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## **ITU-APT Foundation of India (IAFI<sup>1</sup>)**

WRC-23 AGENDA ITEM 9.1, TOPIC C)

### **Study the use of International Mobile Telecommunication systems for fixed wireless broadband in the frequency bands allocated to the Fixed Service on a primary basis, in accordance with Resolution 175 (WRC-19)**

#### **Background**

This contribution addresses the some of the terms in connections with WRC-23 agenda item 9.1, topic c) on the use of IMT systems for deployment of fixed wireless broadband (FWB) in the frequency bands allocated to the fixed services on primary basis. This document may be used in further development of the CPM text and other related deliverables.

#### **Proposal**

It is proposed that WPs 5A/5C agree on these definitions for a common understanding of various terms on *the use of International Mobile Telecommunication (IMT) systems for fixed wireless broadband in the frequency bands allocated to the fixed service on a primary basis* as per the draft attached with this contribution.

Attachment 1 outline elements for understanding various terms under WRC-23 agenda item 9.1, topic c) “The use of International Mobile Telecommunication systems for fixed wireless broadband in the frequency bands allocated to the fixed service on a primary basis.

**Attachment:** 1

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<sup>1</sup> ITU-APT Foundation of India is sector member of ITU-R. For details, please see:  
<https://itu-apt.org>

## ATTACHMENT

### ELEMENTS FOR UNDERSTANDING VARIOUS TERMS UNDER WRC-23 AGENDA ITEM 9.1, TOPIC C)

#### **The use of International Mobile Telecommunication systems for fixed wireless broadband in the frequency bands allocated to the fixed service on a primary basis.**

This document addresses some of the terms considered in connection with WRC-23 agenda item 9.1, topic c) on the use of IMT systems for deployment of fixed wireless broadband (FWB) in the frequency bands allocated to the fixed services on a primary basis. This document may be used in further development of the CPM text and other related deliverables.

Resolution **175 (WRC-19)** includes the term “fixed wireless broadband” (FWB) in the *title* and the *resolves* part and “Fixed wireless access” (FWA) in *recognising c)*. These terms seem to have been used interchangeably. Various terms used in this Resolution are addressed below:

1. “fixed wireless broadband” (FWB) is not clearly defined in ITU-R
2. “Wireless access” is defined in Recommendation ITU-R F.1399 as “end-user radio connection(s) to core networks”, where core networks include, for example, PSTN, ISDN, PLMN, PSDN, Internet, WAN/LAN, CATV, etc.
3. “Wireless access” applications can be provided within the definitions of the radio services FS, MS, FSS, and MSS contained in the Radio Regulations (RR)
4. “Fixed wireless access” (FWA) is defined in Recommendation ITU-R F.592, and Recommendation ITU-R F.1399 as a “Wireless access application in which the location of the end-user termination and the network access point to be connected to the end-user are fixed”.
5. The term “Broadband wireless access” (BWA) is defined in Recommendation ITU-R F.1399 as a “Wireless access in which the connection(s) capabilities are higher than the primary rate”.
6. Thus, it can be safely concluded that the FWB in Resolution **175 (WRC-19)** refers to Broadband Fixed wireless Access (BFWA), and this BFWA can be defined as:  
*“end-user radio connection(s) to core networks, where core networks include, for example, PSTN, ISDN, PLMN, PSDN, Internet, WAN/LAN, CATV, etc. in which the location of the end-user termination and the network access point to be connected to the end-user are fixed, and the connection(s) capabilities are higher than the primary rate.”*
7. The term International Mobile Telecommunications (IMT), as specified in Resolution ITU-R 56-2, encompasses IMT-2000, IMT-Advanced and IMT-2020 radio interface technologies as described in Recommendations ITU-R M.1457, ITU-R M.2012 and ITU-R M.2150.
8. “IMT systems are mobile broadband systems including IMT-2000, IMT-Advanced and IMT-2020” as per *considering a)* of Recommendations ITU-R M.1457, ITU-R M.2012 and ITU-R M.2150.

9. An “IMT system” means a combination of IMT base station(s), terminal station(s), along with necessary control systems, servers, power supply units, antennae, towers, etc.
- 9 A FWB system using either IMT-2000, IMT-Advanced or IMT-2020 technologies refers to a system where the IMT base stations and IMT terminal stations are both fixed and operating consistent with the definition of “fixed stations” in the Radio Regulations.
10. The use of IMT as an interface technology for the deployment of fixed wireless broadband is no different than the use of any other radio interface technology for Fixed wireless broadband in the frequency bands allocated to the fixed service on a primary basis provided that such use is in accordance with the Radio Regulations.

Given that the definition and operation of fixed wireless broadband (FWB) using IMT as technology is consistent with the provisions of Radio Regulations and relevant ITU-R Recommendations and Reports, it is proposed that no additional changes are necessary to the Radio Regulations under agenda item 9.1, topic c). It is also proposed that there is no need to consider further the use of any specific frequency bands for fixed wireless broadband systems using IMT as a technology under this topic, since Broadband Fixed Wireless Access systems may be provisioned within existing bands allocated to the fixed service.

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