IEEE P802.11  
Wireless LANs

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| 802.11  IEEE P802.11aj D3.0 Mandatory Draft Review (MDR) Report | | | | |
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**Abstract**

This document contains the report of the 802.11aj Mandatory Draft Review.

# 3999Introduction

## Purpose of this document

This document is the report from the group of volunteers that participated in the P802.11aj/D3.0 mandatory draft review.

This document contains recommendations for changes to P802.11aj to bring it into improved compliance to IEEE-SA and WG11 style.

Those recommended changes need to be reviewed by TGaj and approved, or ownership of the issues taken by TGaj.

## Process / references

The MDR process is described in:

* 11-11/615r5 – Mandatory Draft Review process
  + https://mentor.ieee.org/802.11/dcn/11/11-11-0615-05-0000-wg802-11-mec-process.doc

And references:

* 11-09/1034r11 – 802.11 Editorial Style Guide
  + https://mentor.ieee.org/802.11/dcn/09/11-09-1034-11-0000-802-11-editorial-style-guide.doc

## Acknowledgements

The 802.11 technical editors (Robert Stacey and Peter Ecclesine) gratefully acknowledge the work and contribution of:

* Jiamin Chen
* Edward Au
* Yongho Seok

Review assignments:

1. Style guide clause 2.1 to 2.6–Jiamin Chen
2. Style guide clause 2.7 to 2.18–Edward Au
3. Style guide clause 3 –Robert Stacey
4. MIB style and compiles with no extra warnings–Yongho Seok
5. ANA check –Robert Stacey

## Actions arising

# Findings

***Findings from Jiamin Chen:***

**2.1 Frames**

**2.1.1 Frame Format Figures**

P24L8the bit labels above the cell in Figure 9-14a (45MG Control Field) are wrong for the incorrect numbing with MFB and MSI/STBC subfields. Create the bit labels by inserting“B<number><tab>B<number>” and set the justification to left as noted in the .11 style guide. Check all frame format figures throughout the draft. P26L6,

Editor[M]: Do as noted above.P30L11 remove the underline below “Reserved”.

Editor[A].

P41L32 missing bit labels for the subfields.

Editor[M]: Insert bit labels for the subfields.

P44L6 the figure is newly defined in 11aj, so no needs to apply underline for the bit lables of “Truncation Type” and “Protected period”subfields.

Editor[M]: Remove the underline.P46L31 missing bit labels for the subfields.

Editor[M]: Insert bit labels for the subfields.P46L58 remove the underline below “Reserved” in the last subfield.

Editor[A].

P47L53missing bit labels for the subfields.

Editor[M]: Insert bit labels for the subfields.

P48L5 missing bit labels for the subfields.

Editor[M]: Insert bit labels for the subfields.

P49L3L57missing bit labels for the subfields.

Editor[M]: Insert bit labels for the subfields.

P52L35L49missing bit labels for the subfields.

Editor[M]: Insert bit labels for the subfields.

P58L6, P58-59 (Figure 9-587w) missing bit labels for the subfields.

Editor[M]: Insert bit labels for the subfields.

P62L35, P63L8, P64L3, P64 (Figure 9-587aa) missing bit labels for all subfields.

Editor[M]: Insert bit labels for the subfields.

P67L59 missing bit labels for the subfields.

Editor[M]: Insert bit labels for the subfields.

P66L58 missing“Bits:”

Editor[M]: Insert “Bits”here.

P51L24 missing“Octets:”

Editor[M]: Insert “Octets:” here.

**2.1.1.1 Optional Fields**

No findings

**2.1.2 Naming Frames**

P15L50 change to “...TSPEC element in an ADDTS Request frame]”

Editor[A].

P89L45 change to “A STA transmitting an Ack frame or a BlockAck frame in response to a frame sent using the 45MG SC modulation class or 45MG OFDM modulation class shall use an MCS from the mandatory MCS set of the 45MG SC modulation class as long as (a) the selected MCS has a ~~D~~data~~R~~rate that does not exceed the ~~D~~data~~R~~rate of the frame that elicited the response,…”

Editor[A].

P89L31 missing space “class)and…”

Editor[M]: Change to “class) and…”

P90L49 change “A data or management frame for SC….” to “A Data or Management frame for SC”

Editor[A].

P90L54L57 change “…management frames…” to “…Management frames…”.

Editor[A].

P104L42 change to “…an explicit ~~B~~beamforming feedback frame transmitted…”

Editor[A].

P137L14 reference to a full frame name. Change to “The Link Measurement Request and Link MeasurementReport frames”

Editor[A].

**2.2 Case of true/false**

P192L33 change “TRUE” to “true”

Editor[A].

P192L38 change “FALSE” to “false”

Editor[A].

**2.3 “Is set to”**

P44L33 change to “For an SP allocation, the Truncatable subfield is set to 1 toindicate~~s~~ that the source CDMG STA…”

Editor[A].

P44L56 replace “is set to 0” with “is equal to 0”

Editor[A].

P44L57 replace “is set to 1” with “is equal to 1”

Editor[A].

P44L63 replace “is set to 0” with “is equal to 0”

Editor[A].

P49L30 replace “are set to 0” with “are equal to 0”

Editor[A].

P56L37 change to “If the Backup AWV Setting subfield is set to 1, the Peer Tx\_Sector ID field is set to ~~indicates~~ the Sector ID of the alternative Tx AWV of the peer STA.”

Editor[A].

P56L37 change to “If the Backup AWV Setting subfield is set to 1, the Peer Tx\_Antenna ID field is set to ~~indicates~~ the Antenna ID of the alternative Tx AWV of the peer STA.”

Editor[A].

P57L62 change to “~~If t~~The Clustering SPSH Enabled field is set to 0~~, it~~ to indicate~~s~~ that a SPSH measurement phase starts. ~~If t~~The Clustering SPSH Enabled field is set to 1~~, it~~ to indicate~~s~~ that the SPSH measurement phase for all member APs or member PCPs terminates, …”

Editor[A].

P67L10 replace “is set to 1” with “is equal to 1”

Editor[A].

P67L11 replace “is set to 0” with “is equal to 0”

Editor[A].

P100L35 replace “is set to 1” with “is equal to 0”

Editor[A].

P117L41 replace “are set to 0” with “are equal to 0”. Replace “is set to 1” with “is equal to 1”

Editor[A].

P117L42 replace “is set to 1” with “is equal to 1”

Editor[A].

P131L18-19 replace “set to 1” with “equal to 1”

Editor[A].

P131L19 replace “set to 0” with “equal to 0”

Editor[A].

P135L4 replace “is 1” with “is equal to 1”

Editor[A].

P140L56 replace “…the DMG Beacon frame is to 0” with “…the DMG Beacon frame is set to 0”

Editor[A].

P143L7 replace the two instances “is set to 1” with “is equal to 1”

Editor[A].

P147L8 replace “is set to 1” with “is equal 1” and “is set to 0” with “is equal to 0”

Editor[A].

P184L1 replace “is set to 1” with “is equal to 1”

Editor[A].

P192L29 replace “is set to 1” with “is equal to 1”

Editor[A].

P207L21 replace “is set to 0” with “is equal to 0”

Editor[A].

**2.4 Information Elements/Subelements**

**2.4.1 Naming**

P153L48 replace “SSW Report information element”with“SSW Report element”

Editor[A].

P285L17 replace “SSW Report information element”with“SSW Report element”

Editor[A].

P47L23 replace “CDMG Capabilities” with “CDMG Capabilities element”

Editor[A].

P137L33 replace “45MG Link Margin Sub-element” with “45MG Link Margin Subelement”

Editor[A].

**2.4.2 Definition Conventions**

P23L51 replace “the Order subfield is 1 bit in length. It is used for two purposes:” with “the Order subfield is used for two purposes:”

Editor[M]: remove “is 1 bit in length. It”.

P56L20 replace “The 45MG MIMO Control is 5 octets in length and is defined in Figure 9-120a.” with “The 45MG MIMO Control field is defined in Figure 9-120a”

Editor[A].

**2.5 Naming of MIB Variables**

The following MIB variables are not present in Annex Ceither in 11aj D3.0 or REVmc D8.0:

For CDMG STAs :

dot11DynamicChannelTransferActivated

For 45MG STAs:

dot1145MGTXOPPowerSaveOptionImplemented

dot1145MGOBSSScanCount

dot1145MGBeamformerOptionImplemnted

dot11SCPHYActivated

dot11MaxNTxChainsImplemented

dot11MaxNTxChainsActivated

dot11BeamformeeOptionImplemented

dot11BeamformerOptionImplemented

dot11NumberSoundingDimensions

dot11BeamformeeNTxSupport, if it is a control variable, “Support” 🡪 “Activated”

Editor[M]: Remove those MIB variables that are not defined in Annex C.

**2.6 Removal of functions and features**

No findings.

***Findings from Edward Au:***

**2.7 Capitalization (150 findings)**

1. Editor[A]: Accept the following proposed 150 replacements in 2.7 (Capitalization). ii.2: replace "Chinese Millimeter wave" with "Chinese millimeter wave" (two appearances).
2. ii.6: replace "Chinese Millimeter Wave Frequency Band" with "Chinese millimeter wave frequency band".
3. 6.18: replace "Zero Correlation Zone sequences" with "zero correlation zone (ZCZ) sequences".
4. 18.10: replace "DCT Measurement Request" with "DCT Measurement Request frame".
5. 18.56: replace "DCT Measurement" with "DCT measurement".
6. 19.33: replace "DCT Measurement" with "DCT measurement".
7. 20.10: replace "DCT Measurement" with "DCT measurement".
8. 20.50: replace "DCT Request" with "DCT request".
9. 21.28: replace "DCT Request" with "DCT request".
10. 22.10: replace "DCT Response" with "DCT response".
11. 22.17: replace "DCT Request" with "DCT response".
12. 22.51: replace "DCT Response" with "DCT response".
13. 34.55: In the cell "Field", replace "receive chain" with "Receive Chain".
14. 34.60: In the cell "Field", replace "receive chain" with "Receive Chain".
15. 34.63: In the cell "Field", replace "carrier" with "Carrier".
16. 34.63: In the cell "Meaning", replace "CSI Matrix" with "CSI matrix".
17. 35.7: In the cell "Field", replace "carrier" with "Carrier".
18. 35.7: In the cell "Meaning", replace "CSI Matrix" with "CSI matrix".
19. 35.9: In the cell "Field", replace "carrier" with "Carrier".
20. 35.9: In the cell "Meaning", replace "CSI Matrix" with "CSI matrix".
21. 35.12: In the cell "Field", replace "carrier" with "Carrier".
22. 35.12: In the cell "Meaning", replace "CSI Matrix" with "CSI matrix".
23. 36.18: In the cell "Field", replace "space-time stream" with "Space-Time Stream".
24. 36.23: In the cell "Field", replace "space-time stream" with "Space-Time Stream".
25. 36.27: In the cell "Field", replace "subcarrier" with "Subcarrier".
26. 36.31: In the cell "Field", replace "subcarrier" with "Subcarrier".
27. 36.34: In the cell "Field", replace "subcarrier" with "Subcarrier".
28. 36.38: In the cell "Field", replace "subcarrier" with "Subcarrier".
29. 38.62: In the cell "Field", replace "subcarrier" with "Subcarrier".
30. 38.65: In the cell "Field", replace "subcarrier" with "Subcarrier".
31. 39.7: In the cell "Field", replace "subcarrier" with "Subcarrier".
32. 39.12: In the cell "Field", replace "subcarrier" with "Subcarrier".
33. 39.22: Replace "in the 45MG Compressed Beamforming Report Information" with "in the 45MG compressed beamforming report information".
34. 39.23: Replace "in the 45MG Compressed Beamforming Report Information" with "in the 45MG compressed beamforming report information".
35. 57.39: Replace "the Measuring Source AID STA to the Measuring Destination AID STA" with "the measuring source AID STA to the measuring destination AID STA".
36. 60.14: In the cell "Meaning", replace "TXOP Power Save Mode" with "TXOP power save mode".
37. 60.15: In the cell "Definition", replace "TXOP Power Save Mode" with "TXOP power save mode".
38. 60.17: In the cell "Meaning", replace "TXOP Power Save Mode" with "TXOP power save mode".
39. 60.18: In the cell "Meaning", replace "TXOP Power Save Mode" with "TXOP power save mode".
40. 60.19: In the cell "Definition", replace "TXOP Power Save Mode" with "TXOP power save mode".
41. 60.19: In the cell "Meaning", replace "TXOP Power Save Mode" with "TXOP power save mode".
42. 61.14: In the cell "Meaning", replace "Interference Mitigation" with "interference mitigation".
43. 61.15: In the cell "Definition", replace "Interference Mitigation" with "interference mitigation".
44. 61.49: In the cell "Meaning", replace "Heartbeat Elapsed Time" with "heartbeat elapsed time".
45. 61.50: In the cell "Definition", replace "Heartbeat Elapsed Time" with "heartbeat elapsed time".
46. 61.60: In the cell "Meaning", replace "Heartbeat Elapsed Time" with "heartbeat elapsed time".
47. 62.19: In the cell "Definition", replace "Reverse Direction Protocol" with "reverse direction protocol".
48. 62.23: Replace "The value for the Maximum MDPU Length" with "The value for the Maximum MDPU Length subfield".
49. 62.24: Replace "value for the Maximum MDPU Length" with "value for the Maximum MDPU Length subfield".
50. 87.19: Replace "Used for Contention Services" with "Used for contention services".
51. 87.19: Replace "Used for Dynamic Allocation Services" with "Used for dynamic allocation services".
52. 87.22: Replace "Used for Non-data Services" with "Used for non-Data services".
53. 87.22: Replace "Used for Scheduled Service" with "Used for scheduled service".
54. 87.24: Replace "Used for Beamforming" with "Used for beamforming".
55. 90.42: Replace "Supported MCS" with "supported MCS".
56. 93.51: Replace "the Maximum A-MSDU Length" with "the maximum A-MSDU length".
57. 93.52: Replace "the Maximum A-MSDU Length" with "the maximum A-MSDU length".
58. 93.53: Replace "the Maximum A-MSDU Length" with "the maximum A-MSDU length".
59. 100.11: Replace "the Reverse Direction Protocol" with "the reverse direction protocol".
60. 103.63: Replace "explicit Beamforming feedback" with "explicit beamforming feedback".
61. 103.64: Replace "Beamformer" with "beamformer".
62. 103.65: Replace "Beamformer's" with "beamformer's".
63. 104.2: Replace "transmit Explicit CSI feedback" with "transmit explicit CSI feedback".
64. 104.8: Replace "Explicit Noncompressed Beamforming feedback" with "explicit noncompressed beamforming feedback".
65. 104.48: Replace "transmit Explicit Compressed Beamforming feedback" with "transmit explicit compressed beamforming feedback".
66. 104.56: Replace "Explicit CSI feedback" with "explicit CSI feedback".
67. 104.64: Replace "Explicit Noncompressed Beamforming feedback" with "explicit noncompressed beamforming feedback".
68. 105.41: Replace "Explicit Compressed Beamforming feedback" with "explicit compressed beamforming feedback".
69. 105.50: Replace "Explicit Beamforming CSI feedback" with "explicit beamforming CSI feedback".
70. 105.57: Replace "Explicit Noncompressed Beamforming feedback" with "explicit noncompressed beamforming feedback".
71. 105.65: Replace "Explicit Compressed Beamforming feedback" with "explicit compressed beamforming feedback".
72. 106.31: Replace "An Explicit Feedback Request" with "An explicit feedback request".
73. 111.1: Replace "Heartbeat Elapsed Time value" with "heartbeat elapsed time value".
74. 111.8: Replace "Heartbeat Elapsed Time value" with "heartbeat elapsed time value".
75. 111.14: Replace "Heartbeat Elapsed Time value" with "heartbeat elapsed time value".
76. 120.5: Replace "Transmission" with "transmission".
77. 120.5: Replace "Alternative Channel" with "alternative channel".
78. 124.42: Replace "Channel 5 and Channel 6" with "channel 5 and channel 6".
79. 126.35: Replace "DMG Beacons" with "DMG Beacon frames".
80. 136.41: Replace "the Link Margin to" with "the link margin to".
81. 137.28: Replace "Link Measurement Report" with "Link Measurement Report frame".
82. 137.31: Replace "Link Measurement Report" with "Link Measurement Report frame".
83. 137.33: Replace "Sub-element" with "subelement".
84. 137.35: Replace "Link Measurement Report" with "Link Measurement Report frame".
85. 137.39: Replace "Link Measurement Report" with "Link Measurement Report frame".
86. 137.42: Replace "Link Measurement Report" with "Link Measurement Report frame".
87. 137.43: Replace "Link Measurement Report" with "Link Measurement Report frame".
88. 137.61: Replace "Transmission of Link Measurement Request, Link Measurement Report and the frames" with "Transmission of Link Measurement Request frame, Link Measurement Report frame and the frames".
89. 139.24: Replace "DMG Beacon" with "DMG Beacon frame".
90. 152.37: Replace "PSMP Group Address ID" with "PSMP Group Address ID subfield".
91. 152.37: Replace "its Group Address" with "its group address".
92. 153.48: Replace "SSW Report information element" with "SSW Report element".
93. 153.63: Replace "Dynamic Channel Transfer (DCT)" with "dynamic channel transfer (DCT)".
94. 154.32: Replace "the procedure of the Dynamic Channel Transfer" with "the procedure of the dynamic channel transfer".
95. 154.34: Replace "DCT Measure Response frame" with "DCT Measurement Response frame".
96. 154.56: Replace "DCT Measurement Request Mode" with "DCT measurement request mode".
97. 154.58: Replace "DCT Measurement Request Mode" with "DCT measurement request mode".
98. 155.12: Replace "Process DCT Measurement Request action" with "Process DCT Measurement Request frame".
99. 155.12" Replace "Process Measurement/Radio Measurement Request action" with "Process Measurement/Radio Measurement Request frame".
100. 155.23: Replace "Process DCT Request action" with "Process DCT Request frame".
101. 155.45: Replace "DCT Measurement Request" with "DCT Measurement Request frame".
102. 163.35: Replace "Enumerated Type" with "Enumerated type".
103. 163.41: Replace "Enumerated Type" with "Enumerated type".
104. 163.54: Replace "Enumerated Type" with "Enumerated type".
105. 168.15: Replace "SC Chip time" with "SC chip time".
106. 168.22: Replace "Channel Estimation sequence duration" with "Channel estimation sequence duration".
107. 168.24: Replace "Header Duration" with "Header duration".
108. 172.49: Replace "Header Check sequence" with "Header check sequence".
109. 174.46: Replace "Modulation and Coding Scheme" with "Modulation and coding scheme".
110. 175.7: In the cell "Field name", replace "Packet type" with "Packet Type".
111. 182.62: Replace "each Beam Refinement packet" with "each beam refinement packet".
112. 182.63: Replace "an STF, a CE field, and a data field" with "an STF field, a CE field, and a Data field".
113. 183.26: Replace "Prepare CP Header" with "Prepare CP header".
114. 183.27: Replace "Tx SC Header" with "Tx SC header".
115. 183.27: Replace "CW not Full" with "CW not full".
116. 183.28: Replace "Transmit CDMG SC mode Header" with "Transmit CDMG SC mode header".
117. 183.28: Replace "Get PSDU Octet Decrement Length" with "Get PSDU octet decrement length".
118. 183.35: Replace "Get PSDU Octet Decrement Bytes in CW Decrement Length" with "Get PSDU octet decrement bytes in CW decrement length".
119. 183.35: Replace "Encode and Transmit" with "Encode and transmit".
120. 183.42: Replace "Get PSDU Octet Decrement Length" with "Get PSDU octet decrement length".
121. 186.32: Replace "Normal Guard Interval" with "Normal guard interval".
122. 195.58: Replace "Short Guard interval duration" with "Short guard interval duration".
123. 195.60: Replace "Long GI Symbol interval" with "Long SI symbol interval".
124. 195.62: Replace "Short GI Symbol interval" with "Short GI symbol interval".
125. 196.36: Replace "For OFDM Transmission" with "For OFDM transmission".
126. 196.37: Replace "For SC Transmission" with "For SC transmission".
127. 205.29: Replace "Base Matrix prototypes" with "Base matrix prototypes".
128. 209.62: Replace "Index into the Modulation and Coding Scheme table" with "Index into the modulation and coding scheme table".
129. 210.13: Replace "Using Rate-matching" with "Using rate-matching".
130. 216.6: Replace "Control mode Modulation" with "Control mode modulation".
131. 217.41: Replace "The Scrambler" with "The scrambler".
132. 220.3: Replace "the data field" with "the Data field".
133. 229.5: Replace "The Scrambler" with "The scrambler".
134. 234.32: Replace "the data field" with "the Data field".
135. 242.38: Replace "Codebook Information values" with "codebook information values".
136. 257.7: Replace "Set TX Parameters" with "Set TX parameters".
137. 257.20: Replace "CW not Full" with "CW not full" (note there are two appearances).
138. 257.22: Replace "Get PSDU Octet Decrement Bytes in CW Decrement Length" with "Get PSDU octet decrement bytes in CW decrement length" (note there are two appearances).
139. 270.30: Replace "Dynamic Channel Transfer" with "Dynamic channel transfer".
140. 271.4: Replace "CDMG Enhanced Beam Tracking" with "CDMG enhanced beam tracking".
141. 271.29: Replace "China Modulation and coding schemes" with "China modulation and coding schemes".
142. 273.54: Replace "Beacon Report" with "beacon report".
143. 276.54: Replace "CDMG Spatial sharing" with "CDMG spatial sharing".
144. 277.2: Replace "CDMG AP or PCP Clustering" with "CDMG AP or PCP clustering".
145. 278.4: Replace "45MG AP or PCP Clustering" with "45MG AP or PCP clustering".
146. 278.25: Replace "on an Agent" with "on an agent".
147. 279.21: Replace "on an Agent" with "on an agent".
148. 280.19: Replace "Dynamic Channel Transfer Timeout" with "Dynamic channel transfer timeout".
149. 281.3: Replace "Dynamic Channel Transfer Timeout" with "Dynamic channel transfer timeout".
150. 285.17: Replace "SSW Report information element" with "SSW Report element".

**2.8 Terminology (0 finding)**

No problem!

**2.9 Use of verbs & problematic words (66 findings)**

1. 161.12: The normative verb "shall" shall not appear in NOTE, which is an informative text.

Editor[M]: Change the note to main body txtand change editinginstruction as follows:

**“*Insert the following~~note~~ sentence at the end of subclause 12.1.2:***

1. ~~Note:~~ The RSN operations in a 45MG BSS shall be the same with the RSN operations in a DMG BSS.”167.9: The normative verb "shall" shall not appear in NOTE, which is an informative text.

Editor[M]: Change the sentence as follows:

“NOTE—For RF power measurements performed over the air, the input level ~~shall be~~iscorrected to compensate for theantenna gain in the implementation….”

1. 285.58: The normative verb "shall" shall not appear in Annex AA, which is an informative text.

Editor[M]: Remove shall here.

1. 286.30: The normative verb "shall" shall not appear in Annex AA, which is an informative text.

Editor[M]: Change to “Generally, N ~~should~~satif~~y~~ies…”

1. 286.31: The normative verb "shall" shall not appear in Annex AA, which is an informative text.

Editor[M]:Change to “…, N ~~should~~ also satif~~y~~ies…”

1. 27.16: "will" can be used when stating future fact. For the sentence "It is set to 1 to indicate that an NDP will follow", it is not the case however.

Editor[M] Change to “It is set to 1 to indicate that an NDP ~~will~~ follows; otherwise, it is set to 0.”

1. 158.32: Replace "will have after the switch" with "have after the switch".

Editor[A].

1. 238.22: For this sentence "Each two consecutive generative complex constellation numbers will be transmitted …", it is not clear what "Each two" means and please replace "will be transmitted" with "are transmitted".

Editor[M]: Change to “~~Each~~ The two consecutive generative complex constellation numbers ~~will be~~aretransmitted …”

1. 148.55: "only" should apply to a condition, not to a verb. Replace "shall only schedule SPs or CBAPs with non-AP and non-PCP DMG STAs" with "shall schedule only SPs or CBAPs with non-AP and non-PCP DMG STAs".

Editor[A].

1. 244.63: avoid using "… shall … only … ". Replace "The measurements shall occur only on the OFDM symbols" with other equivalent form.
2. Editor[M]. Change to "The measurements shall occur ~~only~~on the OFDM symbolsand shall not occur on the other symbols.".132.53: replace "which" with "that".

Editor[A].

1. 200.10: replace "which" with "that".

Editor[A].

1. 211.20: replace "which" with "that".

Editor[A].

1. 211.31: replace "which" with "that".

Editor[A].

1. 211.36: replace "which" with "that".

Editor[A].

1. Editor[A]: Accept the following proposed replacements(16 to 66) in2.9 (Use of verbs & problematic words.)217.25: not appropriate use of "which". Replace "The operations denoted by the dots line arrow and dots line boxes in the above two figures is optional which are applied for SC MIMO mode transmission" with "The operations denoted by the dot line arrows and dot line boxed in the above two figures are optional, and are applied for SC MIMO mode transmission".
2. 218.45: replace "which" with "that".
3. 228.24: not appropriate use of "which". Replace "The operations denoted by the dots line arrow and dots line boxes in the above two figures is optional which are applied for OFDM MIMO mode transmission" with "The operations denoted by the dot line arrows and dot line boxed in the above two figures are optional, and are applied for OFDM MIMO mode transmission".
4. 148.29: Replace "a RTS frame" with "an RTS frame".
5. 148.31: Replace "a RTS frame" with "an RTS frame".
6. 53.21: Replace "transmit Probe Response frame" with "transmit a Probe Response frame".
7. 61.28: Replace "with SSW frames" with" "with the SSW frames" (note that there are two appearances).
8. 69.12: Replace "the measured link margin of Data frames" with "the measured link margin of the Data frames".
9. 90.54: Replace "in management frames transmitted by the receiver STA" with "in the management frames transmitted by the receiver STA".
10. 90.57: Replace "in management frames transmitted by the receiver STA" with "in the management frames transmitted by the receiver STA".
11. 126.29: Replace "included in Probe Request frames" with "included in the Probe Request frames".
12. 129.11: Replace "it may transmit DMG Beacon frame containing" with "it may transmit a DMG Beacon frame containing".
13. 130.21: Replace "transmit DMG Beacon frame" with "transmit a DMG Beacon frame".
14. 139.62: Replace "transmit DMG Beacon frame" with "transmit a DMG Beacon frame".
15. 113.43: Replace "included in Cluster Report elements or DMG TSPEC elements transmitted by STAs within the BSS" with :included in the Cluster Report elements or DMG TSPEC elements transmitted by STAs within the BSS".
16. 114.65: Replace "may transmit Directional Channel Quality Request element" with "may transmit a Directional Channel Quality Request element".
17. 122.54: Replace "the DBC Option subfield of Dynamic Bandwidth Control element" with "the DBC Option subfield of the Dynamic Bandwidth Control element".
18. 125.50: Replace "the AP or PCP Role subfield of Dynamic Bandwidth Control element" with "the AP or PCP Role subfield of the Dynamic Bandwidth Control element".
19. 125.56: Replace "the AP or PCP Role subfield of Dynamic Bandwidth Control element" with "the AP or PCP Role subfield of the Dynamic Bandwidth Control element".
20. 126.29: Replace "transmit Cluster Probe elements included in Probe Request frames" with "transmit Cluster Probe elements included in the Probe Request frames".
21. 129.26: Replace "Upon receiving a DMG Beacon frame including Cluster Switch Announcement element" with "Upon receiving a DMG Beacon frame including a Cluster Switch Announcement element".
22. 132.57: Replace "after receiving SPSH Report element" with "after receiving the SPSH Report element".
23. 141.46: Replace "with the DBC Option subfield of Dynamic Bandwidth Control element" with "with the DBC Option subfield of the Dynamic Bandwidth Control element".
24. 142.52: Replace "of Dynamic Bandwidth Control element" with "of the Dynamic Bandwidth Control element".
25. 142.62: Replace "with the DBC Option subfield of Dynamic Bandwidth Control element" with "with the DBC Option subfield of the Dynamic Bandwidth Control element".
26. 146.19: Replace "of Dynamic Bandwidth Control element" with "of the Dynamic Bandwidth Control element".
27. 24.38: Replace "MFB2 subfield" with "The MFB subfield".
28. 42.10: Replace "with Feedback Type subfield" with "with the Feedback Type subfield".
29. 99.34: Replace "not set 45MG Link Adaptation Capable subfield to" with "not set the 45MG Link Adaptation Capable Subfield to".
30. 101.10: Replace "of 45MG Control field" with "of the 45MG Control field".
31. 101.50: Replace "the exchange of 45MG Control field elements" with "the exchange of the 45MG Control field elements".
32. 122.54: Replace "with the DBC Option subfield of Dynamic Bandwidth Control element" with "with the DBC Option subfield of the Dynamic Bandwidth Control element".
33. 123.24: Replace "set the first bit of Clustering Status subfield" with "set the first it of the Clustering Status subfield".
34. 129.15: Replace "BI equals to Reported BI Duration field" with "BI equals to the Reported BI Duration field".
35. 129.58: Replace "has source and destination DMG AIDs set to 255 and AllocationType subfield set to 2" with "has the source and destination DMG AIDs set to 255 and the AllocationType subfield set to 2".
36. 130.2: "has source and destination DMG AIDs set to 255 and AllocationType subfield set to 0" with "has the source and destination DMG AIDs set to 255 and the AllocationType subfield set to 0".
37. 135.2: Replace "with TX-TRN-REQ subfield" with "with the TX-TRN-REQ subfield".
38. 135.3: Replace "with TX-TRN-REQ subfield" with "with the TX-TRN-REQ subfield".
39. 137.44: Replace "with Activity field" with "with the Activity field".
40. 141.36: Replace "of Dynamic Bandwidth Control element" with "of the Dynamic Bandwidth Control element".
41. 141.47: Replace "of Dynamic Bandwidth Control element" with "of the Dynamic Bandwidth Control element".
42. 142.55: Replace "obtained from Beacon Interval field" with "obtained from the Beacon Interval field".
43. 141.62: Replace "of Dynamic Bandwidth Control element" with "of the Dynamic Bandwidth Control element".
44. 146.19: Replace "of Dynamic Bandwidth Control element" with "of the Dynamic Bandwidth Control element".
45. 164.17: Replace "during the reception of TRN subfields" with "during the reception of the TRN subfields".
46. 165.55: Replace "without training fields" with "without the training fields".
47. 181.60: Replace "of AGC subfields and TRN units" with "of the AGC subfields and TRN units".
48. 258.62: Replace "the presence of training field" with "the presence of the training field".
49. 259.5: Replace "including AGC and TRN fields" with "including the AGC and TRN fields".
50. 254.63: Replace "the primitive PHY-TXEND.request" with "the PHY-TXEND.request primitive".
51. 255.58: Replace "the primitive PHY-TXEND.request" with "the PHY-TXEND.request primitive".

**2.10 Numbers (17 findings)**

1. 40.51: Replace "an 8-bits twos complement value" with "an 8-bit 2s complement value".

Editor[A].

1. 41.1: Replace "an 8-bits 2s complement integer" with "an 8-bit 2s complement integer".

Editor[A].

1. 203.20: Replace "is the ones complement" with "is the 1s complement".

Editor[A].

1. 226.65: Replace "-71dBm" with "-71 dBm".

Editor[A].

1. 246.12: Replace "-71dBm" with "-71 dBm".

Editor[A].

1. 195.47: Replace "1.51515ns" with "1.51515 ns".

Editor[M]: Change to “1.515 ns”

1. 195.47: Replace "0.757575ns" with "0.757575 ns".

Editor[M]: Change to “0.758 ns”

1. 195.50: Replace "2.272ns" with "2.272 ns".

Editor[A].

1. 195.50: Replace "1.136ns" with "1.136 ns".

Editor[A].

1. 195.54: Replace "387.8787ns" with "387.8787 ns".

Editor[M]: Change to “387.879 ns”.

1. 195.56: Replace "96.969696ns" with "96.969696 ns".

Editor[M]: Change to“96.97 ns”

1. 195.58: Replace "48.484848ns" with "48.484848 ns".

Editor[M]: Change to“48.485 ns”

1. 196.6: Replace "581.8ns" with "581.8 ns".

Editor[A].

1. 196.8: Replace "8145.5ns" with "8145.5 ns".

Editor[A].

1. 196.10: Replace "5818ns" with "5818 ns".

Editor[A].

1. 196.13: Replace "2327.3ns" with "2327.3 ns".

Editor[A].

1. 196.16: Replace "2327.3ns" with "2327.3 ns".

Editor[A].

**2.11 Maths operators and relations (6 findings)**

Editor[A]: Accept the following proposed changes (1-6) in 2.11(Mathsoperatiors and relations)

1. 95.16: bitwise exclusive OR operation is already defined in clause 1.5. Delete this definition at 95.16.
2. 95.17: modulus operation is already defined in clause 1.5. Delete this definition at 95.17.
3. 169.40: modulus operation is already defined in clause 1.5. Delete this definition at 169.40.
4. 172.1: modulus operation is already defined in clause 1.5. Delete "Where mod is the modulus operation".
5. 197.28: Real is already defined in clause 1.5. Delete the real definition at 197.28.
6. 214.51: Floor operation is already defined in clause 1.5. Delete "x means the largest integer smaller than a real number x".

**2.12 Hyphenation (27 findings)**

1. Editor[A]: Accept the following proposed replacements (1-27) in 2.12 (Hyphenation)209.32: Replace "for non-allowing" with "for not allowing".
2. 243.63: Replace "non-identity" with "nonidentity".
3. 251.59: Replace "pre-pend" with "prepend".
4. 131.1: Replace "re-scheduling" with "rescheduling".
5. 131.5: Replace "re-scheduling" with "rescheduling".
6. 221.13: Replace "re-arranged" with "rearranged".
7. 234.65: Replace "re-arranged" with "rearranged".
8. 209.65: Replace "length-672" with "length 672".
9. 215.10: Replace "length-672" with "length 672".
10. 99.28: replace "sub-clause" with "subclause".
11. 134.7: Replace "sub-optimal" with "suboptimal".
12. 135.39 Replace "sub-optimal" with "suboptimal".
13. 137.33: Replace "Sub-element" with "subelement".
14. 204.53: Replace "sub-block" with "subblock".
15. 204.54: Replace "sub-block" with "subblock".
16. 223.30: Replace "sub-blocks" with "subblocks".
17. 223.30: Replace "sub-block" with "subblock".
18. 55.54: Replace "omni-directional" with "omnidirectional".
19. 254.52: Replace "PHY\_TXSTART.request" with "PHY-TXSTART.request".
20. 254.54: Replace "PHY\_TXSTART.request" with "PHY-TXSTART.request".
21. 254.59: Replace "PHY\_TXSTART.req(TXVECTOR)" with "PHY-TXSTART.request(TXVECTOR)".
22. 254.63: Replace "PHYTXEND.request" with "PHY-TXEND.request".
23. 255.45: Replace "PHY\_TXSTART.request" with "PHY-TXSTART.request".
24. 255.48: Replace "PHY\_TXSTART.request" with "PHY-TXSTART.request".
25. 255.53: Replace "PHY\_TXSTART" with "PHY-TXSTART".
26. 258.61: Replace "PHY\_RXEND.ind(No\_Error)" with "PHY-RXEND.indication(NoError)".
27. 91.33: Replace "MLMEJOIN.request" with "MLME-JOIN.request".

**2.13 References to SAP primitives (4 findings)**

Editor[A]: Accept the following proposed replacements (1-4) in 2.13References to SAP primitives ings)n)

1. 255.56: Replace "PHY\_TXSTART.req" with "PHY-TXSTART.request primitive".
2. 255.59: Replace "PHYSTART.request primitive" with "PHY-START.request primitive".
3. 160.24: Replace "MLME-JOIN.request" with "MLME-JOIN.request primitive".
4. 160.27: Replace "MLME-ASSOCIATE.request and MLMEREASSOCIATE.request" with "MLME-ASSOCIATE.request and MLME-REASSOCIATE.request primitives".

**2.14 References to the contents of a field/subfield (1 finding)**

1. 89.12: The use of "value of <field> field" is deprecated.

Editor[M]:Change the paragraph as follows:

“…In the case of an RXSS that was specified through the Beamforming Control field in which ~~with the value of~~ the RXSSTxRate subfield equal to 1 and the RXSSTxRate Supported field in the 45MG Capabilities element of the STA performing the RXSS is 1, the first SSW frame of the RXSS shall be transmitted using the 45MG Control modulation class, and the remaining frames of the RXSS shall be transmitted using MCS 0 of the 45MG SC modulation class….”

**2.15 References to MIB variables/attributes (3 findings)**

1. 154.6: Replace "the value of its local MIB variable dot11DynamicChannelTransferImplemented" with "the value of dot11DynamicChannelTransferImplemented".

Editor[A]:

1. 154.15: Replace "if its local MIB variable dot11DynamicChannelTransferActiviated" with "if dot11DynamicChannelTransferActiviated".

Editor[A]:

1. 154.15: Replace "The MIB variable dot11DynamicChannelTransferActiviated set be set to" with "dot11DynamicChannelTransferActiviated set be set to".

Editor[A]:

**2.16 Hanging Paragraphs (6 findings)**

1. 162.39: There is a hanging paragraph between 25.1.2 and 25.1.2.1.

Editor[M]: Change 25.2.1 as follows:

“**25.1.2 CDMG PHY functions**

**25.1.2.1 General**

The CDMG PHY contains two functional entities: the PHY and the layer management function (PLME).Each of these functions is described in detail in 25.3 (Common parameters) to 25.10 (Golay sequences). The CDMG PHY service is provided to the MAC through the PHY service primitives defined in Clause 8 (PHY service specification).

**25.1.2.~~1~~2PHY management entity (PLME)**

The PLME performs management of the local PHY functions in conjunction with the MLME.

**25.1.2.~~2~~3 Service specification method**

…”

1. 187.11: There is a hanging paragraph between 26.1.3 and 26.1.3.1.

Editor[M]: Change 26.1.3 as follows:

“**26.1.3 45MG PHY functions**

**26.1.3.1 General**

The 45MG PHY contains two functional entities: the PHY and the layer management function (PLME). Each of these functions is described in detail in 26.4 (45MG control mode), 26.5 (45MG SC mode), 26.6 (45MG OFDM mode) and 26.14 (45MG PLME). The 45MG PHY service is provided to the MAC through the PHY service primitives defined in Clause 7.

**26.1.3.~~1~~2 PHY management entity (PLME)**

The PLME performs management of the local PHY functions in conjunction with the MLME.

**26.1.3.~~2~~3 Service specification method**

….”

1. 217.29: There is a hanging paragraph between 26.5.3 and 26.5.3.1.

Editor[M]: Insert the following subclause 26.5.3.1 General as follows:

“**26.5.3 Overview of the PPDU encoding process**

**26.5.3.1 General**

This subclause provides an overview of the 45MG SC mode PPDU encoding process.”

1. 219.8: There is a hanging paragraph between 26.5.5.4 and 26.5.5.4.1.

Editor[M]:Insert the following subclause 26.5.5.4.1 General as follows:

**“26.5.5.4 Encoding and modulations**

**26.5.5.4.1 General**

The modulation and coding scheme defines the modulation and code rate that is used in the PPDU. The modulation and coding schemes are defined in 26.5.6.6 (Constellation mapping).”

1. 228.27: There is a hanging paragraph between 26.6.4 and 26.6.4.1.

Editor[M]:Insert the following subclause 26.5.5.4.1 General as follows:

**“26.5.5.4 Overview of 45MG OFDM mode PPDU encoding process**

**26.5.5.4.1 General**

This subclause provides an overview of the 45MG OFDM mode PPDU encoding process.The modulation and coding scheme defines the modulation and code rate that is used in the PPDU. The modulation and coding schemes are defined in 26.5.6.6 (Constellation mapping).”

1. 261.60: There is a hanging paragraph between 26.15 and 26.15.1.

Editor[M]:Insert the following subclause 26.15.1(General) as follows:

**“26.15. Parameters for 45MG MCSs**

**26.15.1 General**

(Move the now hanging paragraph into the new subclause 26.15.1 (General))”

**2.17 Abbreviations (3 findings)**

1. 4.15: Abbreviations may be defined for terms that are used frequently throughout the document. For UW, however, it is used only twice throughout the document. Delete this abbreviation at 4.15, and replace UW with unique word at 196.45 and 248.35.

Editor[A].

1. 259.26: Replace "45MG PHY management information base (MIB) attributes" with "45MG PHY MIB attributes".

Editor[A].

1. 212.30: Replace "the Received Channel Power Indicator (RCPI) parameter" with "RCPI parameter".

Editor[A].

**2.18 Format for code/pseudocode (1 finding)**

1. 118.12: Pseudo-code should be in courier font.

Editor[A].

**Others (15 findings)**

Editor[A]: Accept the following 14 proposed replacements.

1. 26.36: Replace "in10.31.4" with "in 10.31.4".
2. 113.20: Replace "t[he" with "the".
3. 115.42: Replace "to1080 MHz" with "to 1080 MHz".
4. 143.3: Replace "1.08 operating GHz channel" with "operating 1.08 GHz channel".
5. 147.64: Replace "DMG Beacons frames" with "DMG Beacon frames".
6. 174.15: Replace "SPreading" with "Spreading".
7. 185.24: Replace "See 20.10.2.2.6 (TRN field)25.9.2.2.7" with "See 20.10.2.2.6 (TRN field)".
8. 198.58: The following sentence looks strange: "The baseband waveform for fields defined by time waveform for fields defined by time domain sequence for single carrier transmission is".
9. 204.43: Replace "lengthof672 bits" with "length of 672 bits".
10. 206.37: Replace "Uplink Idication" with "Uplink Indication".
11. 209.26: Fix the font size of "Index".
12. 212.18: Replace "[0, 1, …, 12]and" with "[0, 1, …, 12] and".
13. 217.2: Replace "using SCmode transmission" with "using SC mode transmission".
14. 218.44: Replace "SCTF filed" with "SCTF field".

# Individual clauses

***Findings from Robert Stacey***

Clause 4 (General description)

OK. Declarative statements only.

Clause 6 (Layer management)

Checked for presence statements: OK

Checked for consistency: OK

Clause 9 (Frame formats)

**9.2.4.1.10 +HTC/Order subfield**

“For 45MG STAs, the Order subfield is 1 bit in length. It is used for two purposes:”

There is no such thing as an Order subfield (it’s called “+HTC/Order subfield” in the baseline). The +HTC/Order subfield length is not dependent on the STA type. Change to:

“A 45MG STA uses the +HTC/Order subfield for two purposes:”

Editor[A].

Use of “may” in the locations listed below. Frame formats section is descriptive; avoid use of normative verbs.

P27L27,

Editor[M]: Remove “may” and change to “The response to a reverse direction grant (RDG) ~~may~~ contains Data frames from any TID”

P27L30,

Editor[M]: Remove “may” and change to “The response to a RDG~~may~~ containsData frames only from the same AC as the last Data frame received from the RD initiator”

P62L17

Editor[M]: Remove “may” and change to“Indicates support for acting as a reverse direction responder, i.e., the STA ~~may~~ uses an offered RDG to transmit data to an RD initiator using the Reverse DirectionProtocol described in 10.28 (Reverse direction protocol).”

Annexes

Includes PICS

Includes MIB

# ANA

***TGaj editor, please perform actions shown below in “actions arising”***

| **Resources by Doc1Subclause for MDR** | | |
| --- | --- | --- |
| **RefDoc1Subclause** | **ResourceName** | **Status** |
| 8.2.4.1.2 | ProtocolVersions | NP |
| 8.2.4.1.3 | FrameTypes | NP |
| 8.2.4.1.3 | DataSubTypes | NP |
| 8.2.4.1.3 | ExtendedSubTypes | NP |
| 8.2.4.1.3 | ExtendedControlSubTypes | NP |
| 8.2.4.1.3 | ControlSubTypes | NP |
| 8.2.4.1.3 | ManagementSubTypes | NP |
| 8.2.6 | TLV encodings | NP |
| 8.4.1.1 | AuthenticationAlgorithmNumbers | NP |
| 8.4.1.11 | Categories | OK |
| 8.4.1.4 | Capabilities | NP |
| 8.4.1.7 | ReasonCodes | OK |
| 8.4.1.9 | StatusCodes | OK |
| 8.4.2.1 | ElementIDs | NP |
| 8.4.2.1 | Element ID Extension 1 | OK |
| 8.4.2.100.2 | Active Path Selection Protocol | NP |
| 8.4.2.27.2 | CipherSuiteSelectors | NP |
| 8.4.2.27.3 | AKMSuiteSelectors | NP |
| 8.4.2.27.4 | RSNCapabilities | NP |
| 8.4.2.29 | ExtendedCapabilities | NP |
| 8.4.2.50 | FastBSSTransitionSubElementIDs | NP |
| 8.4.4 | Info IDs | NP |
| 8.5.14.28 | WNM-Notification types | NP |
| 8.5.2.1 | SpectrumManagementActionFrames | NP |
| 8.5.8.1 | PublicActionFrames | OK |
| 8.8.3 | ShortFrameTypes | NP |
| 8.8.4 | ShortControlFrameSubTypes | NP |
| 8.8.5 | ShortManagementFrameSubTypes | NP |
| annex C | dot11mac | See Action 1 |
| C.3 | dot11Groups | OK |
| C.3 | dot11OperationEntry | NP |
| C.3 | dot11phy | OK |
| C.3 | dot11smt | OK |
| C.3 | dot11StationConfigEntry | NP |
| C.3 | ieee802dot11 | NP |
| C.3 | dot11Compliances | OK |
| D.1 | BehaviorLimits | NP |
| E.1 | OperatingClassesInJapan | NP |
| E.1 | OperatingClassesInEurope | NP |
| E.1 | OperatingClassesGlobal | NP |
| E.1 | OperatingClassesInUSA | NP |
| None | MAC addresses | NP |
| Notes:  NP – Not present  OK – Present and values are correct | | |

Actions arising:

Action 1: {dot11mac 13} was assigned for dot1145MGCountersTable but is unused in draft. Send release request to ANA.

Editor[A]

# MIB

|  |
| --- |
| *Editing Instruction: TGajEditor revises Annex C as follows*  **TGaj Editor: Replace “45mg(“ with “fourtyfivemg(“ throughout Annex C.**  **Editor[M]:Propose touse “CMMG” instead of “45MG” throughout the draft.**  **TGaj Editor: Remove the following from Annex D because dot11EDCATableTXOPLimit which was updated from P802.11mc D8.0 does not have any PHY dependent wording.**  ~~Change the definition of “dot11EDCATableTXOPLimit” in the “SMT EDCA Config TABLE” in C.3 as follows:~~  ~~dot11EDCATableTXOPLimit OBJECT-TYPE SYNTAX Unsigned32 (0..65535) MAX-ACCESS read-write STATUS current DESCRIPTION "This is a control variable. It is written by the MAC upon receiving an EDCA Parameter Set in a Beacon frame. Changes take effect as soon as practical in the implementation.  This attribute specifies the maximum number of microseconds of an EDCA TXOP for a given AC. The default value for this attribute is  1) 0 for all PHYs, if dot11EDCATableIndex is 1 or 2; this implies that the sender can send one MSDU in an EDCA TXOP,  2) 3008 microseconds for Clause 18, Clause 21, Clause 25, Clause 26 and Clause 19 PHY and 6016 microseconds for Clause 17 PHY, if dot11EDCATableIndex is 3,  3) 1504 microseconds for Clause 18, Clause 21, Clause 25, Clause 26 and Clause 19) PHY and 3264 microseconds for Clause 17 PHY, if dot11EDCATableIndex is 4." ::= { dot11EDCAEntry 5 }~~  Editor[A].  **TGaj Editor: Change the following editing instruction because the position of the inserted texts (the end of the Station Management (SMT) Attributes) is not clear.**  Insert the following tables (“dot11CDMGSTAConfigTable”) and (“dot1145MGSTAConfigTable”) at the end of the ~~“Station ManagemenT (SMT) Attributes”~~“dot11S1GStationConfigTable” part of C.3:  Editor[A].  **TGaj Editor: Change the Dot11CDMGSTAConfigEntry as the following.**  Dot11CDMGSTAConfigEntry ::= SEQUENCE { dot11CDMGOptionImplemented TruthValue, dot11DynamicChannelTransferImplemented TruthValue, dot11OpportunisticTransmissionsActivated TruthValue, dot11CDMGSpatialsharingActivated TruthValue, dot11CDMGClusteringActivated TruthValue }  Editor[A].  **TGaj Editor: Define the following MIB variables or remove it as the below editing instruction. (Because of the MIB compiling error, this document simply proposes to remove the following MIB variables from Dot1145MGSTAConfigEntry.) - dot11DynamicChannelTransferImplemented - dot11OpportunisticTransmissionsActivated - dot11SpatialsharingActivated**  Dot1145MGSTAConfigEntry ::= SEQUENCE { dot1145MGOptionImplemented TruthValue, ~~dot11DynamicChannelTransferImplemented TruthValue, dot11OpportunisticTransmissionsActivated TruthValue, dot11SpatialsharingActivated TruthValue,~~ dot1145MGClusteringActivated TruthValue }  Editor[A].  **TGaj Editor: Change the following editing instruction because the position of the inserted texts (the end of the PHY Attributes) is not clear.**  Insert the following table~~s~~ (“dot11 Phy CDMG TABLE”) ~~and (“dot11CDMGOperation TABLE”)~~ at the end of ~~“PHY Attributes”~~“dot11 S1G Transmit Beamforming Config TABLE“ section in C.3:  Editor[A].  **TGaj Editor: Define the entries of dot11PHY45MGTable. (Because of the MIB** compiling **error, this document simply proposes to remove dot11PHY45MGTable.)**  --\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* -- \* dot11 Phy 45MG TABLE --\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* dot11PHY45MGTable OBJECT-TYPE SYNTAX SEQUENCE OF Dot11PHYCDMGEntry MAX-ACCESS not-accessible STATUS current DESCRIPTION "Entry of attributes for dot11Phy45MGTable. Implemented as a table indexed on ifIndex to allow for multiple instances on an Agent." ::= { dot11phy 30}  dot11PHY45MGEntry OBJECT-TYPE SYNTAX Dot11PHY45MGEntry MAX-ACCESS not-accessible STATUS current DESCRIPTION "An entry in the dot11PHY45MGEntry Table. ifIndex - Each IEEE 802.11 interface is represented by an ifEntry. Interface tables in this MIB module are indexed by ifIndex." INDEX {ifIndex} ::= { dot11PHY45MGTable 1 } -- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* -- \* End of dot11 PHY 45MG TABLE ~~-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*~~  Editor[M]:Define the entries of dot11PHY45MGTable as follows:  --\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  -- \* dot11 Phy 45MG TABLE  --\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  dot11PHY45MGTable OBJECT-TYPE  SYNTAX SEQUENCE OF Dot11PHY45MGEntry  MAX-ACCESS not-accessible  STATUS current  DESCRIPTION  "Entry of attributes for dot11Phy45MGTable. Implemented as a table indexed  onifIndex to allow for multiple instances on an Agent."  ::= { dot11phy 30}  dot11PHY45MGEntry OBJECT-TYPE  SYNTAX Dot11PHY45MGEntry  MAX-ACCESS not-accessible  STATUS current  DESCRIPTION  "An entry in the dot11PHY45MGEntry Table. ifIndex - Each IEEE  802.11 interface is represented by an ifEntry. Interface tables in this  MIB module are indexed by ifIndex."  INDEX {ifIndex}  ::= { dot11PHY45MGTable 1 }  Dot11Phy45MGEntry ::=  SEQUENCE {  dot1145MGCurrentChannelWidth INTEGER,  dot1145MGCurrentChannelCenterFrequencyIndex Unsigned32,  dot1145MGTxSTBCOptionImplemented TruthValue,  dot1145MGTxSTBCOptionActivated TruthValue,  dot1145MGRxSTBCOptionImplemented TruthValue,  dot1145MGRxSTBCOptionActivated TruthValue,  dot1145MGBeamFormingOptionImplementedTruthValue,  dot1145MGBeamFormingOptionActivatedTruthValue,  dot1145MGMaxNTxChainsImplementedTruthValue,  dot1145MGMaxNTxChainsActivatedTruthValue,  dot1145MGTXOPPowerSaveOptionImplemented  dot1145MGOBSSScanCount  dot1145MGBeamformerOptionImplemnted  dot11SCPHYActivated  dot11MaxNTxChainsImplemented  dot11MaxNTxChainsActivated  dot11BeamformeeOptionImplemented  dot11BeamformerOptionImplemented  dot11NumberSoundingDimensions  dot11BeamformeeNTxSupport, if it is a control variable, “Support”  “Activated”  }  dot1145MGCurrentChannelWidth OBJECT-TYPE  SYNTAX INTEGER { cbw540(0), cbw1080(1)}  MAX-ACCESS read-only  STATUS current  DESCRIPTION  "This is a status variable.  This attribute indicates the operating channel width."  DEFVAL { cbw540 }  ::= { dot11Phy45MGEntry 1 }  dot1145MGCurrentChannelCenterFrequencyIndex OBJECT-TYPE  SYNTAX Unsigned32 (0..200)  MAX-ACCESS read-only  STATUS current  DESCRIPTION  "This is a status variable.  For a 540 MHz, 1080 MHz, denotes the channel centerfrequency.  See 26.10 (Channelization)."  DEFVAL { 0 }  ::= { dot11Phy45MGEntry 2 }  dot1145MGTxSTBCOptionImplemented OBJECT-TYPE  SYNTAX TruthValue  MAX-ACCESS read-only  STATUS current  DESCRIPTION  "This is a capability variable.  Its value is determined by device capabilities.  This attribute, when true, indicates that the device is capable of transmitting  45MG PPDUs using STBC."  DEFVAL { false }  ::= { dot11Phy45MGEntry 3 }  dot1145MGTxSTBCOptionActivated OBJECT-TYPE  SYNTAX TruthValue  MAX-ACCESS read-write  STATUS current  DESCRIPTION  "This is a control variable.  It is written by an external management entity.  Changes take effect as soon as practical in the implementation.  This attribute, when true, indicates that the entity's capability of  transmitting frames using STBC option is enabled."  DEFVAL { false }  ::= { dot11PhyHTEntry 4 }  dot1145MGRxSTBCOptionImplemented OBJECT-TYPE  SYNTAX TruthValue  MAX-ACCESS read-only  STATUS current  DESCRIPTION  "This is a capability variable.  Its value is determined by device capabilities.  This attribute, when true, indicates that the device is capable of receiving  45MG PPDUs using STBC."  DEFVAL { false }  ::= { dot11Phy45MGEntry 5 }  dot1145MGRxSTBCOptionActivated OBJECT-TYPE  SYNTAX TruthValue  MAX-ACCESS read-write  STATUS current  DESCRIPTION  "This is a control variable.  It is written by an external management entity.  Changes take effect as soon as practical in the implementation. Changes  made while associated with an AP or while operating a BSS should take  effect only after disassociation or the deactivation of the BSS, respectively.  This attribute, when true, indicates that the entity's capability for  receiving45MG PPDUs using STBC is enabled."  DEFVAL { false }  ::= { dot11Phy45MGEntry 6 }  dot1145MGBeamFormingOptionImplemented OBJECT-TYPE  SYNTAX TruthValue  MAX-ACCESS read-only  STATUS current  DESCRIPTION  "This is a capability variable.  Its value is determined by device capabilities.  This attribute, when true, indicates that the beamforming option is implemented."  DEFVAL { false }  ::= { dot11Phy45MGEntry 7 }  dot1145MGBeamFormingOptionActivated OBJECT-TYPE  SYNTAX TruthValue  MAX-ACCESS read-write  STATUS current  DESCRIPTION  "This is a control variable.  It is written by an external management entity.  Changes take effect as soon as practical in the implementation.  This attribute, when true, indicates that the beamforming option is  enabled."  DEFVAL { false }  ::= { dot11Phy45MGEntry 8 }  dot1145MGMaxNTxChainsImplemented OBJECT-TYPE  SYNTAX Unsigned32  MAX-ACCESS read-only  STATUS current  DESCRIPTION  "This is a capability variable.  Its value is determined by device capabilities.  This attribute indicates the maximum number of transmit chains within this  device."  DEFVAL { 1 }  ::= { dot11Phy45MGEntry 9 }  dot1145MGMaxNTxChainsActivated OBJECT-TYPE  SYNTAX Unsigned32  MAX-ACCESS read-write  STATUS current  DESCRIPTION  "This is a control variable.  It is written by an external management entity.  Changes take effect as soon as practical in the implementation.  This attribute indicates the maximum number of transmit chains that are  activated within this device, unless this attribute exceeds dot1145MGMax-  NTxChainsImplemented, in which case the maximum number of transmit chains  that are activated within this device is equal to dot1145MGMaxNTxChainsImplemented."  DEFVAL { 2147483647}  ::= { dot11Phy45MGEntry 10 }  -- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  -- \* End of dot11 PHY 45MG TABLE  -- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  **TGaj Editor: Change the following editing instruction because the position of the inserted texts (the end of the MAC Attribute Templates) is not clear.**  Insert the following tables (“dot11CDMGOperation TABLE”) and (“dot1145MGOperation TABLE”) at the end of the ~~“MAC Attribute Templates”~~“dot11BSSStatisticsTable” section in C.3:  Editor[A].  **TGaj Editor: Change the Dot11CDMGOperationEntry and Dot1145MGOperationEntry as the following. (Because dot11DCTTimeouts are duplicated, the below name changes are proposed.)**  Editor[M]: The “dot11DCTTimeout” is only apply for CDMG STAs. So propose to still use “dot11DCTTimeout”. Remove the “Dot1145MGOperationEntry” where the “dot11DCTTimeout” also appears as follows:  Dot11CDMGOperationEntry ::= SEQUENCE { dot11~~CDMG~~DCTTimeout Unsigned32~~,~~ }  dot11~~CDMG~~DCTTimeout OBJECT-TYPE SYNTAX Unsigned32 (1..64000) UNITS "milliseconds" MAX-ACCESS read-write STATUS current DESCRIPTION "This is a control variable. It is written by the SME or an external management entity. Changes take effect as soon as practical in the implementation. Dynamic Channel Transfer Timeout (in milliseconds)" DEFVAL { 1000 } ::= { dot11CDMGOperationEntry 1 }  ~~Dot1145MGOperationEntry ::= SEQUENCE { dot1145MGDCTTimeout Unsigned32, }~~  ~~dot1145MGDCTTimeout OBJECT-TYPE SYNTAX Unsigned32 (1..64000) UNITS "milliseconds" MAX-ACCESS read-write STATUS current DESCRIPTION "This is a control variable. It is written by the SME or an external management entity. Changes take effect as soon as practical in the implementation. Dynamic Channel Transfer Timeout (in milliseconds)" DEFVAL { 1000 } ::= { dot1145MGOperationEntry 1 }~~  **TGaj Editor: Change the following editing instruction because the position of the inserted texts (the end of the Groups - units of conformance) is not clear.**  Insert the following groups (“dot11CDMGComplianceGroup” and“dot11CDMGOperationsComplianceGroup”) at the end of the ~~“Groups - units of conformance”~~“dot11PADComplianceGroup” section in C.3:  Editor[A].  **TGaj Editor: Change the dot11CDMGComplianceGroup and dot11CDMGOperationsComplianceGroup as the following.**  dot11CDMGComplianceGroup OBJECT-GROUP OBJECTS { dot11CDMGOptionImplemented, dot11DynamicChannelTransferImplemented, dot11OpportunisticTransmissionsActivated, dot11CDMGSpatialsharingActivated, dot11CDMGClusteringActivated } STATUS current DESCRIPTION "Attributes that configure the CDMG Group for IEEE Std 802.11." ::= { dot11Groups 95}  dot11CDMGOperationsComplianceGroup OBJECT-GROUP OBJECTS {dot11CDMGDCTTimeout} STATUS current DESCRIPTION "Attributes that configure the CDMG Operation for IEEE Std 802.11." ::= { dot11Groups 96}  Editor[A].  **TGaj Editor: Change the following editing instruction at P281 L39 because the position of the inserted texts (the end of the “dot11Compliance” module) is not clear.**  Insert the following groups at the end of the ~~“dot11Compliance”~~ module “GROUP dot11FILSComplianceGroup” of the “Compliance Statements” section of C.3:  Editor[A].  **TGaj Editor: Change the following editing instruction because the position of the inserted texts (the end of the Groups - units of conformance) is not clear.**  Insert the following groups (“dot1145MGComplianceGroup” and“dot1145MGOperationsComplianceGroup”) at the end of the ~~“Groups - units of conformance”~~“dot11PADComplianceGroup” section in C.3:  Editor[A].  **TGaj Editor: Change the dot1145MGComplianceGroup and dot1145MGOperationsComplianceGroup as the following.**  dot1145MGComplianceGroup OBJECT-GROUP OBJECTS { dot1145MGOptionImplemented, ~~dot11DynamicChannelTransferImplemented, dot11OpportunisticTransmissionsActivated, dot11SpatialsharingActivated,~~  dot1145MGClusteringActivated } STATUS current DESCRIPTION "Attributes that configure the 45MG Group for IEEE Std 802.11." ::= { dot11Groups 97}  ~~dot1145MGOperationsComplianceGroup OBJECT-GROUP OBJECTS {dot1145MGDCTTimeout} STATUS current DESCRIPTION "Attributes that configure the 45MG Operation for IEEE Std 802.11." ::= { dot11Groups 98}~~  Editor[M].45MG STAs do not support DCT feature, so remove “dot11DCTTimeout”related paragraph from 45MG relatedMIB descriptions as shown above.Request ANA to release“dot11groups 98”.  **TGaj Editor: Change the following editing instruction at P282 L62 because the position of the inserted texts (the end of the “dot11Compliance” module) is not clear.**  Insert the following groups at the end of the ~~“dot11Compliance”~~ module “GROUP dot11FILSComplianceGroup” of the “Compliance Statements” section of C.3:  **TGaj Editor: Remove “dot11Phy45MGComplianceGroup” at P283 L39 and P283 L16 because dot11Phy45MGComplianceGroup is not defined.**  Editor[A]. |

# IEEE-SA MEC

## The MEC comments

Robert Stacey

Intel

robert.stacey@intel.com

**RE: PRE-BALLOT MANDATORY EDITORIAL COORDINATION (PRE-BALLOT MEC)**

Dear Robert:

I reviewed Draft 3.0 of IEEE P802.11aj™ and provided comments, starting on the next page.

Note that this review has been organized into two sections and uses the “language of standards” to communicate necessary requirements (shall) of the IEEE-SA standards process versus those issues that are voluntary (should) in nature.

**Section I: Items/issues that shall be resolved before the ballot begins**

The draft cannot be balloted or recirculated until these issues are resolved. Your Staff Liaison will review the updated draft for compliance prior to upload of the PDF for ballot.

NOTE—Fonts shall be embedded in the draft PDF. Instructions on creating a PDF with embedded fonts can be found at: <http://standards.ieee.org/develop/stdswritten.html>

**Section II: Items/issues that shall be resolved before the final recirculation**

These issues have to be resolved and viewed by balloters. The items will be checked for completion by the Project Editor during the Sponsor ballot, then checked by the Review Committee (RevCom) of the IEEE-SA Standards Board (IEEE-SASB), and may impact approval unless rectified.

*Please note that this review does not address all of the editorial items (i.e., punctuation, grammar, formatting) to be reviewed at the time of professional editing, which takes place after IEEE-SASB approval.*

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| The following comments are derived from the *IEEE Standards Style Manual*. The complete manual is available to view/download at:  <https://development.standards.ieee.org/myproject/Public/mytools/draft/styleman.pdf> |

**SECTION I: Items/issues that shall be resolved before the ballot begins:**

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| **Copyright**   * If applicable, all copyright permission for excerpted text (including definitions), tables, and figures shall be submitted to the IEEE prior to the start of ballot. If there are missing permission response letters, please submit them immediately to me at l.perry@ieee.org.   Sample permission letters can be found in Annex A of the [*IEEE Standards StyleManual*](https://development.standards.ieee.org/myproject/Public/mytools/draft/styleman.pdf) *or* *<http://standards.ieee.org/develop/stdsreview.html>.* More information on the IEEE SA Copyright Policy can be found at: <http://standards.ieee.org/ipr/copyright.html>   * The correct copyright statement shall appear on the first page of the standard.   **ACTION:**The copyright statement appears on the first and third page of the draft. It should be updated and appear on page 1 as follows:  Copyright © by The Institute of Electrical and Electronics Engineers, Inc.  Three Park Avenue  New York, New York 10016-5997, USA  All rights reserved.  This document is an unapproved draft of a proposed IEEE Standard. As such, this document is subject to change. USE AT YOUR OWN RISK! IEEE copyright statements SHALL NOT BE REMOVED from draft or approved IEEE standards, or modified in any way. Because this is an unapproved draft, this document must not be utilized for any conformance/compliance purposes. Permission is hereby granted for officers from each IEEE Standards Working Group or Committee to reproduce the draft document developed by that Working Group for purposes of international standardization consideration. IEEE Standards Department must be informed of the submission for consideration prior to any reproduction for international standardization consideration ([stds.ipr@ieee.org](mailto:stds.ipr@ieee.org)). Prior to adoption of this document, in whole or in part, by another standards development organization, permission must first be obtained from the IEEE Standards Department ([stds.ipr@ieee.org](mailto:stds.ipr@ieee.org)). When requesting permission, IEEE Standards Department will require a copy of the standard development organization's document highlighting the use of IEEE content. Other entities seeking permission to reproduce this document, in whole or in part, must also obtain permission from the IEEE Standards Department.  IEEE Standards Department  445 Hoes Lane  Piscataway, NJ 08854, USA  Editor[A]. |
| **Draft title**   * Per 4.2.3.2 of the IEEE-SA Standards Board Operations Manual, the title on the draft document shall be within the scope as stated on the most recently approved PAR. The latest PAR form can be found at: <http://standards.ieee.org/board/nes/approved.html>   For more information please see 9.2 of the [*IEEE Standards Style Manual*](https://development.standards.ieee.org/myproject/Public/mytools/draft/styleman.pdf).  Editor[A]. No issue found. |
| **Required frontmatter text**   * Replace the current disclaimers (starting with Notice to users after the Introduction through the Patents section, pages iv and v) with the following text:   Important Notices and Disclaimers Concerning IEEE Standards Documents  IEEE documents are made available for use subject to important notices and legal disclaimers. These notices and disclaimers, or a reference to this page, appear in all standards and may be found under the heading “Important Notice” or “Important Notices and Disclaimers Concerning IEEE Standards Documents.”  **Notice and Disclaimer of Liability Concerning the Use of IEEE Standards Documents**  IEEE Standards documents (standards, recommended practices, and guides), both full-use and trial-use, are developed within IEEE Societies and the Standards Coordinating Committees of the IEEE Standards Association (“IEEE-SA”) Standards Board. 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Furthermore, the viewpoint expressed at the time a standard is approved and issued is subject to change brought about through developments in the state of the art and comments received from users of the standard.  In publishing and making its standards available, IEEE is not suggesting or rendering professional or other services for, or on behalf of, any person or entity nor is IEEE undertaking to perform any duty owed by any other person or entity to another. Any person utilizing any IEEE Standards document, should rely upon his or her own independent judgment in the exercise of reasonable care in any given circumstances or, as appropriate, seek the advice of a competent professional in determining the appropriateness of a given IEEE standard.  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In the event that an IEEE standard is translated, only the English version published by IEEE should be considered the approved IEEE standard.  **Official statements**  A statement, written or oral, that is not processed in accordance with the IEEE-SA Standards Board Operations Manual shall not be considered or inferred to be the official position of IEEE or any of its committees and shall not be considered to be, or be relied upon as, a formal position of IEEE. At lectures, symposia, seminars, or educational courses, an individual presenting information on IEEE standards shall make it clear that his or her views should be considered the personal views of that individual rather than the formal position of IEEE.  **Comments on standards**  Comments for revision of IEEE Standards documents are welcome from any interested party, regardless of membership affiliation with IEEE. However, IEEE does not provide consulting information or advice pertaining to IEEE Standards documents. 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Comments on standards should be submitted to the following address:  Secretary, IEEE**-**SA Standards Board  445 Hoes Lane  Piscataway, NJ 08854 USA  **Laws and regulations**  Users of IEEE Standards documents should consult all applicable laws and regulations. Compliance with the provisions of any IEEE Standards document does not imply compliance to any applicable regulatory requirements. Implementers of the standard are responsible for observing or referring to the applicable regulatory requirements. IEEE does not, by the publication of its standards, intend to urge action that is not in compliance with applicable laws, and these documents may not be construed as doing so.  **Copyrights**  IEEE draft and approved standards are copyrighted by IEEEunder U.S. and international copyright laws. They are made available by IEEE and are adopted for a wide variety of both public and private uses. 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Permission to photocopy portions of any individual standard for educational classroom use can also be obtained through the Copyright Clearance Center.  **Updating of IEEE Standards documents**  Users of IEEE Standards documents should be aware that these documents may be superseded at any time by the issuance of new editions or may be amended from time to time through the issuance of amendments, corrigenda, or errata. An official IEEE document at any point in time consists of the current edition of the document together with any amendments, corrigenda, or errata then in effect.  Every IEEE standard is subjected to review at least every ten years.When a document is more than ten years old and has not undergone a revision process, it is reasonable to conclude that its contents, although still of some value, do not wholly reflect the present state of the art.Users are cautioned to check to determine that they have the latest edition of any IEEE standard.  In order to determine whether a given document is the current edition and whether it has been amended through the issuance of amendments, corrigenda, or errata, visit the IEEE-SA Website at <http://ieeexplore.ieee.org/xpl/standards.jsp> or contact IEEE at the address listed previously. For more information about the IEEE-SA or IEEE’s standards development process, visit the IEEE-SA Website at<http://standards.ieee.org>.  **Errata**  [Errata](http://standards.ieee.org/findstds/errata/index.html), if any, for all IEEE standards can be accessed on the IEEE-SA Website at the followingURL:<http://standards.ieee.org/findstds/errata/index.html>. Users are encouraged to check this URL for errata periodically.  **Patents**  Attention is called to the possibility that implementation of this standard may require use of subject matter covered by patent rights. By publication of this standard, no position is taken by the IEEE with respect to the existence or validity of any patent rights in connection therewith. If a patent holder or patent applicant has filed a statement of assurance via an Accepted Letter of Assurance, then the statement is listed on the IEEE-SA Website at <http://standards.ieee.org/about/sasb/patcom/patents.html>. Letters of Assurance may indicate whether the Submitter is willing or unwilling to grant licenses under patent rights without compensation or under reasonable rates, with reasonable terms and conditions that are demonstrably free of any unfair discrimination to applicants desiring to obtain such licenses.  Essential Patent Claims may exist for which a Letter of Assurance has not been received. The IEEE is not responsible for identifying Essential Patent Claims for which a license may be required, for conducting inquiries into the legal validity or scope of Patents Claims, or determining whether any licensing terms or conditions provided in connection with submission of a Letter of Assurance, if any, or in any licensing agreements are reasonable or non-discriminatory. Users of this standard are expressly advised that determination of the validity of any patent rights, and the risk of infringement of such rights, is entirely their own responsibility. Further information may be obtained from the IEEE Standards Association.  Editor[A]. |
| **General**   * The draft shall be complete with no missing figures, tables, equations, text, etc.   Editor[A]. |

**SECTION II: Items/issues that shall be resolved before the final recirculation**

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| **Trademarks or service marks**   * Please **review** the use of trademarks in the draft, if applicable. References to commercial equipment or products in a standard shall be generic and shall not include trademarks or other proprietary designations. Where a sole source exists for essential equipment or materials, it is permissible to supply the name of the trademark owner in a footnote. The proper use guidelines for trademarks shall be determined by the trademark owner. Trademark owners must grant written permission before their trademarks may be referenced in a standard. * Trademarks or other proprietary designations that are not commercial equipment or products should be avoided in standards. If used however, all trademarks shall be credited to the trademark owner in the front matter of the standard. The following text shall introduce any mention of specific trademark information:   The following information is given for the convenience of users of this standard and does not constitute an endorsement by the IEEE of these products. Equivalent products may be used if they can be shown to lead to the same results.  For more information on commercial terms and conditions see the IEEE-SA Policy on commercial terms set forth in 6.2 of the IEEE-SA [*Standards Board Operations Manual*](http://standards.ieee.org/develop/policies/opman/sb_om.pdf)*.*  Editor[A]. No findings. |
| **Registration objects**   * If the draft contains a registration of objects (for additional information, visit the IEEE Standards Web site <http://standards.ieee.org/regauth/index.html>), the working group shall submit the document to the IEEE Registration Authority (IEEE-RA) for mandatory coordination (submit to a.n.thomas@ieee.org for review). The text containing the registration information should be highlighted in the draft and the clause should be noted in the email. If the working group believes that the draft may potentially contain a registration of objects or if the working group would like information about setting up a registration, contact the IEEE-RA as early as possible to prevent a delay in approval by the IEEE-SA Standards Board. Search on the following words: object identifier, unique identifier, and assignment of unique numbers.   Editor[A]. No findings. |
| **Clause 1**   * **Scope**   + For new and revision projects, the scope of the draft shall be within the scope of that given on the PAR, as determined by the balloting group voting on the draft. * **Purpose**   + For new and revision projects, the purpose (if included) of the draft shall be within the parameters of the purpose given on the PAR, as determined by the balloting group voting on the draft.   For more information please see 10.4.2 and 10.4.3 of the [***IEEE Standards Style Manual***](https://development.standards.ieee.org/myproject/Public/mytools/draft/styleman.pdf).  Editor[A]. |
| **“Absolute” verbiage**   * Please **review** the text for any explicit or implicit guarantees made within the document, especially those that are safety-related. Avoid making guarantees if there is a possibility of unforeseen situations or circumstances altering an outcome. For example, words such as *ensure*, *guarantee*, *maximize*, *minimize*, etc., should be modified if they are inaccurate.   **ACTION:** Review instance of *maximize*, *minimize*, and *prevent* in text.  Possible substitutions are shown below:   |  |  | | --- | --- | | Ensure | * To help ensure * Improve * To verify (if applicable)   For example, “to ensure safety” might be changed to “to improve safety” or “to prevent” might be changed to “to reduce.” | | Guarantee | Improve | | Maximize | Improve | | Minimize | Reduce | | Prevent | Reduce | |  |  |   Editor[M]. Search the words mentioned above and fix the problems according to the suggestions.  P134L27:  “…Spatial reuse is not allowed in SPSH measurement phase. Only one pair of STAs participate during directional channel quality measurement.  P150L14:  “…The algorithm to schedule SPs or CBAPs for DMG STAs in a CDMG BSS is implementation dependent and beyond the scope of this standard but should aim to improve the network efficiency.”  P129L31:  “The functions of a CDMG CCSR shall cover the channel set. The CDMG CCSR shall provide coordination services for all the S-APs operating on the channels of the channel set {3, 7, 8} within the CCSS to mitigate interference.”  P182L3:  **“…**is the complex DC term chosen to reduce EVM.**”**  P220L41:  “The instrumentation shall incorporate a rake receiver or equalizer to reduce error resulting from multipath.”  P230L65:  “…is the complex DC term chosen to reduce EVM.”  P133L35:  “…The AP or PCP may also create SPs in its beacon interval with the source and destination AID set to 255 to eliminate transmission during specific periods in the beacon interval.”  P244L48:  “…Cyclic shifts are applied to eliminate unintended beamforming when correlated signals are transmitted in multiple space-time streams….” |
| **Verbs**   * The use of the word ***will*** is deprecated and shall not be used when stating mandatory requirements; ***will*** is only used in statements of fact.   **ACTION:**Review instances of ***will***; consider rewriting in the present tense if appropriate.  **More information on word usage can be found in 10.2.2 of the** [*IEEE Standards Style Manual*](https://development.standards.ieee.org/myproject/Public/mytools/draft/styleman.pdf)*.*  Editor[M].  P27L13:  “…The CMMG NDP Announcement subfield of the CMMG Control field indicates that an NDP is transmitted after the frame (according to the rules described in 10.34a (Null data packet (NDP) sounding for CMMG STAs))….”  P101L51: This txt matches the similar description in the baseline on P1465 (REVmc 8.0): no changes.  “…the responder is not now providing, and will never provide, feedback for the request that had the MSI value that matches the MFSI value….”  P102L54:  “If the MFB is in the same MPDU as a CMMG Compressed Beamforming frame, the MFB responder shall estimate the recommended MFB under the assumption that the beamformer uses the steering matrices contained therein….”  P108L62:  “This rule enables the NDP receiver to know that it receives a CMMG NDP and can determine the source and destination of the CMMG NDP. It enables the receiver and transmitter to know when the immediate response and CMMG NDP are transmitted relative to the frame containing the CMMG NDP announcement indication.” |
| **Normative and informative text**   * IEEE standards style does not allow for requirements in informative text.   **ACTION:** The NOTE in 25.3.3.8, which is informative text, includes a requirement. Please either rewrite the sentence to remove the word shall, or remove “NOTE—“and format as normative text.  **See 10.1 of the** [**IEEE Standards Style Manual**](https://development.standards.ieee.org/myproject/Public/mytools/draft/styleman.pdf) **for information on normative and informative clauses.**  Editor[A].  “NOTE—For RF power measurements performed over the air, the input level is corrected to compensate for the antenna gain in the implementation. The gain of the antenna is the maximum estimated gain by the manufacturer. In the case of the phased-array antenna, the gain of the phased-array antenna is the maximum sum of estimated element gain minus 3 dB implementation loss.” |
| **Definitions**  **ACTION:** The first term should be rewritten because it will eventually be added to the IEEE Standards Dictionary. The cross references to other parts of the standard need to be included in an informative note.  Editor[M]. Change the first term as follows:  **China directional multi-gigabit (CDMG):** Pertaining to operation in DMG and where the channel is con­tained within the Chinese 60 GHz frequency band.  NOTE —The Chinese 60 GHz channel set is defined in Table E-5 in Annex E. |
| **Graphics**  **\*\*NOTE\*\* If you have separate source and/or graphics files for the figures in the draft, you’ll need to submit those to the staff editor when you submit the files to RevCom.**  Editor[A]. |

**NEXT STEPS**

**Please note that the following are next steps for this project:**

1. After you have implemented the changes from this review, create the PDF that will be used for the initial Sponsor ballot. Remember that the draft number shall be rolled to reflect that changes have been made, e.g., the draft uploaded for ballot should be IEEE P741™/D2).
2. Once the invitation has closed and the ballot group is balanced, please follow the next steps:
   1. Login to myProject and click the **Balloting** tab
   2. Click **Initiate Sponsor Ballot**
   3. Select your project from the PAR **drop** down list
   4. Enter the **Ballot Open Date**
   5. Enter the **Ballot Close Date** (should be minimum of 30 days)
   6. Enter the **Draft #**: (must match the draft number in the draft )
   7. **Select File for Uploading:**  
      Click the Browse button to find your draft file. The file must be a PDF.

NOTE—Fonts shall be embedded in the draft PDF. Instructions on creating a PDF with embedded fonts can be found at: <http://standards.ieee.org/develop/stdswritten.html>

* 1. Review the **system** generated text. If you would like to add additional instruction or information, use the **Sponsor Text** Area.
  2. Click **Initiate Ballot.**

1. Note that compliance with items in Section I will be reviewed by the Staff Liaison when you upload the PDF for Sponsor Ballot. The Project Editor will not review your draft until after the Sponsor Ballot has opened.
2. The RevCom MEC will occur after you submit the final balloted draft to RevCom. At that time, you will also be required to submit the document source file as well as electronic files of graphics.

If you have any questions about the comments in this mandatory editorial coordination, please contact me at [l.perry@ieee.org](mailto:l.perry@ieee.org)or 732.562.3942.

Lisa Perry

Senior Program Manager, Content Production & Management

IEEE Standards Association, 445 Hoes Lane, Piscataway, NJ 08854

cc: Kathryn Bennett

## The response to the MEC comments