### IEEE P802.11Wireless LANs

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| LB 207 Comment Resolution for Synchronization (Sync) Frame Operation |
| Date: 2015-03-09 |
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Abstract

This submission proposes resolutions for comments in clause 9.46.1 of TGah Draft 4.0 with the following CIDs:

* 6222, 6224, 6225, 6227

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: Revise the changes for CID 6224

Interpretation of a Motion to Adopt

A motion to approve this submission means that the editing instructions and any changed or added material are actioned in the TGah Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGah Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

***TGah Editor: Editing instructions preceded by “TGah Editor” are instructions to the TGah editor to modify existing material in the TGah draft. As a result of adopting the changes, the TGah editor will execute the instructions rather than copy them to the TGah Draft.***

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| **CID** | **P.L** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 6222 | 304.32 | 9.46.1 | If multiple STA share the same RAW slot and requesting syn frames, does the AP needs to send multiple sync frame? | Please clarify whether AP is only required to send sync frame to one of the STA assigned to the RAW slot, if RAW slot is shared by many | Rejected – AP has the option to send a sync frame like NDP-CTS frame with Address Indicator equal to 1 and RA/Partial BSSID (PBSSID) field equal to partial BSSID to allow contention for all STAs assigned to the RAW slot. Please refer to IEEE 802.11-13/0078r0.AP may also have other options as long as a sync frame is scheduled at the slot boundary of the STA and complies with the description in 304.32.Hence, AP has the flexibility to choose the suitable options, and there is no need for clarificatioin. |
| 6224 | 304.30 | 9.46.1 | "NAV setting excahnges" in this sentence is ambiguous. Does it mean 1) it requires the reponding/following frame to sync frame also have a duration setting? or 2) it only means the NDP CTS has a duration protecting the time slot? or3) RTS/CTS exchange is initiated after AP receivng PS Poll?If it is 1), then it means PS Poll cannot be sent after NDP CTS frameIf it is 2), then the time slot is not protected against STAs which cannot hear the AP | Clarify the sentence  | Revised – Agree in principle with the commenter. To clarify the situation, we propose to add the following descriptions for NAV-setting frame exchanges.Note that NAV-setting frame exchanges refer to any frame that can set NAV to other 3rd party stations, and AP has the flexibility to choose any NAV-setting frame exchanges for protection. TGah editor to make the changes shown in 15/0325r1 under all headings that contain CID 6624. |
| 6225 | 305.1 | 9.46.1 | The Duration setting for NDP CTS is not sepcified when Time slot protection is not enabled | specify the duration setting | Rejected – In case when time slot protection is not enabled, the corresponding duration is still defined by the Duration field of NDP CTS frame, which is specified in 8.9.1.1.1 NDP\_1M CTS and 8.9.1.1.2 NDP\_2M CTS.Specifically, in 8.9.1.1.1 NDP\_1M CTS, it specifies that *“The Duration field is expressed in units of OFDM symbol duration (40 us) (Table 24-4 (Timing-related constants)) and follows the definitions in 8.3.1.3 (CTS frame format).”*Further, in 8.9.1.1.2 NDP\_2M CTS, it specifies that *“The Duration field is expressed in units of microseconds and follows the definitions in 8.3.1.3 (CTS frame format).”*Hence, we do not need to specify the duration setting in 9.46.1 |
| 6227 | 304.32 | 9.46.1 |  If both time slot protection and NDP paging is enabled, it is not specified how AP sends both NDP paging and NDP CTS at TWT start time | Please clarify the procedure when the combination of NDP paging and time slot protection are both enabled | Rejected – As described in 304.30, AP has the flexibility to choose any NAV-setting frame exchange for protection. Hence, there is no need to specify one specific packet exchange sequence for protection. |

**Discussion:** *None.*

**Propose:**

* Revised for CID 6224, per discussion and editing instructions in 11-15/0325r1.

***TGah editor: Chage this subclause (9.46.1) as follows:*** *(CID 6624)*

When an AP receives a Sync Control frame from a STA with the Time Slot Protection Request field equal to 1, the AP shall protect a time slot that is assigned for the STA in a RAW, or a time duration that is assigned for the STA at a TWT, or a TXOP duration after the expiration of a wakeup timer of the STA with NAV-setting frame exchanges. Note that NAV-setting frame exchanges refer to any frame that can set NAV to other 3rd party stations, and AP has the flexibility to choose any NAV-setting frame exchanges for protection.