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| **Radiocommunication Study Groups** |  |
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| Source: Document 5A/TEMP/53 | **Annex 18 to Document 5A/221-E** |
| **24 November 2020** |
| **English only** |
| Annex 18 to Working Party 5A Chairman’s Report | |
| [Editor’s note: Based on input contributions 5A/58 and 5A/207, the following text has been proposed, but it has neither been reviewed nor agreed. AH 5A/5C on 9.1.c will consider the development of these elements as a Report and/or a Recommendation as appropriate and views were expressed that parts pertaining to regulatory analysis are not within the scope of work that should be done under topic 9.1.c]  Elements FOR a working document towards a preliminary draft new [Report/Recommendation] ITU-R F.[IMT-FWB] | |
| **Use of International Mobile Telecommunication system for fixed wireless broadband in the frequency bands allocated to the fixed service  on a primary basis** | |

(20xx)

Scope

This Recommendation studies the use of IMT for fixed wireless broadband in the frequency bands allocated to the fixed services on primary basis within WRC-23 agenda item 9.1, topic c).

Keywords

IMT-based, Fixed wireless broadband, fixed service

The ITU Radiocommunication Assembly,

considering

*a)* that Resolution **175 (WRC-19)** resolves to studythe use of International Mobile Telecommunication (IMT) systems for fixed wireless broadband in the frequency bands allocated to the fixed service on a primary basis;

*b)* that there is a need to use IMT for fixed wireless broadband on primary basis;

*c)* that when IMT is allocated within the fixed services frequency bands on primary basis, the provided services will be enhanced,

noting

*a)* that any necessary studies to be consider on the use of International Mobile Telecommunication 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;

*b)* that…,

recommends

that, Annex 1 should be refer to for the use of International Mobile Telecommunication system for fixed wireless broadband in the frequency bands allocated to the fixed service on a primary basis.

Annex 1

[Editor’s note: The following material might be used towards a working document for a new report]

Use of International Mobile Telecommunication system for fixed wireless broadband in the frequency bands allocated to the fixed service   
on a primary basis

# 1 Introduction

[Editor’s note: This section provides general description of the use of IMT system for fixed wireless broadband based on different IMT radio interface which could include use cases, deployment scenarios, technical requirement and considerations related to the use of spectrum.]

The term “fixed wireless broadband” (hereinafter abbreviated to FWB) is a short form for the term “broadband fixed wireless system”, where “fixed wireless system” is defined in Recommendation [ITU-R F.592](https://www.itu.int/rec/R-REC-F.592/en) as follows: “Telecommunication systems operating in the fixed service including, for example, radio-relay systems, HF systems, and systems using high altitude platform stations (HAPS), and which support a range of applications such as access and core transport”. This definition includes “Fixed wireless access” (FWA), which in the same Recommendation is defined as: “*Fixed wireless system* application in which the location of the end-user termination and the network access point to be connected to the end-user are fixed”. (See Recommendation [ITU-R F.1399](https://www.itu.int/rec/R-REC-F.1399/en).)

According to the Administrative Circular [CA/251](https://www.itu.int/md/R00-CA-CIR-0251/en), Working Party (WP) 5A and WP 5C have been assigned as joint responsible groups for WRC-23 agenda item 9.1, topic c), in CPM23-1.

WP 5A will provide the draft text on the results of studies to the CPM Chapter Co-Rapporteurs.

The provided input contribution includes consideration and proposal on the working scope and timeline of WRC-23 agenda item 9.1, topic c). To avoid repeated submission, it is submitted to WP 5A and the Chairman of WP 5A is invited to transfer this contribution to WP 5C for consideration in an appropriate way if necessary.

# 2 Use cases, deployment scenarios and technical requirement

[Editor’s note: This section provides typical use cases and operational architecture, deployment scenarios and technical requirement including system characteristics/features on using IMT system for fixed wireless broadband.]

Technical and spectrum studies related to WRC-23 agenda item 9.1, topic c), are conducted for typical use cases, deployment scenarios and system characteristics/features on using IMT system for FWB, etc.

Various use cases can be considered as applications of wireless access and wireless transport using IMT system for FWB, including wireless instead of fibre optics (such as IMT base station backhaul), flexible wireless access in last mile (such as remote video monitoring and wireless home broadband), data convergence and distribution etc, The implementation of different use cases can be achieved by different deployment scenarios.

The use of IMT system for FWB could support the following applications of wireless access and wireless transport:

− Wireless access network: IMT base station to CPEs (Customer Premise Equipment) or fixed terminals through Point to Point and Point to Multi-point communication.

− Wireless transport network: IMT base station to base station or IMT base station to core network through Point to Point and Point to Multi-point communication.

The locations of stations are fixed in the above applications. The implementation of transport and access network using IMT system for FWB is in line with the definition of fixed service.

The studies could continue to be conducted in accordance with the Radio Regulations in force within WRC-23 agenda item 9.1, topic c), and to support the use of IMT system for FWB in the frequency band allocated to the fixed service, regulatory analysis with respect to RR can be considered.

# 3 Spectrum aspect

[Editor’s note: This section provides capacity requirement for transport, frequency arrangement and consideration on sharing and compatibility analysis.]

Conduct studies related to capacity requirement for transport, frequency arrangement and consideration on sharing and compatibility analysis.

Based on the applications described above, drafting a new ITU-R recommendation and revising existing ITU-R Recommendations/Report could be a proper way forward to deal with the study of WRC-23 agenda item 9.1, topic c).

− A new Recommendation to be prepared for addressing the technical, spectrum and regulatory related issues. It could consist of the latest technical progress, current/planned usage and consideration on the specific frequency band including related sharing and compatibility study and possible regulatory provisions analysis on the use of IMT system for FWB.

− Existing Recommendations/Reports of frequency arrangements in specific frequency bands to be revised and could be used as a reference to the new Recommendation mentioned above.

The below table includes relevant ITU-R Recommendations included in contribution [5A/19](https://www.itu.int/md/R19-WP5A-C-0019/en) from Chairmen of WP 5A and WP 5C, which could be taken as basis for the future study and revised as necessary.

TABLE 1

Relevant ITU-R Recommendations included in contribution 5A/19

|  |  |  |
| --- | --- | --- |
| Vocabulary of terms | Spectrum related | Technical related |
| Rec. ITU-R F.592 | Rec. ITU-R F.748 | Rec. ITU-R F.757 |
| Rec. ITU-R F.1399 | Rec. ITU-R F.749 | Rec. ITU-R F.1400 |
|  | Rec. ITU-R F.1402 | Rec. ITU-R F.1401 |
|  | Rec. ITU-R F.1488 | Rec. ITU-R F.1490 |
|  | Rec. ITU-R F.1489 | Rec. ITU-R F.1499 |
|  | Rec. ITU-R F.1518 | Rec. ITU-R F.1763 |
|  | Rec. ITU-R F.1519 |  |
|  | Rec. ITU-R F.1613 |  |

# 4 Consideration on regulatory analysis

[Editor’s note: This section provides the possible regulatory provisions analysis on using IMT system for fixed wireless broadband in the frequency bands allocated to the fixed service on a primary basis which could be included in the summary section of the draft CPM text.]

# 5 Conclusion

[Editor’s note: This section provides conclusion and suggestion.]

The co-signing Administration(s) proposes to develop a new ITU-R Recommendation and revise the existing ITU-R Recommendation(s)/Report(s) toward WRC-23 agenda item 9.1, topic c), and the study results could be included in the draft CPM text.