IEEE P802.11
Wireless LANs

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| Proposed resolution to CID2199 |
| Date: 2014-02-15 |
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Abstract

This submission proposes a resolution to CID2199 submitted on 11ad text.

The discussion is in reference to Draft P802.11REVmc\_D2.0.

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| 2199 | 1411.32 | 10.3.4.1 | Section 10.3.4.1 states that DMG STAs do not support authentication and deauthentication. This appears to be an optimisation that should only apply to cases where the Open Authentication algorithm is used, otherwise 11ad STAs cannot make use of other authentication algorithms such as SAE, Fast BSS Transition and those in 11ai. Even when Open Authentication is in use I'm not sure how multi-band operation is affected by this restriction. | Restrict this optimisation to cases where the Open Authentication algorithm is in use. This will require also changes in other parts of the draft, such as Figure 10-12 which shows authentication and association states. |

**Discussion:** TGm held a discussion on possible resolutions to this CID back at the Jan/14 meeting. See <https://mentor.ieee.org/802.11/dcn/14/11-14-0030-02-000m-discussion-on-cid2199.pptx>. The preferred resolution was resolution 1, which allows the use of Authentication frames when the Open System Authentication algorithm is not in use.

**Proposed resolution**: Revised

**10.3.1 State variables**

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*Replace the fourth paragraph as follows*

For nonmesh STAs, this state variable expresses the relationship between the local STA and the remote STA. It takes on the following values:

— State 1: Initial start state for non-DMG STAs and for DMG STAs that perform IEEE Std 802.11 authentication. Unauthenticated and unassociated.

— State 2: Initial start state for DMG STAs that do not perform IEEE Std 802.11 authentication. Authenticated (except DMG STAs that do not perform IEEE Std 802.11 authentication, which are unauthenticated) but unassociated.

— State 3: Authenticated (except DMG STAs that did not perform IEEE Std 802.11 authentication, which are unauthenticated) and associated (Pending RSN Authentication).

— State 4: Authenticated (except DMG STAs that did not perform IEEE Std 802.11 authentication, which are unauthenticated) and associated (RSNA Established or Not Required).

*Delete the fifth paragraph as follows*

~~State 1 is not used by DMG STAs, and the state machine starts in State 2.~~

**10.3.2 State transition diagram for nonmesh STAs**

*Replace Figure 10-12 with the following*



**10.3.4.1 General**



*Replace the last paragraph as follows*

Authentication is optional in an IBSS. In a non-DMG infrastructure BSS, authentication is required. In a DMG infrastructure BSS and PBSS, the Open System authentication algorithm is not used (see 11.2.3.1). APs do not initiate authentication.

**10.3.4.5 Deauthentication—destination STA**

*Insert the following paragraph as the first paragraph*

A DMG STA in State 2, State 3 or State 4 that receives a Deauthentication frame shall remain in the same state if it did not perform an IEEE Std 802.11 authentication exchange.

*Change the first sentence of the second paragraph as follows*

Otherwise, u~~U~~pon receipt of a Deauthentication frame from a STA for which the state is State 2, State 3, or State 4, the destination STA shall deauthenticate with the originating STA using the following procedure:

**11.1.4 RSNA establishment**

*Delete the second paragraph as follows*

~~In a DMG BSS, IEEE 802.11 Authentication and Deauthentication shall not be used. Instead, STAs proceed immediately with Association.~~

**11.2.3.1 Overview**



*Replace the first paragraph as follows*

In an ESS, a non-DMG STA shall complete an IEEE Std 802.11 authentication exchange prior to association. A DMG STA not in an IBSS shall complete an IEEE Std 802.11 authentication exchange prior to association when an authentication algorithm other than the Open System authentication algorithm is requested. A DMG STA shall not perform an IEEE Std 802.11 authentication exchange using the Open System authentication algorithm. An IEEE Std 802.11 authentication exchange is optional in an IBSS.

**11.2.3.2 Open System authentication**

**11.2.3.2.1 General**

*Change the first paragraph as follows*

Open System authentication is a null authentication algorithm. Any non-DMG STA requesting Open System authentication may be authenticated if dot11AuthenticationAlgorithm at the recipient non-DMG STA is Open System authentication. A STA may decline to authenticate with another requesting STA. Open System authentication is the default authentication algorithm for pre-RSNA equipment.