IEEE P802.11  
Wireless LANs

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| MCS Tables Comment Resolution for LB 178 D1.0 | | | | |
| Date: 20 September 2011 | | | | |
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Abstract

This document provides resolutions for CIDs 3779, 2967, 3050, 3051, 3052, 3053, 3054, 3055, 3056, 2968, 3133, 2969

R3: change CIDs 3050, 3051, 3052, 3053, 3054, 3055, 3056 to agree in principle to match resolution for CID 3502

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| 3779 | 200.52 | 22.5 | No mandatory data throughput can achieve 1 Gbps at the MAC SAP. | Need to define some mandatory modes to meet this requirement. | D | Disagree. The PAR (11-08/0807r4) states “This amendment defines… that enable modes of operation…”. Nowhere in the PAR does it state that these modes of operation must be mandatory. |
| 2967 | 200.65 | 22.5 | According to the PAR and functional requirement documents, 802.11ac shall achieve the data throughput of at least 1 Gbps and 500 Mbps for Multi-STA and Single-STA cases, respectively, at the MAC SAP. However, the mandatory throughput cannot meet such requirements. | Add some mandatory modes to achieve the data throughput required by the PAR and functional requirement documents. | D | Disagree. The PAR (11-08/0807r4) states “This amendment defines… that enable modes of operation…”. Nowhere in the PAR does it state that these modes of operation must be mandatory.  Furthermore, the functional requirements document (11-09/0451r16) states “The TGac amendment shall provide at least a mode of operation capable of achieving…” Again, this does not require that the modes be mandatory. |

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| 3050 | 201.28 | 22.5 | Table 22-25 has a missing row of data for MCS Index 9 | This row requires completing or deleting | P | Agree in Principle. The missing MCS rows are due to “poor” numerology in the encoding/interleaving blocks for particular combinations with bandwidth and modulation/coding. To make the tables match visually between the various tables, blank rows were left in those with missing MCSs. Refer to CID 3502 that adds “not valid” to those rows. |
| 3051 | 201.55 | 22.5 | Table 22-26 has a missing row of data for MCS Index 9 | This row requires completing or deleting | P | Agree in Principle. The missing MCS rows are due to “poor” numerology in the encoding/interleaving blocks for particular combinations with bandwidth and modulation/coding. To make the tables match visually between the various tables, blank rows were left in those with missing MCSs. Refer to CID 3502 that adds “not valid” to those rows. |
| 3052 | 202.51 | 22.5 | Table 22-28 has a missing row of data for MCS Index 9 | This row requires completing or deleting | P | Agree in Principle. The missing MCS rows are due to “poor” numerology in the encoding/interleaving blocks for particular combinations with bandwidth and modulation/coding. To make the tables match visually between the various tables, blank rows were left in those with missing MCSs. Refer to CID 3502 that adds “not valid” to those rows. |
| 3053 | 203.24 | 22.5 | Table 22-29 has a missing row of data for MCS Index 9 | This row requires completing or deleting | P | Agree in Principle. The missing MCS rows are due to “poor” numerology in the encoding/interleaving blocks for particular combinations with bandwidth and modulation/coding. To make the tables match visually between the various tables, blank rows were left in those with missing MCSs. Refer to CID 3502 that adds “not valid” to those rows. |
| 3054 | 204.24 | 22.5 | Table 22-31 has a missing row of data for MCS Index 9 | This row requires completing or deleting | P | Agree in Principle. The missing MCS rows are due to “poor” numerology in the encoding/interleaving blocks for particular combinations with bandwidth and modulation/coding. To make the tables match visually between the various tables, blank rows were left in those with missing MCSs. Refer to CID 3502 that adds “not valid” to those rows. |
| 3055 | 204.51 | 22.5 | Table 22-32 has a missing row of data for MCS Index 9 | This row requires completing or deleting | P | Agree in Principle. The missing MCS rows are due to “poor” numerology in the encoding/interleaving blocks for particular combinations with bandwidth and modulation/coding. To make the tables match visually between the various tables, blank rows were left in those with missing MCSs. Refer to CID 3502 that adds “not valid” to those rows. |
| 3056 | 210.19 | 22.5 | Table 22-43 has a missing row of data for MCS Index 6 | This row requires completing or deleting | P | Agree in Principle. The missing MCS rows are due to “poor” numerology in the encoding/interleaving blocks for particular combinations with bandwidth and modulation/coding. To make the tables match visually between the various tables, blank rows were left in those with missing MCSs. Refer to CID 3502 that adds “not valid” to those rows. |

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| 2968 | 211.51 | 22.5 | MCS 9 should be added because mod(NCBPS/NES, DR)=0 if NES is set to 6. | Add MCS9 for the case of "optional 80 MHz, NSS = 6" | D | Disagree. The task group decided to only fill in MCS holes in cases that do not increase product complexity, as described in 11/0577r1 CID 547. Adding the MCS with NES equal to 6 would increase the maximum required NES from 4 to 6 for this bandwidth and NSS. |
| 2969 | 214.24 | 22.5 | MCS 9 should be added because mod(NCBPS/NES, DR)=0 if NES is set to 6. | Add MCS9 for the case of "optional 160 MHz and 80+80 MHz, NSS = 3" | D | Disagree. The task group decided to only fill in MCS holes in cases that do not increase product complexity, as described in 11/0577r1 CID 547. Adding the MCS with NES equal to 6 would increase the maximum required NES from 4 to 6 for this bandwidth and NSS. |

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| 3133 | 212.12 | 22.5 | NBPSCS should be 2 for QPSK | as in comment | A | Agree. See resolution in 11/0928r0. |

**TGac editor: modify D1.0 P212 Table 22-47 row for MCS Index 2, as follows**

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| MCS Index | Modulation | R | NBPSCS | NSD | NSP | NCBPS | NDBPS | NES | **Data rate (Mb/s)** | |
| **800 ns GI** | **400 ns GI** |
| 2 | QPSK | 3/4 | 2 | 234 | 8 | 3276 | 2457 | 3 | 614.3 | 682.5 |