IEEE P802.11  
Wireless LANs

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| 11-21-1821-00-000m-CC35 -- 13 GEN CIDs | | | | |
| Date: 2021-11-08 | | | | |
| Author(s): | | | | |
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|  |  |  |  |  |

Abstract

This submission contains 13 CIDs assigned to Jon Rosdahl.

R0: Initial file.

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| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** |
| 497 |  | C.3 | It is meaningless for capability MIB attributes to have defaults | Delete all DEFAULT lines for MIB attributes where the DESCRIPTION says the attribute is a "capability variable" (e.g. dot11OpportunisticTransmissionsImplemented) |

AdHoc Notes:

"GEN: 2021-09-16 21:55:45Z - status set to: Submission Required -

Check the ARC Template - No value in having a DEFAULT, so look for how many need to be removed.

IF a Submission is not submitted, this CID will be resolved with ""Reject; The comment fails to identify changes in sufficient detail so that the specific wording of the changes that will satisfy the commenter can be determined.""

GEN: 2021-05-15 23:39:25Z - status set to: Discuss"

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| 230 |  | C.3 |  |  | Status variables, e.g. dot11CMMGCurrentChannelWidth, should not have defaults | Remove the DEFVAL line for all status variables |

AdHoc Notes:

GEN: 2021-05-12 22:26:40Z - status set to: Submission Required

From Minutes:

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| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** |
| 423 |  | B.4 | DMG only uses Extended Channel Switch Announcement, but PICS doesn't capture this (SM4.5 has the DMG exclusion, but SM20 and DSE9 don't mention DMG) | As it says in the comment |

AdHoc Notes:

"GEN: 2021-09-16 21:50:22Z - status set to: Submission Required

Clause should be in B.4

""AND NOT CFDMG:M"" to SM20.\* and DSE9.\* would be the change to the PICs - need to have page and line number - about 20 instances.

GEN: 2021-05-15 23:41:15Z - status set to: Discuss"

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| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** |
| 372 | 199.00 | 3.2 | "transmitted basic service set identifier (BSSID): The BSSID included in the medium access control (MAC) header transmitter address field of a Beacon frame when the multiple BSSID capability is supported." -- "transmitter address" should be "TA" since the field is referred to as the TA field | As it says in the comment |

AdHoc Notes:

"GEN: 2021-10-25 16:44:13Z - AI: Jon circulated discussion on reflector. -

Options for resolution:

A) Change ""...transmitter address field..."" to ""...transmitter address (TA) field…""

B) Change to ""...transmitter address field..."" to ""...TA field…""

C) Change ""...transmitter address field… to ""... Address 2 field…""

GEN: 2021-05-24 15:51:34Z - status set to: Discuss

Straw Poll for a Proposed Resolution for CID 372

A) Change ""...transmitter address field..."" to ""...transmitter address (TA) field…""

B) Change to ""...transmitter address field..."" to ""...TA field…""

C) Abstain.

Results: 4-4-2 (8 no response)

GEN: 2021-05-14 15:57:02Z - status set to: Review

GEN: 2021-05-14 14:15:38Z -

Proposed Resolution: Revised

p199.51

""transmitted basic service set identifier (BSSID): The BSSID included in the medium access control

(MAC) header transmitter address field of a Beacon frame when the multiple BSSID capability is supported."" --

Change ""...transmitter address field..."" to ""...transmitter address (TA) field…"""

**Discussion:**

Discussion:

There are 32 instances of "transmitter address" in the D0.0 standard.

In the definitions clause 3.2, transmitter address is used 3 times:

1. p175.58: "bandwidth signaling transmitter address (TA): A TA that is used......"
2. p187.27: "nonbandwidth signaling transmitter address (TA): An address in the TA field of an medium access"
3. p199.51(D0.0) – the one in question.

"transmitted basic service set identifier (BSSID): The BSSID included in the medium access control (MAC) header transmitter address field of a Beacon frame when the multiple BSSID capability is supported."

In clause 3.4 Acronyms:

TA transmitter address or transmitting station address

TTAK TKIP-mixed transmitter address and key

The use of "transmitter address" followed by (TA) in two of 3 instances in the definition clause leads to justification for using it in the 3rd definition. Interesting the TA in the first two instances has a pre adjective given in both cases, but the acronym TA is used without the pre adjective when used in the definition.

The "Medium Access Control (MAC)" is spelled out and an acronym given, which also gives support for the use of transmitter address (TA).

There are 8 instances of "transmitter address (TA)" in the standard.

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| 336 |  | C.3 | "Its value is determined by device capabilities." should be "Its value is determined by STA capabilities." | As it says in the comment |

AdHoc Notes:

"GEN: 2021-09-16 21:42:43Z - status set to: Submission Required - Some MIB Atributes have co-located logical entities, so a check for each would have to be make to make a global change.

The Use of ""device"" is in an ARC Doc - Jon To check on the template doc and look for definition of ""Device"" as apposed to ""STA"". If a thing contains multiple devices, then it may be ambiguous.

Device is used in many places and it is not always a STA. There is a large number of ""Device"" and it would require a check one by one.

ED2: 2021-04-26 16:05:47Z - Transfer to GEN ad-hoc.

ED2: 2021-04-25 11:08:40Z - status set to: Discuss"

From Minutes:

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| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** |
| 393 | 300.00 | 5.1.1.4 | "-- QoSAck, if the frame is an individually addressed frame and is acknowledged by the STA. -- QoSNoAck, if the frame is a group addressed frame and is not acknowledged by the STA." is weird, because it suggests you might have a unicast Data frame that is not acked, or a group-addressed Data frame that is acked | Change to "(and so is acknowledged by the STA)" or similar |

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| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** |
| 249 | 299.00 | 5.1.1.3 | "The received individually addressed frames at a QoS STA may be as follows: a) Non-QoS subtypes, in which case the STA shall assign to them a priority of Contention." -- this is also true if they're group addressed | Change to "Data frames received by a STA may be of: [...]" |

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| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** |
| 184 | 165.00 | 3.2 | "peer-to-peer link: A direct link within a quality-of-service (QoS) basic service set (BSS), a tunneled direct- link setup (TDLS) link, or a station-to-station (STA-to-STA) communication in an independent basic service set (IBSS)." is broken since it mixes "link" with "communication" | Change to "peer-to-peer link: A station-to-station (STA-to-STA) link between tunneled direct- link setup (TDLS) peer STAs in an infrastructure basic service set (BSS) or between STAs in an independent basic service set (IBSS)." |

Adhoc Notes:

GEN: 2021-05-24 15:40:09Z - status set to: Discuss

GEN: 2021-05-13 13:17:16Z - status set to: Review

Similar to CID 563, 183 and 184

Proposed Resolution: Change peer to peer link definition:

Option 1: (Revised)

peer-to-peer link: A tunneled direct-link setup (TDLS) link, or a station-to-station (STA-to-STA) communication in a directional multi-gigabit (DMG) basic service set (BSS) or independent basic service set (IBSS).

Option2: (Accept)

peer-to-peer link: A station-to-station (STA-to-STA) link between tunneled direct-

link setup (TDLS) peer STAs in an infrastructure basic service set (BSS) or between STAs in an independent basic service set (IBSS).

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| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** |
| 183 | 165.00 | 3.2 | "peer-to-peer link: A direct link within a quality-of-service (QoS) basic service set (BSS), a tunneled direct- link setup (TDLS) link, or a station-to-station (STA-to-STA) communication in an independent basic service set (IBSS)." is broken since there are no direct links other than TDLS and IBSS ones | Change to "peer-to-peer link: A tunneled direct- link setup (TDLS) link or a station-to-station (STA-to-STA) communication in an independent basic service set (IBSS)." |

AdHoc Notes:

GEN: 2021-05-24 15:39:22Z - status set to: Discuss

GEN: 2021-05-13 13:11:44Z - status set to: Review

Similar to CID 563, 183 and 184

Proposed Resolution: Revised; Change peer to peer link definition:

Option 1:

peer-to-peer link: A tunneled direct-link setup (TDLS) link, or a station-to-station (STA-to-STA) communication in a directional multi-gigabit (DMG) basic service set (BSS) or independent basic service set (IBSS).

Option2:

peer-to-peer link: A station-to-station (STA-to-STA) link between tunneled direct-

link setup (TDLS) peer STAs in an infrastructure basic service set (BSS) or between STAs in an independent basic service set (IBSS).

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| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** |
| 563 | 165.00 | 3.1 | We already have the following definition for "direct link": "A bidirectional link from one quality-of-service (QoS) station (STA) to another QoS STA operating in the same infrastructure QoS basic service set (BSS) that does not pass through a QoS access point (AP)..."  and DLS has been removed in 802.11-2020. We can drop "direct link" from the peer-to-peer definition. | Change peer-to-peer link definition to: "Peer-to-peer link: A tunneled direct-link setup (TDLS) link, or a station-to-station (STA-to-STA) communication in a directional multi-gigabit (DMG) basic service set (BSS) or independent basic service set (IBSS). |

AdHoc Notes:

"GEN: 2021-05-24 15:39:13Z - status set to: Discuss

GEN: 2021-05-13 13:10:05Z - status set to: Review

Similar to CID 563, 183 and 184

Proposed Resolution: Change peer to peer link definition:

Option 1: (Accept)

peer-to-peer link: A tunneled direct-link setup (TDLS) link, or a station-to-station (STA-to-STA) communication in a directional multi-gigabit (DMG) basic service set (BSS) or independent basic service set (IBSS).

Option2: (Revised)

peer-to-peer link: A station-to-station (STA-to-STA) link between tunneled direct-

link setup (TDLS) peer STAs in an infrastructure basic service set (BSS) or between STAs in an independent basic service set (IBSS)."

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| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** |
| 181 |  |  | "shall be able to" should be "shall" or "shall, if <condition>,". Ditto "shall be capable of" | As it says in the comment |

AdHoc Notes:

GEN: 2021-10-01 15:32:56Z - status set to: Discuss  
  
From Minutes 2021-05-24:

1.9.5. CID 183 (GEN):  
1.9.5.1. See also CIDs 184 and 563.  
1.9.5.2. Presented two options. Second option does not include DMG case in the definition of peer-to-peer link.  
1.9.5.3. Request for more time to review.  
1.9.5.4. ACTION ITEM #3: Jon ROSDAHL: Send proposed resolutions to the reflector.  
1.9.5.5. Move 183, 194 and 563 to Comment “Group Definitions Clause 3” and mark as Discuss.

GEN: 2021-05-20 16:19:20Z - See also 164 and 546   
GEN: 2021-05-12 22:17:08Z - status set to: Submission Required

Email Exchange:

There are 24 instances of “shall be able to”.

**Discussion:**

  Changing “shall be able to" should be "shall" is fine in most cases, but it seems that for a particular STA that must be able to perform certain tasks, as described in the phrase after the “shall be able to”….it may be proper to leave as is.

CID 546 changed “shall be capable of” to “shall support”.

**Proposed Resolution:**

Review (remove "be able to") pages relative to D0.0

**P773.7** change "A STA shall be able to properly construct"

* "A STA shall properly construct"

**P773.12** change "A STA shall be able to validate"

* "A STA shall validate"

**p1701.34** change "a non-DMG STA shall be able to interpret Control frames"

* " a non-DMG STA shall interpret Control frames"

**p1701.36** change "a DMG STA shall be able to interpret Control Frames”

* "a DMG STA shall interpret Control frames"

**p1820.30** change "non-S1G STA shall be able to respond to QoS"

* "non-S1G STA shall respond to QoS"

**p1825.12** change "A QoS STA shall be able to receive QoS"

* "A QoS STA shall receive QoS"

**p1825.30** change "A Qos STA shall be able to process received QoS"

* "A Qos STA shall process received QoS"

**p1831.10** change "A non-AP STA with dot11RAWOperationImplemented equal to true shall be able to follow the RAW procedure, as described in this subclause."

* "A non-AP STA with dot11RAWOperationImplemented equal to true shall follow the RAW procedure, as described in this subclause."

**p1840.39** change "A mesh STA with dot11MCCAActivated equal to true shall be able to track at least"

* "A mesh STA with dot11MCCAActivated equal to true shall track at least"

**p1840.42** change "mesh STA shall be able to track, set up, and accept"

* "mesh STA shall track, set up, and accept"

**P1889.4** change "During a PSMP sequence, a STA shall be able to receive frames"

* "During a PSMP sequence, a STA shall receive frames"

**p2051.1** change "An S1G STA that is starting a BSS shall be able to receive and transmit"

* "An S1G STA that is starting a BSS shall receive and transmit"

**p2051.4** change "MLME-START.request primitive and shall be able to receive at each"

* "MLME-START.request primitive and shall receive at each"

**P2081.36** change "A Sectorized beam capable AP supporting TXOP-based sectorization operation shall be able to transmit or receive through both the omnidirectional beam or the sectorized beams."

* "A Sectorized beam capable AP supporting TXOP-based sectorization operation shall transmit or receive through both the omnidirectional beam or the sectorized beams.

**P2303.3** change - "An HT STA that is starting or joining a BSS shall be able to receive and transmit at each of the MCS values listed…”

* “An HT STA that is starting or joining a BSS shall receive and transmit at each of the MCS values listed…”

**P2426.14** change - "An HCCA AP for which dot11PublicTXOPNegotiationActivated is true or dot11ProtectedTXOPNegotiationActivated is true shall be able to maintain one or more dot11APCEntry(s) for each collaboration candidate in the dot11APCTable. These fields indicate the schedules that the AP should try to avoid using when creating schedules for new TS requests."

* "An HCCA AP for which dot11PublicTXOPNegotiationActivated is true or dot11ProtectedTXOPNegotiationActivated is true shall maintain one or more dot11APCEntry(s) for each collaboration candidate in the dot11APCTable. These fields indicate the schedules that the AP should try to avoid using when creating schedules for new TS requests."

**P2470.63-2471.4** change to "shall support", in alignment with CID 546

“A STA that is starting a VHT BSS shall be able to receive and transmit at each of the <VHT-MCS, NSS> tuple values indicated by the Basic VHT-MCS And NSS Set field of the VHT Operation parameter of the MLME-START.request primitive and shall be able to receive at each of the <VHT-MCS, NSS> tuple values indicated by the Supported VHT-MCS And NSS Set field of the VHT Capabilities parameter of the MLME-START.request primitive.”

* “A STA that is starting a VHT BSS shall support receive and transmit at each of the <VHT-MCS, NSS> tuple values indicated by the Basic VHT-MCS And NSS Set field of the VHT Operation parameter of the MLME-START.request primitive and shall support receive at each of the <VHT-MCS, NSS> tuple values indicated by the Supported VHT-MCS And NSS Set field of the VHT Capabilities parameter of the MLME-START.request primitive.”

**P2482.34-39** change to "shall support", in alignment with CID 546

“The STA that is starting a TVHT BSS shall be able to receive and transmit at each of the <VHT-MCS, NSS> tuple values indicated by the Basic VHT-MCS And NSS Set field of the VHT Operation parameter of the MLME-START.request primitive and shall be able to receive at each of the <VHT-MCS, NSS> tuple values indicated by the Supported VHT-MCS and NSS Set field of the VHT Capabilities parameter of the MLMESTART.request primitive.”

* “The STA that is starting a TVHT BSS shall support receive and transmit at each of the <VHT-MCS, NSS> tuple values indicated by the Basic VHT-MCS And NSS Set field of the VHT Operation parameter of the MLME-START.request primitive and shall support receive at each of the <VHT-MCS, NSS> tuple values indicated by the Supported VHT-MCS and NSS Set field of the VHT Capabilities parameter of the MLMESTART.request primitive.”

**P2508.59-65** change to "shall support", in alignment with CID 546

“A STA that is starting a CMMG BSS shall be able to receive and transmit at each of the <CMMG-MCS, NSS> tuple values indicated by the Basic CMMG-MCS and NSS Set field of the CMMG Operation parameter of the MLME-START.request primitive and shall be able to receive at each of the <CMMG-MCS, NSS> tuple values indicated by the Supported CMMG-MCS and NSS Set field of the CMMG Capabilities parameter of the MLME-START.request primitive.

* “A STA that is starting a CMMG BSS shall support receive and transmit at each of the <CMMG-MCS, NSS> tuple values indicated by the Basic CMMG-MCS and NSS Set field of the CMMG Operation parameter of the MLME-START.request primitive and shall support receive at each of the <CMMG-MCS, NSS> tuple values indicated by the Supported CMMG-MCS and NSS Set field of the CMMG Capabilities parameter of the MLME-START.request primitive.

**P2954.38** change to "shall support", in alignment with CID 546- “An HT STA that does not support the reception of an HT-greenfield format packet shall be able to detect that an HT-greenfield format packet is an HT transmission (as opposed to a non-HT transmission)”

* “An HT STA that does not support the reception of an HT-greenfield format packet shall support detection that an HT-greenfield format packet is an HT transmission (as opposed to a non-HT transmission)

**P3035.19** change to "shall support", in alignment with CID 546- – “The receiver shall be able to decode a PPDU that was transmitted with a RIFS separation from the previous PPDU.”

* “The receiver shall support decoding a PPDU that was transmitted with a RIFS separation from the previous PPDU.”

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| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** |
| 164 |  |  | "shall be capable of" is not clear. It might allow a device to be capable of doing something, but not actually do it | Change to "shall" in each case. Ditto "shall be able to" |

AdHoc Notes:

GEN: 2021-10-01 15:33:36Z - status set to: Submission Required  
  
GEN: 2021-05-12 22:27:19Z - status set to: Submission Required

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| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** |
| 111 |  |  | "that intends" is used 23 times in md D5.0, STAs and APs do not intend to do anything, these requirements should be reworded, and the phrase removed. | Remove "that intends". e.g. Current "A source DMG STA that intends to set up relay operation with a destination DMG STA shall obtain the capabilities of the destination DMG STA prior to initiating the relay setup ..." propose: "A source DMG STA shall obtain the capabilities of the destination DMG STA prior to initiating the relay setup ...". |

AdHoc Notes:

GEN: 2021-05-11 21:13:16Z - status set to: Submission Required

**References:**