/2021/11/APG23-3-INP-41_China_WP1.docx) (CHN), [INP-46](https://www.apt.int/sites/default/files/2021/11/APG23-3-INP-46_Iran-AI1.2_1.3_1.4_1.5_9.1c.docx) (IRN)
* Information Documents
* APG23-2/[INF-07](https://www.apt.int/sites/default/files/2021/03/APG23-2-INF-07_Briefing_on_AI_9.1.C.docx) (DG, Chair), [INF-25](https://www.apt.int/sites/default/files/2021/04/APG23-2-INF-25_ASMG_Preparation_for_WRC-23.pdf) (ASMG), [INF-35](https://www.apt.int/sites/default/files/2021/04/APG23-2-INF-35_Status_of_CEPT_Preparation_for_WRC-23_and_RA-23.pdf) (CEPT), [INF-36](https://www.apt.int/sites/default/files/2021/04/APG23-2-INF-36_RCC_Preparation_to_the_World_Radio_Conference_and_Radio_Assembly_2023.pdf) (RCC)
* APG23-3/[INF-01](https://www.apt.int/sites/default/files/2021/10/APG23-3-INF-01_Preliminary_WMO_Position_on_WRC-23_Agenda.docx) (WMO), [INF-06/Rev.](https://www.apt.int/sites/default/files/2021/11/APG23-3-INF-06Rev.1_Briefing_on_AI9.1.C.docx)1 (DG Chair), [INF-20](https://www.apt.int/sites/default/files/2021/11/APG23-3-INF-20_Status_of_CEPT_Preparation_for_WRC-23_and_RA-23.pdf) (CEPT), [INF-37](https://www.apt.int/sites/default/files/2021/11/APG23-3-INF-37_ASMG_Preparation_for_WRC-23.pdf) (ASMG), [INF-39](https://www.apt.int/sites/default/files/2021/11/APG23-3-INF-39_Report_of_APM23-2.docx) (ATU)

**3. Summary of discussions**

**3.1 Summary of APT Members’ views**

**3.1.1 Thailand - Document** [**APG23-3/INP-12**](https://www.apt.int/sites/default/files/2021/10/APG23-3-INP-12_Thailand_PV_WP1_AI_1.1_1.4_9.1c.docx)

Thailand supports APT Preliminary View on agenda item 9.1 topic c) reached at APG23-2 Meeting. The on-going studies shall take into account the protection of primary services in the frequency bands currently allocated for fixed service. Thailand does not support changes to Radio Regulations under agenda item 9.1 topic c).

**3.1.2 Australia - Document** [**APG23-3/INP-07**](https://www.apt.int/sites/default/files/2021/10/APG23-3-INP-07_AUS_contribution_for_WP1_Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.3_1.4_1.5_9.1Topic_c_and_No._21.5_v2.docx)

Australia supports studies in accordance with Resolution **175 (WRC-19)**. Australia also supports the modification of existing or, if required, the development of new ITU-R Recommendations, Reports and/ or Handbooks as a result of these studies, but does not support changes to the Radio Regulations being made under this topic. Australia is of the view that the term “fixed wireless broadband” is understood to mean fixed wireless access supporting broadband applications. The use of IMT as a technology for the deployment of fixed wireless broadband is no different to the use of any other radio interface technologies for fixed wireless broadband in bands allocated to the fixed service on a primary basis provided that such use is in accordance with the Radio Regulations.

**3.1.3 Korea (Republic of) - Document** [**APG23-3/INP-24**](https://www.apt.int/sites/default/files/2021/11/APG23-3-INP-24_WP1_Kor_1.1_1.2_1.4_9.1Topic_C_21.5.docx)

The Republic of Korea is of the view that IMT technology within the capability of IMT systems would be utilized to support for fixed wireless broadband in the frequency bands allocated to the fixed services on primary basis based on no change to the Radio Regulations (RR).

**3.1.4 Singapore** [**APG23-3/INP-36**](https://www.apt.int/sites/default/files/2021/11/APG23-3-INP-36_SNG_WP1__AI1.1_1.2_9.1c.docx)

Based on the recent development of ITU-R studies under Agenda Item 9.1 topic c), Singapore would like to share its preliminary views under this agenda item as follows:

1. The work on this topic should focus on broadband fixed wireless access using IMT technologies in bands allocated to the fixed service on a primary basis.
2. Broadband fixed wireless access using IMT technologies and other technologies in bands allocated to the fixed service on a primary basis can be addressed through an update of appropriate existing ITU-R Recommendations/Reports/Handbooks. There is no need to develop new regulatory provisions in the Radio Regulations and thus Agenda item 9.1 topic c) should not lead to any changes to the Radio Regulations.

1. There is no need to study specific frequency bands under this topic considering the existing provisions of the RR.

**3.1.5 New Zealand - Document** [**APG23-3/INP-20**](https://www.apt.int/sites/default/files/2021/11/APG23-3-INP-20_New_Zealand_input_to_WP1_AIs_1.1_1.2_1.3_1.5_9.1_Topic_C_Art._No_21.5.docx)

New Zealand supports the ongoing ITU-R studies and is of the view that agenda item 9.1 topic c) should be addressed by reviewing the existing ITU-R Recommendations/Reports and Handbooks and make necessary modifications to implement FWA/FWB systems using IMT technology. The development of new ITU-R Recommendations or reports should only be considered if necessary. New regulatory provisions in the Radio Regulations for FWB applications using IMT technology should not be considered. Any topic under agenda item 9.1 should not lead to the Radio Regulations changes, this view is aligned with the scope of Resolution **175 (WRC-19)**.

**3.1.6 China (People’s Republic of) - Document** [**APG23-3/INP-41**](https://www.apt.int/sites/default/files/2021/11/APG23-3-INP-41_China_WP1.docx)

China supports studies currently carried out by ITU-R in accordance with Resolution **175 (WRC-19)**. China also supports the modification of existing or, if required, the development of new ITU-R Recommendations, Reports and/ or Handbooks as a result of these studies.

**3.1.7 Iran (Islamic Republic of) - Document** [**APG23-3/INP-46**](https://www.apt.int/sites/default/files/2021/11/APG23-3-INP-46_Iran-AI1.2_1.3_1.4_1.5_9.1c.docx)

The Islamic Republic of Iran is of the view that the use of frequency bands having a frequency allocation for primary fixed service by IMT-type Fixed Wireless Broadband systems, (using IMT technologies) shall not change existing and future sharing and compatibility situation of the in-band and adjacent frequency bands. Such use shall also fully respect the current operational conditions of the fixed and other radiocommunication services as well as systems.

Furthermore, this Administration is of the view that this agenda item does not require any regulatory change in Radio Regulations.

* 1. **Summary of issues raised during the meeting**
* There was a discussion regarding whether to include the phrase “no change to the ITU Radio Regulations (RR)” in the APT Preliminary Views for this topic. Due to different views expressed, this phrase was not included in this meeting.
* It was indicated that regulatory methods to change the Radio Regulations should not be developed for this topic in line with the CPM report structure for agenda item 9.1.
* It was pointed out by an APT Member if specific frequency band(s) under this topic should be studied in future APG meetings considering the following situations;
* For example, CEPT has a guideline on how to share FS and FSS in the same frequency band. However, such a guideline is not available in the APT region and then it may not be clear for APT Members how IMT technology could be used in the FS bands which are also allocated to other services in future.
* It should also be noted that, as indicated in Document APG23-3/INF-37, ASMG administrations are invited to consider the frequency bands that will be studied using the IMT systems for fixed wireless broadband in the frequency bands allocated to the fixed service on a primary basis, with an emphasis on protecting the existing services, and the frequency band 3.8-4.2 GHz was mentioned during the presentation of this INF document in this APG meeting.
* It was also pointed out by an APT Member that on-going studies under this topic shall take into account the protection of primary services in the frequency bands allocated to the FS, and this point might need to be reflected in the APT Preliminary Views.
* Some APT Members are of the view that the term “fixed wireless broadband” is understood to mean fixed wireless access supporting broadband applications using IMT technology. Some APT Members are of the view that the term “fixed wireless broadband” supports a range of applications, such as access and core transport.
* It was raised that the Correspondence Group of ITU-R is being discussed, and the conclusion of the CG chairman is that the term “fixed wireless broadband” should refer to broadband fixed wireless access, and that the studies for this WRC-23 topic should focus on broadband fixed wireless access applications employing IMT technology in frequency bands allocated on a primary basis to the fixed service. This conclusion is subject to review by the WPs 5A and 5C meeting in November 2021.

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

APT Members support the on-going ITU-R studies in accordance with Resolution **175 (WRC-19)** under WRC-23 agenda item 9.1 topic c).

APT Members support the modification of existing or, if required, the development of new ITU-R Recommendations, Reports and/or Handbooks as a result of these studies.

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

* Some APT Members are of the view that the term “fixed wireless broadband” is understood to mean fixed wireless access supporting broadband applications using IMT technology.
* Some APT Members are of the view that the term “fixed wireless broadband” is a short form for the term “broadband fixed wireless system” defined in Recommendation [ITU-R F.592](https://www.itu.int/rec/R-REC-F.592/en), which support a range of applications such as access and core network transport.

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

* Contributions are sought to update the APT preliminary views, in particular, to address the issue whether to mention “no change to the RR is required” in the APT Preliminary Views for this topic.
* Contributions are sought to whether APG should consider identifying specific frequency bands allocated to the FS for fixed wireless access supporting broadband applications using IMT technology considering the situation in other regions.

**7. Views from Other Organisations** (as provided in the information documents to

APG23-2)

**7.1 Regional Groups**

**7.1.1 ASMG** - **Document** [**APG23-3/INF-37**](https://www.apt.int/sites/default/files/2021/11/APG23-3-INF-37_ASMG_Preparation_for_WRC-23.pdf)

* Inviting ASMG administrations to consider the frequency bands that will be studied for using the IMT systems for fixed wireless broadband in the frequency bands allocated to the fixed service on a primary basis with an emphasis on protecting the existing services.
* To studying the update of the current recommendations in the ITU with the possibility of preparing a new recommendation and the bands that will be identified for the use of these systems in the frequency bands allocated on a primary basis to the fixed service, in addition to studying of technologies and applications of fixed wireless broadband within the uses of IMT systems and related concepts.

**7.1.2 ATU - Document** [**APG23-2/INF-39**](https://www.apt.int/sites/default/files/2021/11/APG23-3-INF-39_Report_of_APM23-2.docx)

* To decide that as a matter of principle, the protection of incumbent services operating in the same or in adjacent frequency bands need to be ensured.

**7.1.3 CEPT** - **Document** [**APG23-3/INF-20**](https://www.apt.int/sites/default/files/2021/11/APG23-3-INF-20_Status_of_CEPT_Preparation_for_WRC-23_and_RA-23.pdf)

* In conclusion, CEPT oppose any changes to the RR in response to WRC-23 Agenda item 9.1, topic c.
* CEPT considers that discussions on fixed wireless broadband applications using IMT technologies as well as other technologies should take place in ITU-R WPs 5A and 5C to avoid fragmentation of work and to ensure efficient working within ITU-R

**7.1.4 CITEL** - **Document** [**APG23-2/INF-35**](https://www.apt.int/sites/default/files/2021/04/APG23-2-INF-35_Status_of_CEPT_Preparation_for_WRC-23_and_RA-23.pdf)

* No views are provided.

**7.1.5 RCC** - **Document** [**APG23-2/INF-36**](https://www.apt.int/sites/default/files/2021/04/APG23-2-INF-36_RCC_Preparation_to_the_World_Radio_Conference_and_Radio_Assembly_2023.pdf)

* The RCC Administrations consider that decision on usage of IMT systems in the frequency bands allocated to the fixed service on the primary basis is subject to:
* Compliance of such usage to the fixed wireless broadband communication requirements;
* Protection of services operating in the same or adjacent frequency bands.

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