IEEE P802.11
Wireless LANs

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| Proposed resolution to CID 412 and 413 in LB220 |
| Date: 2016-07-27 |
| Author(s):  |
| Name | Company | Address | Phone | Email |
| Jiamin Chen | Huawei/HiSilicon |  |  | Jiamin.chen@mail01.huawei.com |
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 Abstract

This document proposes resolutions to 2 CIDs on TGaj D2.0: 412 and 413.

**Revision History**

R0: Initial version.

**Technical comments:**

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| CID | Clause | Page | Line | Type | Comment | Proposed Change | Remark |
| 412 | 10.42.5 | 147 | 14 | T | The 11ad coexistence addition in Section 10.42.5 seems to suggest the following frame sequence: 2.16 GHz RTS -- 1.08 GHz RTS -- 1.08 GHz CTS -- 2.16 GHz CTS -- data -- 1.08 GHz CF-END -- 2.16 GHz CF-ENDThis sequence is not compatible with DMG RTS/CTS timing and also the NAV reset logic (10.3.2.4 in 11mc Draft 6.0) for DMG; unintended recipient DMG STA in this case expects SIFS between 2.16 GHz RTS and 2.16 GHz CTS; in addition, if this unintended recipient does not see the 2.16 GHz CTS where it is supposed to be and does not detect any other DMG activity it will follow 10.3.2.4 and reset its NAV about SIFS + CTS-Time + SIFS + 2 x slot time after end of the 2.16 GHz RTS end -- i.e., it does not include any extra gap for 1.08 GHz RTS and CTS and two extra SIFS gaps introduced in there. | Consider an 11ad compatible sequence such as 2.16 GHz RTS -- 2.16 GHz CTS -- 1.08 GHz RTS -- 1.08 GHz CTS -- data -- 1.08 GHz CF-END -- 2.16 GHz CF-END |  |

Proposed resolution: **Revised**

Discontinuous transmission of RTS/CTS on a 2.16 GHz or a 1.08 GHz channel may cause incorrect setting of NAVs. On the other hand, if the request of a transmission on a 1.08 GHz channel fails, then there is no need to transmit RTS/ DMG CTS frame on a 2.16 GHz channel. So the proposed sequence is: “1.08 GHz RTS -- 1.08 GHz CTS -- 2.16 GHz RTS – 2.16 GHz CTS – data -- 1.08 GHz CF-END -- 2.16 GHz CF-END”.

***Change the third paragraph of 10.42.5 (Backward compatibility and interoperation) as follows:***

During an SP or a CBAP, the source and destination CDMG STAs operating on a 1.08 GHz channel in a CDMG BSS shall transmit a RTS frame and a DMG CTS or DMG DTS frame respectively on the corresponding 2.16 GHz channel after successfully transmitting and receiving a RTS frame and a DMG CTS or DMG DTS frame respectively on the 1.08 GHz channel if the 2.16 GHz channel is idle. Then the DMG STAs can set their NAVs by receiving the RTS or DMG CTS or DMG DTS frames transmitted on the 2.16 GHz channel by the CDMG STAs. After transmitting a CF-END frame to truncate a SP or TXOP on a 1.08 GHz channel within a 2.16 GHz channel, a CDMG STA shall also transmit a corresponding CF-END frame on the 2.16 GHz channel if it is idle.

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| CID | Clause | Page | Line | Type | Comment | Proposed Change | Remark |
| 413 | 25.5.4.2.2 | 180 | 14 | T | Introduction of 2.16 GHz RTS and CTS exchange prior to CDMG transmission also requires extensions to CCA requirements. | CCA needs to indicate busy also with DMG transmission, i.e., requirements in 20.6.4.2.2 |  |

Proposed resolution: **Revised.**

A CDMG STA is DMG STA when operating on a 2.16 GHz channel therefore it shall follow the CCA rule defined for DMG STAs in 20.6.4.2.2 (CCA).

***Insert the following paragraph at the end of 25.5.4.2.2 (CCA):***

“CCA to indicate busy on a 2.16 GHz channel follows the rule defined for DMG STAs in 20.6.4.2.2 (CCA).”