IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| SB000 Annex AB CIDs | | | | |
| Date: 2020-04-15 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Solomon Trainin | Qualcomm |  |  | strainin@qti.qualcomm.com |
| Alecsander Eitan | Qualcomm |  |  | eitana@qti.qualcomm.com |
| Assaf Kasher | Qualcomm |  |  | akasher@qti.qualcomm.com |

Abstract

Resolution of Annex AB CIDs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Page** | **Line** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 6102 | 787.00 | 5 | AB | Annex AB "The purpose of this annex is to show an example implementation of an extended wireless network formation using devices that implement DMG STA functionality" The term "extended wireless network" is not defined and not used in the spec. The "extended network" is used in conjunction with GLK, that the Annex AB does not mention. The Annex AB is irrelevant to the normative part of the spec, does not provide any information that is useful for the features defined in the spec, contains errors and misleading sentences. I propose to remove the Annex. | Remove the annex | Accept |
| 6103 | 787.00 | 7 | AB | Annex AB "The extended wireless network is intended to complement the sometimes limited signal range of a DMG STA" In any of the known WiFi networks the signal range is limited. The introduction does not provide any justification that solution different from the ESS is needed to provide the expected functionality | Remove the annex | Accept |
| 6104 | 787.00 | 11 | AB | Annex AB "The extended wireless network described in this annex is similar to a mesh network. However, DMG STAs are not mesh STAs and cannot form mesh BSS. This annex describes an alternative approach of extended wireless network formation utilizing multiple BSSs." It is completely unclear what is similarity and difference between the introduced network and the mesh network. In no place, the spec is limited to adapt the mesh network to the DMG STA and vice versa. Unclear and not explained in the Annex why an alternative approach is needed and how it is different. From the other side the 802.11 spec provides means of multiple BSS interconnection by DS and ESS (Extended Service Set) that are applicable for the DMG STA by definition. The referred sentence is misleading. | Remove the annex | Accept |
| 6105 | 787.00 | 14 | AB | Annex AB "Figure AB1 shows an example of an extended wireless network formation by devices that implement DMG STA functionality." There is no explanation of the Figure AB1 that makes the figure useless. | Remove the annex | Accept |
| 6106 | 787.00 | 20 | AB | "AB.2 Layer 3 network consists of multiple BSSs" The sentence wrongfully mixes different layers. The most popular L3 network is IP network built around routers. Below IP, the architecture allows for arbitrarily many different network technologies, ranging from Ethernet to wireless to single point-to-point links. The L3 network does not need and is not aware of the BSS and vice versa. | Remove the annex | Accept |
| 6107 | 787.00 | 21 | AB | Annex AB  "DMG STAs can form either an infrastructure BSS or a PBSS." It is not true - the DMG STAs can participate in the IBSS as well. The DMG STAs establish infrastructure BSS and IBSS same as non-DMG STAs. | Remove the annex | Accept |
| 6108 | 787.00 | 22 | AB | Annex AB "Neither DMG BSS nor PBSS is intended to form mesh topology network by itself." By definition "Mesh topology is a type of networking where all nodes cooperate to distribute data amongst each other" so, indeed the Infrastructure BSS and PBSS are not mesh networks with no relation to is it DMG BSS or not. From the other side the 802.11 introduces and defines mesh basic service set (MBSS). From the data delivery point of view, it appears as if all STAs in a mesh BSS are directly connected at the MAC layer even if the STAs are not within range of each other. The multi-hop capability enhances the range of the STAs and benefits wireless LAN deployments. Further, using the multi-hop capability, MSDUs and Management frames can be transferred between STAs that are not in direct communication with each other over a single instance of the wireless medium. There is no reason presented that the mesh BSS is not relevant and does not provide a benefit to the DMG STAs. | Remove the annex | Accept |
| 6109 | 788.00 | 4 | AB | Annex AB "Multiple STA instances inside a device can be managed by a single SME using either MM-SME (see 4.9.3) or cochannel coordinated management (see 4.9.5). The SME can manage multiple DMG STA instances in a device so that each STA is bridged from a higher layer perspective." Misconception of layering - SME has nothing to do with the bridging. The bridging belongs to the data path that the SME is not involved. | Remove the annex | Accept |

Discussion:

The CIDs 6102-6109 address different aspects of the Annex AB (Extended wireless network formation by DMG STAs). The Annex AB is irrelevant to the normative part of the spec, does not provide any information that is useful for the features defined in the spec, contains errors and misleading sentences. I propose to accept the proposed change and remove the Annex AB.

Reference: IEEE P802.11ay/D5.0, October 2019