IEEE P802.11
Wireless LANs

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| 802.11REVmc Initial Sponsor Ballot – MAC Comment resolutions  |
| Date: 2015-11-09 |
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**Abstract**

This document contains some proposed resolutions to initial sponsor ballot comments.

R1: Updated discussion based on feedback from commenters

R2: Updated based on analysis and discussions around CID 6059

# Comments

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| 5042 | 253.40 | 6.3.29.2.2 | "Specifies additional parameters associated with the block ack agreement." -- this is about as useful as a chocolate teapot. When you have nothing to say, say nothing.Ditto at 255.06, 256.23 and 257.46. | Remove cited sentence. |

Discussion:

* Looks like a reasonable change.
* Add a description of the parameters - keep a description.

Proposed Resolution:

Rejected. The text as accurate as stated and provides an accurate high level description.

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| 5043 | 253.32 | 6.3.29.2.2 | Use of "block ack" without a noun to qualify it ambiguous. Does it relate to the mechanism, a specific agreement, a specific frame?Suggest that all such uses be qualified with one of these terms, rewording as necessary. | Review all such uses and add qualifying noun where missing. |

Discussion:

Proposed Resolution:

Revised. Change all occurences of "Block ACK is" to "Block Ack agreement is" throughout the document.

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| 5044 | 401.50 | 6.3.74.2.1 | "QoS Map" is used as both an adjective and a noun. Recommend it be considered to be an adjective. | Review all uses of "QoS Map" and add any missing noun. e.g., at the cited location, add "frame". |

Discussion:

* Replace all occurrences where QoS Map is used as a noun and ensure that it is only used as an adjective.

Proposed Resolution:

Revised. Editors to ensure that Working Group style for capitalisation is applied. Changes made in the description text.

At 401.50, change "QoS Map" to "QoS Map Configure frame"

At 402.9, change "QoS Map" to "QoS Map information"

At 402.53, change "QoS Map" to "QoS Map information"

At 628.15, change "QoS Map" to "The QoS Map element"

At 632.18, change "QoS Map" to "The QoS Map element"

At 965.63, change "QoS Map" to "QoS Map element"

At 966.11, change "QoS Map" to "QoS Map element" - note 2 occurences.

At 966.43, change "QoS Map" to "QoS Map element".

At 1787.14, change "QoS Map" to "QoS mapping"

At 1787.20, change "QoS Map" to "QoS mapping"

At 1787.21, change "QoS Map" to "QoS mapping"

At 1787.29, change "QoS Map" to "QoS mapping"

At 3576.23, change "QoS Map" to "QoS mapping"

At 107.31, change "QoS Map" to "QoS mapping"

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| 5045 | 202.10 | 6.3.11.2.2 | DMG use of "operationalRateSet" instead of "basic MCS Set" is awkward.Firstly, the semantics relate to "basic" rather than "operational", secondly it relates to MCSs, not rates. | If this does not affect OTA signalling, and I don't think it does, change DMG throughout to use "basic MCS Set". |
| 5267 | 149.59 | 6.3.3.3.2 | About the BSSBasicRateSet parameter of the BSSDescription set parameter of the MLME-SCAN.confirm primitive: "DMG BSS: Empty". But a parameter of a primitive is something that is present in the primitive, whether or not the invoker of the primitive has put any values in it. When a parameter (such as BSSBasicRateSet) is numerical, then some number or other will be present in the parameter. If no number is defined as meaning "Empty", then there is no such thing as "Empty" in the BSSBasicRateSet parameter. | Since the valid values of BSSBasicRateSet are 1-127, it would be easy enough to define the value 0 as meaning "Empty". So insert that definition into this description. (In the normative text below, references to BSSBasicRateSet being empty, or not, seem to be consistent with such a definition.) |

Discussion:

* In the context of DMG, it makes more sense to use Operational rate set. Also, this does not refer to OTA signalling.
* “Empty is defined for the Operational Rate Set.

Proposed Resolution:

Revised

At 201.58. Change "Empty." to "The set of MCS indexes that the STA uses for communication within the BSS."

At 202.10. Change ""The set of MCS indexes that the STA uses for communication within the BSS." to "Empty".

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| 6059 | 398.47 | 6.3.73.3.2 | "The mapping of Status Code received in the GAS Response frame is mapped to the corresponding Result Code in Table 8-45 (Status codes)." How does Table 8-45 show this mapping? Similar problem at P1612.9, and 1625.48. | Either add Result Code mappings to Table 8-45 (another column, probably), add a new table that shows these mappings, or reword these sentences to something the Standard tells the implementer how to do. |

Discussion:

* The ResultCodes are enumerated as:
	+ SUCCESS,
	+ NO\_OUTSTANDING\_GAS\_REQUEST,
	+ GAS\_ADVERTISEMENT\_PROTOCOL\_NOT\_SUPPORTED,
	+ GAS\_QUERY\_RESPONSE\_OUTSTANDING,
	+ GAS\_QUERY\_RESPONSE\_TOO\_LARGE,
	+ SERVER\_UNREACHABLE,
	+ GAS\_QUERY\_TIMEOUT,
	+ GAS\_RESPONSE\_NOT\_RECEIVED\_FROM\_SERVER
* The corresponding Status Codes
	+ SUCCESS
	+ GAS\_ADVERTISEMENT\_PROTOCOL\_NOT\_SUPPORTED
	+ NO\_OUTSTANDING\_GAS\_REQUEST
	+ GAS\_RESPONSE\_NOT\_RECEIVED\_FROM\_SERVER
	+ GAS\_QUERY\_TIMEOUT
	+ GAS\_QUERY\_RESPONSE\_TOO\_LARGE
	+ REJECTED\_HOME\_WITH\_SUGGESTED\_CHANGES
	+ SERVER\_UNREACHABLE
* The result codes and status codes don’t line-up
* Questionable whether it makes sense to map status to result codes or to another parameter.
* Different MLME primitives, in general, don’t map status codes with result codes consistently anyway.
* This resolution requires work in Clause 6, and potentially Clause 10

Proposed Resolution:

Declined. The commentor did not provide sufficient detail to resolve the comment.

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| 6071 | 170.08 | 6.3.7.2.2 | The AssociateFailureTimeout parameter to MLME-ASSOCIATE.request (and MLME-REASSOCIATE.request) is described as being set to the value of the MIB attribute dot11AssociationResponseTimeOut. Why do we need a parameter to pass a value that is already in a MIB attribute? | Delete the AssociateFailureTimeout parameter, and delete the ReassociateFailureTimeout parameter. |

Discussion:

* Looks like the MIB variable covers this behaviour and no MLME primitive parameters are needed

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Proposed Resolution:

Revised.

At 169.32, remove AssociateFailureTimeout,

At 170.08, remove the AssociationFailureTimeout row.

At 183.34, remove ReassocateFailutreTimeout,

At 184.08, remove the ReassociationFailureTimeout row.

At 1595.31, replace “the AssociateFailureTimeout expires” with “the association fails to complete within dot11AssociationResponseTimeOut”

At 1599.18, replace “the ReassociateFailureTimeout expires” with “the reassociation fails to complete within dot11AssociationResponseTimeOut:”

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| 6220 | 340.00 | 6.3.58 | The uses of t1-t4 are not clearly explained for the MLME-FINETIMINGMSMT primitives. In the .request, t1 and t4 are the values from the relevant previous .confirm. In the .confirm they are the values measured for the frame which has just gone out, and the Ack which came back (but there needs to be a way to signal "no Ack"). In the .indication t1 and t4 are from the frame but t2 and t3 are measured | Update the descriptions in the tables as it says in the comment |

Discussion:

Feedback from commenter:

It may be that the best way to handle this is to add a NOTE 3 in 6.3.58.1

saying something like:

In MLME-FINETIMINGMSMT.request the t1, Max t1 Error, t4 and Max t4 Error

parameters are set to the values in the prior MLME-FINETIMINGMSMT.confirm

for that Peer MAC Address and with a Dialog Token parameter equal to the

Followup Up Dialog Token parameter in the request, or 0 if there was none.

In MLME-FINETIMIMGMSMT.confirm the t1, Max t1 Error, t4 and Max t4 Error

parameters are set to the values determined for the Fine Timing Measurement

frame and its acknowledgement.  This primitive is not issued if no

acknowledgement is received.

In MLME-FINETIMINGMSMT.indication the t1, Max t1 Error, t4 and Max t4 Error

parameters are set to the values in the Fine Timing Measurement frame and the

t2, Max t2 Error, t3 and Max t3 Error parameters are set to the values

determined for the Fine Timing Measurement frame and its acknowledgement.

Also move the MLME-FINETIMINGMSMT.indication in Figure 6-17 to be below

(i.e. after in time) the t3 capture instant.

* Mark Rison to provide an updated resolution.

Proposed Resolution:

Revised.

Move the MLME-FINETIMINGMSMT.indication in Figure 6-17 to be below

(i.e. after in time) the t3 capture instant.

In 6.3.58.1, add the following after Note 2:

“NOTE 3 - In MLME-FINETIMINGMSMT.request the t1, Max t1 Error, t4 and Max t4 Error parameters are set to the values in the prior MLME-FINETIMINGMSMT.confirm for that Peer MAC Address and with a Dialog Token parameter equal to the Followup Up Dialog Token parameter in the request, or 0 if there was none.

In MLME-FINETIMIMGMSMT.confirm the t1, Max t1 Error, t4 and Max t4 Error parameters are set to the values determined for the Fine Timing Measurement frame and its acknowledgement.  This primitive is not issued if no acknowledgement is received.

In MLME-FINETIMINGMSMT.indication the t1, Max t1 Error, t4 and Max t4 Error parameters are set to the values in the Fine Timing Measurement frame and the t2, Max t2 Error, t3 and Max t3 Error parameters are set to the values determined for the Fine Timing Measurement frame and its acknowledgement.”

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| 6408 | 143.00 | 6 | "The MLME subsequently issues an MLME-foo.confirm" -- not if nothing is received and there's no timeout | Add "In the case that a response is received from the responder STA", as for MLME-ENABLEMENT, for any primitive where a response from the peer is needed and there's no timeout |

Discussion:

* Looks like a reasonable change

Proposed Resolution:

Revised. Make the following changes:

At 162.58, 171.63, 186.09, 245.60, 416.22, 419.52, 426.04, change "The MLME subsequently..." to "In the case that a response is received from the responder STA, the MLME subsequently…"

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| 6428 | 143.00 | 6 | The parameters called "BSSBasicRateSet" or "OperationalRateSet" or "SupportedRates" in the MLME SAP are not always rates, they can sometimes be BSS selectors | Rename the parameter to allow for this, and if there are any cases where a BSS selector is not allowed, reduce the range (from 1-127) |

Discussion:

This one is about the special "rate" values 126 and 127, which don't

actually indicate a rate but indicate a PHY (VHT and HT).  So either

the name should indicate this, or the range should exclude those

special values.

Looking for BSSBasicRateSet:

- 149.50: I think the range should be 1-125, since the membership

selectors are done separately at 152.33

- 201.52: I think the range should be 1-125, since the membership

selectors are done separately at 202.49

Looking for OperationalRateSet:

- 150.3: I think the range should be 1-125, since the membership

selectors are done separately at 152.33

- 159.33: I think the range should be 1-125, since the membership

selectors are done separately at 159.20 (within the BSSDescription)

… but maybe 6.3.4.2.4 needs to have a check for membership selector

compatibility

- 202.3: I think the range should be 1-125, since the membership

selectors are done separately at 202.49

… but maybe 6.3.11.2.4 needs to have a check for membership selector

compatibility

Looking for SupportedRates:

- 173.26, 187.31, 177.18, 190.57, 246.60, 247.58, 249.3: I think the

range for this one should indeed be 1-127, since I can't see a separate

membership selector parameter, but the description cell needs to cover

this

… or maybe there should be a separate membership selector parameter

for these primitives, to be consistent with everywhere else

Proposed Resolution:

Assigned to Mark Rison

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| 6604 | 144.00 | 6.3 | It says "Content of FT Authentication elements" | Replace all instances with "Content of FT Authentication frame" (cf. "Content of SAE Authentication frame") |

Discussion:

* FT Authentication frames are included in Authentication as well as Public Action frames. SAE are solely included in Authentication frames.

Proposed Resolution:

Reject. The FT Authentication is a set of elements that is included in either an Action frame or an Authentication frame.

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| 6170 | 147.18 | 6.3.3.2.3 | From Guido Hiertz:The "Channel list" provides an "Ordered set ofintegers." In which order? Lowest first? Highest first? Which way are the integers ordered | Define the ordering of integers |
| 6860 | 147.18 | 6.3.3.2.3 | The "Channel list" provides an "Ordered set ofintegers." In which order? Lowest first? Highest first? Which way are the integers ordered | Define the ordering of integers |

Discussion:

* Using set looks to be the correct convention at this point.

Proposed Resolution:

Revised. At 147.18, change "Ordered set" to "Set"