IEEE P802.11  
Wireless LANs

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| Proposed text for addition of GLK to 802REVc Clause B.2 | | | | | | | | | |
| Date: 2023-09-13 | | | | | | | | | |
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Abstract

This document address a comment made in response to the 802REVc D1.1 recirculation ballot, CID 65 in [**1-23/0022r0**](https://mentor.ieee.org/802.1/dcn/23/1-23-0022-00-Mntg-p802-revc-d1-1-comments-pdis.ods).

r1: added EMF formated version of the figure.

To address CID 65 the following changes (redlined) are proposed:

**B.2 IEEE 802.11 RM**

The IEEE 802.11 RM is based on the functional station (STA) model, as shown in Figure B.5.

The interconnections between IEEE 802.11 STAs follow four general connection models.

The first interconnection model provides several types of peer-to-peer, direct, pair-wise communication between STAs, each applicable in differing use scenarios. In these direct communications the STAs in each pair have symmetrical operations, with each STA matching the functional STA model, although they can take on different behavioral roles to establish and maintain the interconnection link.

The second interconnection model, the infrastructure model, supports multiple STAs, collected into one or more wireless access domains, called basic service sets (BSSs). These access domains (BSSs) are interconnected via the distribution system (DS) and can interwork with other IEEE 802 networks via a portal.

Each access domain in the infrastructure model is established by an access point (AP), which extends the basic STA model to include repeating and forwarding functions that allow communications between non-AP STAs that do not directly interconnect. The AP, acting in cooperation with the DS, is a forwarding entity that enables communications between non-AP STAs within the access domain (intra-BSS relay) and also to different IEEE 802.11 wireless access domains established by other APs connected to the same DS (inter-BSS relay).

The third interconnection model, is a mesh model consisting of autonomous STAs. Inside the mesh, STAs establish peer-to-peer wireless links with neighbor STAs to mutually exchange messages. Further, using the mesh’s multi-hop capability, messages can be transferred between STAs that are not in direct communication with each other over a single instance of the wireless medium. From the data delivery point of view, it appears as if all STAs in a mesh are directly connected at the MAC layer even if the STAs are not within range of each other. A mesh might have an interface to the DS, through a Mesh Gate, and thereby can enable communication to non-AP STAs in infrastructure access domains, and/or via a portal to non-IEEE 802.11 networks.

The fourth interconnection model, is the general link (GLK) model consisting of GLK STAs connected by IEEE 802.11 general links that are suitable to be used as links inside an IEEE 802.1Q bridged network. A GLK STA coordinates with a GLK convergence function to provide an instanace of Internal Sublayer Service, as defined in IEEE Std 802.1AC-2016, to an IEEE 802.1Q bridge for each peer GLK STA with which it is communicating. GLK STAs also provide link metrics for the use of external path selection protocols such as spanning tree protocol. GLK operation does not involve a DS. Instead, the general links formed with GLK operation are a point-to-point connection between pairs of instances of Internal Sublayer Service SAPs.

Figure B.6 illustrates the infrastructure model for APs, the distribution system and portal. The arrows indicate the intra-BSS and inter-BSS relay functions for MSDUs as well as interconnection to other IEEE 802 networks.

Figure B.6a illustrates the infrastructure model for GLK APs and GLK non-APs STA s, the general links shown connect the IEEE 802.1Q MAC relay entities shown with each other or the LLC sublayer of the end stations shown.

*Editor – add Figure 4-15 from IEEE 802.11REVme D3.0 as Figure B.6a (the attached file: Figure\_4\_13b.vdx), with the following Figure title: Figure B.6a—Example of infrastructure BSS with general links (also the figure number may be corrected to be B.7 both in the title and in the text)*





**References:**