IEEE P802.11
Wireless LANs

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| CR on CIDs for 10.61 (Distributed Scheduling) |
| Date: 2018-05-1 |
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Abstract

This document proposes the comment resolution for 5 CIDs (1161, 1657, 1796, 1797, and 1801) related to clause 10.61 Distributed Scheduling in the Draft 1.1 of LB 231.

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| **CID** | **Commenter** | **Page** | **Comment** | **Proposed Change** | **Resolution** |
| 1161 | Adrian Stephens | 195 | " distributed scheduling enabled EDMG PCP or AP" -- is this enablement static or dynamic? How does it relate to capabilities? | Reword to relate to MIB variable values, or the values of fields transmitted.Make similar changes wherever this term is used. | Revised: Instruct the editor to change Clause 10.61.1 P234L28 to read: "An EDMG PCP or AP may use the distributed scheduling protocol to improve spatial sharing and interference mitigation with other BSSs that use one or more of the same channels. An EDMG PCP or AP with dot11EDMGDistributed SchedulingProtocolActivated equal to true shall enable ~~that uses~~ the distributed scheduling protocol ~~shall~~ by setting the Distributed Scheduling Enabled subfield to 1 in a transmitted EDMG Extended Schedule element. An EDMG PCP or AP shall follow the distributed scheduling protocol as described in this clause during any beacon interval in which the Distributed Scheduling Enabled subfield is set to 1.” Instruct the editor to define an MIB variable “dot11EDMGDistributedSchedulingProtocolActivated” in Annex C as part of Dot11EDMGSTAConfigEntry with default value of false.Instruct the editor to change line 4 of page 195 in subclause 10.61.3 P234L28 as follows:“…within its BSS, ~~a distributed scheduling enabled~~ an EDMG PCP or AP with the Distributed Scheduling Enabled subfield set to 1 shall listen for DMG Beacon frames…” Instruct the editor to change lines 23-25 of page 195 in subclause 10.61.3 P234L28 as follows:“…with no SPs of ~~distributed scheduling enabled~~ PCPs or APs that have the Distributed Scheduling Enabled subfield set to 1 (i.e., the PCP or AP is allowed to schedule over the SPs of neighbors that ~~are~~ have not enabled the distributed scheduling ~~enabled~~ protocol). A ~~distributed scheduling enabled~~ PCP or AP with the Distributed Scheduling Enabled subfield set to 1 may schedule CBAPs anywhere in the DTI…” |
| 1657 | Jinjing Jiang | 195 | Detecting DMG beacon frames from neighbor BSS is different from getting interference during the overlapping SP. The beacon frames are more easily heard than the high-directional transmission in SP. Dividing the beacon interval equally among nearby BSSs seems to be sub-optimal. Any enhancement? | Please clarify | Rejected:Extensive simulations show that in dense environments (where Distributed Scheduling is intended for use), PCP/APs suffer significant packet losses when they schedule SPs on top of each other, despite the use of directional transmissions.Also, the protocol already provides a means for taking advantage of reuse opportunities provided by directional transmissions, by allowing PCP/APs to schedule CBAPs on top of neighboring PCP/APs’ SPs. In other words, it is a mistake to \*assume\* that scheduling SPs on top of each other is ok. However, scheduling a CBAP, which will test the channel before attempting to transmit, on top of an SP is ok. The protocol provides for this distinction.  |
| 1796 | Kazuyuki Sakoda | 194 | It is nice that distributed scheduling protocol allows coordination among neighboring BSSs without running complicated procedures such as MMSL cluster operation. However, there is no description if distributed scheduling runs based on the assumption that neighboring BSSs maintain their own local TSFs without time sync coordination. |  | Rejected: The distributed scheduling protocol does not require neighboring BSSs to maintain time sync coordination. The AP/PCP estimates the timing of its neighbors' allocations based on when it received its neighbors' ESEs. |
| 1797 | Kazuyuki Sakoda | 194 | Distributed scheduling protocol should be enabled by a MIB variable, which is missing. | Add "When dot11EDMGDistributedSchedulingProtocolActivated is true, EDMG STA shall use distributed scheduling protocol defined in 10.61." at the beginning of the 1st paragraph in 10.61.1. Also, define a MIB variable dot11EDMGDistributedSchedulingProtocolActivated in Annex C. | Revised: Instruct the editor to change Clause 10.61.1 P234L28 to read: "An EDMG PCP or AP may use the distributed scheduling protocol to improve spatial sharing and interference mitigation with other BSSs that use one or more of the same channels. An EDMG PCP or AP with dot11EDMGDistributed SchedulingProtocolActivated equal to true shall enable ~~that uses~~ the distributed scheduling protocol ~~shall~~ by setting the Distributed Scheduling Enabled subfield to 1 in a transmitted EDMG Extended Schedule element. An EDMG PCP or AP shall follow the distributed scheduling protocol as described in this clause during any beacon interval in which the Distributed Scheduling Enabled subfield is set to 1.” Instruct the editor to define an MIB variable “dot11EDMGDistributedSchedulingProtocolActivated” in Annex C as part of Dot11EDMGSTAConfigEntry with default value of false. |
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| 1801 | Kazuyuki Sakoda | 195 | "..., it shall randomly schedule its remaining SPs over time periods..." It may not be a good idea to schedule SP that overlaps with neighboring BSSs. At least it should not be mandated. | Please consider to replace "..., it shall randomly schedule its remaining SPs over time periods..." with "..., it may randomly schedule its remaining SPs over time periods..." | Revised:Instruct the editor to make the following change in line 22 on page 195 in subclause 10.61.3 of P234L28:“…it may ~~shall~~ randomly schedule its remaining SPs over time periods…” |