IEEE P802.11
Wireless LANs

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| Minutes for November Plenary – San Antonio |
| Date: 2012-11-12 |
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Abstract

Minutes for the TG REVmc during the 2012 Nov 802 Plenary Session in San Antonio

**Tuesday – TG REVmc – November 12, 2012 – 1:30pm**

1. Called to order by Chair: Dorothy Stanley – 1:30pm
	1. Proposed Agenda:

**Monday PM1**

1. Chair’s Welcome, Status, Review of Objectives, Approve agenda, minutes
2. Editor’s Report
3. Timeline and Schedule
4. Vinko Erceg - CIDs 45, 66, 299, 355, see 11-12-1297
5. Matthew Fischer - 40, 43, 56, 96, see 11-12-1256
	* 1. No objection to the agenda
	1. Reviewed Patent Slides
		1. No issued noted/or brought forward.
	2. Minutes:
	3. Approve prior meeting minutes

<https://mentor.ieee.org/802.11/dcn/12/11-12-1214-04-000m-minutes-tg-revmc-teleconferences-sept-nov-2012.docx>

<https://mentor.ieee.org/802.11/dcn/12/11-12-1144-00-000m-minutes-for-sept-interim-indian-wells.docx>

* 1. Editor Report
		1. (note that Adrian used Spigot for the first time today in the group – the group asked that it be minuted).
		2. Review Doc 11-12/1274r0
			1. 107 Editorial Comments left – 14 Discuss, 69 Resolved, 12 Assigned, 1 Unasigned, 2 Ready for Motion, 8 Approved.
	2. Timeline and Schedule
		1. Review the agenda for the week
			1. Question on Bufferable Units
				1. There are at least 3 that are working on this,
				2. Action item: Matthew Ficsher, Mark Hamilton, and Mark Rison to get together offline.
			2. Motion for Gen Comments resolved in Sept will be motioned on Thurs AM1.
			3. No other changes to the week’s Agenda,
		2. Timeline
			1. Review the Plan of Record, no change made
	3. Vinko Erceg - CIDs 45, 66, 299, 355, see 11-12/1297r0
		1. Review 11-12/1297r0
		2. CID 45:
			1. Review comment: Discussion:
			2. The statement itself already defines what is mandatory
			3. Using “Mandatory” in the sentence would create a self-reference and confusion. See also CID 218.
			4. Review page 1688 of 802.1102012
				1. The statement seems to be consistant – All STAs must support.
				2. Clause 20 gives the high level overview, and in Clause 20.3.5 it is the de
			5. The pendulent paragraph of 20.1.1 may be ok to be removed.
			6. Two statements seem to be similar in two places.
			7. Move the 1669 2nd to last paragraph move to 1688 and replace last paragraph (20.3.5)
			8. See Modified text in 11-12/1297r1 for the resolution.
		3. CID 66
			1. Review Comment.
			2. See Table 20.8, the world “field” is a variable, and the entries in the table should be one of the choices that are used in the equation later.
			3. There are no use of HT-Duplicate without a definition.
			4. HT-Duplicate is really MCS 32, and having MCS 32 in the equation would look funny. So either defining “HT-Duplicate” would be good.
			5. Note in Equation 20-60 that if we defined “HT-Duplicate” in Table 20-8 then we would find an easier solution.
			6. Proposed Resolution: Revise: IN Table 20-8, replace “MCS 32, see Note 3” with “HT-Duplicate, see Note 3”
			7. Then checking the other equation, this may solve the issue as well, but it is in the “Non” HT-Duplicate section, so the equation would need to be changed to “Non HT-Duplicate.
			8. So if we add a row (even though it is duplicate) to table 20-8, we can have a Non HT-Duplicate row as well in the table, and then change the equation in 20-61 to make it clear that it is not an error.
			9. Proposed resolution addition: on page1727, change HT Duplicate to Non-HT Duplicate in two places and add a line in Table 20-8 “Non-HT Duplicate” “-“ “104”.
			10. In Equation 20-58 and 20-59 the variable is all Caps.
			11. Additional Change – Change “HT-Data” to “HT-DATA”
		4. CID 299
			1. Review comment
			2. Resolution: Revised: Modify Page 1614: as follows – see 12/1297r1 for details.
		5. CID 355
			1. Review comment
			2. Difference in rem vs mod discussed. – do we need definition or not was deferred till later.
			3. Proposed Resolution: Revise, On Page 1713, change “rem(N” to “mod(N”.
	4. Matthew Fischer - 40, 43, 56, 96, see 11-12-1256r1
		1. Review doc 11-12/1256r1
		2. CID 40
			1. Review the comment
			2. Review the diagram in Figure 9-14 – DCF timing relationships
			3. Proposed Resolution: Reject: The general requirements given for RX and CCA sensitivity implicitly require an implementation to either include a MAC and PHY which cooperate through the exchange of MAC SLOT timing information or an implementation in which the PHY operates in such a manner as to provide updates to the CCA result at a rate that is less than one half of the CCA assessment time.
			4. Discussion on how comment resolution is handled. Only one objection to continue with the proposed resolution with 18 in the room.
		3. CID 43, 56
			1. Review the comments.
			2. Proposed Resolution: Modify 9.3.7 as described in 11-12-1256r1 for CID 43 and 56.
			3. Reviewed some examples of what the change would mean.
			4. Will pickup again on Wednesday PM1.
	5. Ran out of time – Recessed until PM1 where we will take on Carlos’s presentation.
1. Tuesday, November 13, 2012 PM1
	1. Called to order by Dorothy Stanely 1:35pm
	2. Review Proposed Agenda

Carlos Aldana - 46, 47, 48, 354, see 11-12-1249

Adrian Stephens - Editorials - 217, 249, 253, 254, 259, 272, 274

* + 1. No objection to Agenda
	1. Carlos Aldana - 46, 47, 48, 354, see 11-12-1249r1
		1. Presentation of 11-12-1249r1
		2. Question on issues noted in the presentation of the current stuff, can we fix that along with the inclusion of the new “fine” stuff?
		3. Issue with some stray quote marks. Noted to make correction.
		4. Transmitted out of a single “rx-Chain” sounds odd. Need to define it better.
		5. Vendor Specific was missing in some cases, and so the proposal is to make it specific to add in all cases.
		6. Transmit in one RF chain seemed odd.
			1. Reducing the complexity by forcing to a single chain seems like a good idea
			2. Right now you have to stay with multiple chains or with single chains, you cannot switch back and forth.
		7. Note that the Annex in the submission is not an addition, but only the highlighted text.
		8. Question on how much overhead is added with these changes?
		9. Quick check shows about 2000 packets extra per second.
		10. When we looked at this before, the current 10ns delay accounts for the amount of bandwidth that is available and to temper the amount of delay. So what happens with reducing the delay to 1ns or .1ns?
			1. Can we get some simulation results to see the effect of the changes?
		11. In 11ad, there was a lot of discussion on the delays in the chains, and what can be supported.
		12. The error changed to 2 bytes to make the math easier, but does not have to change.
		13. Changes to the existing set of frames would not be made, they are class 3 frames, and the new way would be a class 1 frame.
		14. Question on the extent of the magnitude of the changes seemed higher, and some would like more time spent on this topic before agreeing to add to TGmc, but when we go to motion, we will pull these for a separate motion, and then decide if there is support to include it now or not.
		15. We are probably not going to get all the comments addressed this week, so delaying to next meeting or more telecom time may be appropriate.
		16. Through out the PHY clause, we need to get the right timings when we add something like this.
			1. How to use this proposal was debated a bit on if other PHYS could or could not use this tweak.
		17. How does going to public action frames fit in scope of the discussion?
			1. This can be argued that this is a new feature.
			2. Yes, but remember as a Revision project, it is up to the group as to how much change we would accept -- Add, Delete, or modify.
		18. Do we make the similar changes to the existing, do we move to Class 1 frames?
			1. The answer was no, it would not be expected to make that change.
		19. Can we get simulation results to help make decision?
			1. Unsure that some results could be prepared, or when it could be done.
		20. Why is changing the “class” change the bandwidth usage?
			1. The class change cause more frames, and to all APs that they can hear, and then they could potentially cause a flood of packets in order to deterimine the location.
		21. The triangulation and period of the packet sequence frequency is of concern
		22. The difference was that in the past, the traffic was limited to the AP that it was associated, in the proposal, it can be done witout the delay of associating to the AP.
		23. Thanks given to the presenter – suggested to follow-up with those that had comments.
	2. Adrian Stephens - Editorials – different list to be used. 366
		1. CID 366
			1. Action on Adiran to complete the proposal
		2. CID 272
			1. assigned to Mark Rison
		3. CID 259
			1. There is a stock response for the proposed Resolution
			2. Proposed Resolution: Rejected. The commenter has not indicated specific changes that would resolve his comment.
			3. Assigned to Mark Rison if he gets to it before we go to ballot.
		4. CID 258
			1. Proposed Resolution: Insert missing spaces at 1044.05, 1046.64, 1819.15. Also check and insert missing spaces for: "500kb/s", "40MHz-capable", "312.5kHz", "0.5Mb/s", "1.5Mb/s", "500kbit/s", "3Mb/s", "5MHz", "10MHz", "20MHz", "12Mb/s"
		5. CID 253
			1. Comments were sent to Adrian, and are captured in CID 115.
			2. Lets go there first.
		6. CID 115
			1. Set of changes were sent for consideration.

Mark Rison responds:

Change to "0 or $n" in figs:

8-1 (A2, A3, SC, A4, QC, HTC)

8-11 (A4, A5, A6)

8-30 (A4, QC, HTC)

8-34 (HTC)

[Something horrible has happened to the top line of 8-62]

8-186 (all fields after Version)

[8-266 does not appear to follow a valid pattern]

8-370 (Chosen PMK)

8-436 (SCO, MSCP)

8-449 (MCSP)

8-417 (delete the "(optional)" from the NRC cell)

* + - 1. The list was done out of D0.04
			2. See 8.2.3 General Frame Format
				1. Given that some fields do not exist all the time, changing the figure to say “0 or 6”would be the proper thing todo.

Concern that it may be more accurate, but it may be confusing to make the change. In some cases we do this in other figures as well. We do not know if we have all the specific cases where there are variable size is more correct.

* + - 1. Proposed Resolution:

[1:30:57 PM] Adrian Stephens: REVISED (EDITOR: 2012-11-13 20:30:48Z) - Change octets value to "0 or $n" in figs for specified fields:

8-1 (A2, A3, SC, A4, QC, HTC)

8-11 (A4, A5, A6)

8-30 (A4, QC, HTC)

8-34 (HTC)

8-186 (all fields after Version)

8-370 (Chosen PMK)

8-436 (SCO, MSCP)

8-449 (MCSP)

8-417 (delete the "(optional)" from the NRC cell)

* + - 1. No objection…return to CID 253
		1. CID 253
			1. Make the same Resolution as in CID 115.
		2. CID 249
			1. Review the commentor, and the Commentor did not want to challenge the proposed resolution.
			2. Proposed Resolution: Reject: The commenter indicates that the concerns in the inconsistency between captions “Figure 8-12 xyz and the text ”see the following figure”. This is a matter of IEEE-SA style.
		3. CID 240
			1. Review submitted info:

EDITOR: 2012-11-10 17:08:44Z -

Mark Rison writes:

Also lowercaseify "One or more" in figs 8-330, 8-331, 8-332, 8-338, 8-339, 8-340, 8-507, 8-508, 8-509, 8-510 and "Zero or more" in figs 8-155, 8-506. (D0.4)

* + - 1. Proposed Resolution: REVISED (EDITOR: 2012-11-02 15:56:51Z) - Change "Variable" to "variable" in "octets" row of frame format figures. Also lowercase in the multiplicity rows: "One or more" in figs 8-330, 8-331, 8-332, 8-338, 8-339, 8-340, 8-507, 8-508, 8-509, 8-510 and "Zero or more" in figs 8-155, 8-506. (D0.4)
		1. CID 220
			1. Review comment and proposals:

Proposal:

Change all KeyID to Key ID except where use as part of the name of a MIB variable. & Fix case in Figure 11-17 (KeyId -> "Key ID")

EDITOR: 2012-10-02 13:32:21Z

The term Key ID is used as follows:

1. as an MLME parameter

2. as part of a field (560.20) name

3. as an entire field name (598.20, 1167.55)

4. as part of the name of a KDE (1249.50)

The term KeyID is used as follows:

1. As the entire name of a field (598.50, 603.50, 790.40 …)

2. As part of the name of a MIB variable (1168.20)

3. As part of the name of a field (1194.15)

4. As a signal into the CCMP block (1207.15)

The only obvious inconsistency is at 603.60 and possibly 1207.15.

There are 30 Instances of KeyID and 88 of Key ID.

Question, should we address only the inconsistencies, or should we eliminate one of these terms?

* + - 1. There are many locations that key identifier with in the draft, so we need to make the changes where it was missed.
			2. Proposed Resolution: [1:44:15 PM] Adrian Stephens: REVISED (EDITOR: 2012-10-12 15:53:43Z) - Change all KeyID to Key ID except where use as part of the name of a MIB variable. & Fix case in Figure 11-17 (KeyId -> "Key ID") Also change "BIP key ID" -> "BIP key identifier"
		1. CID 217
			1. Review comment –
			2. Ask for volunteer to do the work?
				1. None
			3. Proposed Resolution: Rejected. The commenter has not indicated specific changes that would resolve his comment
		2. CID 143
			1. Review comment,
			2. Changes identified
			3. “multicast to unicast”
			4. Proposed Resolution: REVISED (EDITOR: 2012-09-27 15:40:12Z) - Change "directed" to "individually addressed" at 2123, 2137 (802.11-2012) and in (ref d0.4): The following changes are also needed in D0.4: 2386.24, 2409.57, 1092.7, 1263.49, 70.24 (x2), 936.5, 936.6 (x2), 936.8, 1261.51 (->"group-to-individually-addressed"), 1298.50, 1299.25, 1441.23, 2901.31, 2901.34, 2958.48. Then delete the "unicast" and "directed" synonyms from clause 3.
		3. CID 100
			1. Review comment
			2. We may want to drop the “control response” from the locations where it is qualified, as it is not required in those places.
			3. Check for “Management Response Frame” – used in lots of terms.
				1. But we change the search to be lower case, more specific cases.
			4. Discussion on if we agree to make further changes like these or not. – decided not.
			5. Proposed Response:

REVISED (EDITOR: 2012-11-10 17:19:29Z) - At 179.58, delete "in the corresponding QoS Action management frame".

At 266.35, 268.35, 270.35; delete change "management frame of action type" to "frame".

Change all "<name of frame> [action] [management] frame" to "<name of frame> frame", excluding the term "time priority management frame".

Change all remaining "management frame" to "Management frame" where this is used as a noun phrase (i.e., where the thing is a frame), and excluding defined terms (i.e., the bold terms in clause 3).

Change all "data frame" to "Data frame" where this is used as a noun phrase (i.e., where the thing is a frame), and excluding defined terms (i.e., the bold terms in clause 3).

Ditto for "data MPDU".

Change all "control frame" to "Control frame" where this is used as a noun phrase (i.e., where the thing is a frame), and excluding defined terms (i.e., the bold terms in clause 3).

Change all "<name of frame> control response frame" to "<name of frame> frame" and reword as necessary.

Adrian Stephens

* + 1. CID 99
			1. Review comment and former Action Item from Mark Hamilton
			2. More work to do.
		2. CID 97
			1. Review comment, but more work needed. Here as well.
		3. CID 98
			1. Review comment – pending resolution of CID 97
			2. This one would require a submission.
			3. ACTION ITEM: Mark Rison will prepare, but will wait until Adrian gets the other cids update.
			4. Discussion on the value and use of the word Frame vs packet vs MPDU etc.
		4. That is all the CID in the “Discuss” group.
	1. Editor Comment State:
		1. There are 69 that were presented as ready for motion and we have had 11 that were done today and will be motioned later
		2. Doc11-12/1082r8 is there now, and r9 will be produced after todays meeting and posted in preparation for motion on Thursday Morning.
		3. Dorothy to send E-mail prior to ensure what is ready for motion.
		4. Review the Comment Spreadsheet.
		5. We have a few editor Comments left.
		6. Several Comments have been assigned to Mark R,and he has some submission ready to review.
			1. Documents: 11-12/1345, 11-12/1344, 11-12/1247 are ready for review that address most of the CIDs assigned to Mark.
	2. We will start tomorrow with comments presentations from Matthew Fischer, Eldad, then Gen
	3. Recessed 3:28pm
1. Wednesday, November 14, 2012 PM1
	1. Called to Order by Dorothy Stanley at 1:30pm
	2. Review Agenda for this meeting slot:

Continue Comment Resolution:

1. Eldad -- PMD direction (35, 61, 65, 275, 276)

2. Presentations from Matthew Fischer – (finish review 45 & 56) 96 see 11-12-1256

3. GEN comments see doc 11-12-1229 – address the following 29 CIDs:

146, 28, 73, 101, 111, 114, 3, 134, 152, 183, 228, 229, 231, 269, 218, 119, 39, 27, 84, 294, 63, 64, 295, 102, 302, 300, 106, 290, 292.

 4.Recess

* + 1. As Matthew Fischer was not in attendance at the start of the meeting, swap Matthew and Eldad to allow the group to start discussions.
		2. No objection to the updated Agenda
		3. Review 11-12-1279r4 (agenda
			1. Look at the agenda for the rest of the week
			2. Review the proposed motions for Thursday
	1. Eldad -- PMD direction (35, 61, 65, 275, 276)
		1. Review 11-12-1009r3
			1. This submission was used to remove the PLCP/PMD interface in TGac.
			2. The Goal is to look if we can delete the PLCP/PMD completely from 802.11.
			3. The main changes that were done by TGac would need to be replicated for each PHY.
			4. In the effort for TGac, when PLCP/PMD was used, it has a note that it is not applicable to TGac, so going forward we would need to evaluate how to complete the removal for all cases.
			5. The removal of the interface there are thought to be no shalls that are dependant on the interface. The interface is a virtual fabrication that is not used in the physical deployments.
			6. Review of each clause change was done following the submission.
			7. The variables of RXRFDelay and aRXPLCPDelay are always used together, so replacing them with RxPHYDelay, which makes the removable easier.
			8. When TGv added a few time dependant variables that have PMD in the name, so we would need to verify that there is not “internal” point that the times are taken from.
			9. When TGac removed the distinction, it was determined to add alternate equations to make it clear for VHT implementations would use one set, and the non-VHT would use the original one…when we make the change, it would have only one set.
			10. The first P in PSDU and PPDU are are both defined as PLCP, so we will need to be careful in the extraction.
			11. Questions:
				1. Review figure 20-22 How to map out the changes in the figure?

Simply delete the primatives, and then the one line PLCP/PMD in the figure.

Keeping the three rows of the PHY figure allows the current text to make it match text, but it could be collapsed by merging as it makes sense.

* + - * 1. Question on how the TOD implemented may not be in TGac, and how was it accounted for?

This is a bit different than the removal, but it indicates that TGac may not have thought about this particular issue.

It still looks straight forward, but clause 22 may need to be checked for the 11v changes that may have been missed.

* + - * 1. ISO7498-1 does not define the PLCP and PMD so it was a creation of 802, and we would be able to drop it out completely.
				2. Does TGaf have an issue with the droping of PLCP or PMD?

They are based on TGac, so they should not have an issue.

* + - 1. Straw Poll: Is there any objection to the direction described by Eldad?
				1. No objection to prepare the removal.
			2. Question on how effeciant is it to do the edits ahead of the VHT roll-in.
				1. If we make the change on the baseline without AC, then when AC is rolled-in, then there will be some fix-ups, but should not be massive.
		1. Eldad will prepare a submission for resolving the PMD comments by the January Interim.
	1. Presentations from Matthew Fischer – (finish review 45 & 56) 96 see 11-12-1256
		1. Review minutes from Monday for starting point of presentation today
		2. Continue in review of 11-12-1256r5
		3. Since Monday, we have updated the document, and many changes were made.

 **R5:**

Add diagram to show tradeoffs of MAC and PHY timing parameters.

**R4:**

Proposed text changes for CID 40, 43, 56 slightly modified – removed “a value that is greater than the value indicated in the PHY Charateristics table of the attached PHY” – since a later instruction replaces all of the values for those parameters with “implementation dependent”.

Changed “MAC SLOT boundary” to “MAC slot boundary”.

Added reference to slot boundaries in 9.19.2.3

**R3:**

Fixed CID 40 resolution (still had old reject resolution)

Fixed CID 43, 56 resolutions (changed counter to revise and update r number)

Added R2 revision notes.

**R2:**

Combined CID 40 with CID 43, 56.

Changed CID 40 resolution from reject to revise.

Included new editing instructions to cover CID 40.

Modified editing instructions for CID 43, 56 to give corrected modifications to parameter value modifications and timing values.

**R1:**

Correct the internal doc references.

Change wording of proposed text of CID 96 slightly.

Fix editor references – change from TGac to TGm.

* + 1. CID 40
			1. Originally was proposed to Reject
			2. So a new proposal was made.
		2. CID 40.43.56
			1. All three CIDs considered together.
			2. Look to have constant values for slot time for the PHY boundaries, and the Rx/Tx turnaround + D2 + CCAdell + M2 are defined to have the sum to equal.
			3. SIFS and Slot times are fixed, and we allow for the variables that make up the equations to have choices on how to choose the tradeoffs.
			4. Make a change to create an R6 whre a reference was corrected toward the end of this section.
			5. Discussion:
				1. When does the CCA have to be done?

In order to keep the slot consistent, you do not have to fix any of the indivual components, but rather the sum of them all.

Large discussion on clarifying the diagram

How to deal with the end of the busy part.

We realign the slottime at the end of the packet plus SIFS

The PHY behaviour signals the CCA from the start to the end.

* + - * 1. Looking at the parameters, it is a collapsing of the parameters, and so it may be ok, but need to check that the values are not used individually somewhere else in the spec.

The inequalities make it usable in the general case

The meaning of having a longer CCA and a phy process, then you have to process

* + - * 1. More discussion that was back and forth
				2. A list of Atributes should define things that are consistent to the spec. If they are for implementation dependant, then they are not needed in the spec.
				3. The best CCA completely fills the slottime.
				4. If the CCA is running contiguously, then you can imagine an integrated CCA that works with a periodicity that is the uncertainty of detecting the busy.
				5. The spec has a concept that tells the state changes.
				6. The Vendor should have some choices that allows interoperability.
				7. If a variable is zero, will it cause a problem?

No

* + - * 1. As long as you meet the sum requirements, then it allows the implementation to select trade-offs
				2. The MAC needs to know how to calculate the slot boundaries correctly.
				3. What are the PHY Characteristics?

Are they common definitions of the different PHY?

The “a” numbers are thought to be fixed for a particular PHY.

More dialog without capture.

* + - * 1. We should have only the PHY characteristics that matter, there are constrained and unconstrained variables.
				2. Look at 19.4.7 – There is another case to look at.
				3. Question on the tolerance of the variables?

How do you deal with 10% tolerance of SIFS

A lot of variables are PHY dependant, or they have taken the 10% and allocated it out, but if the implementation takes this 10%, it runs the risk of not meeting the spec.

* + - 1. Strawpoll on the direction of the paper:
				1. Are we coming to Concensus on the general direction of 11-12-1256r7?
			2. No want a different straw poll?
			3. Strawpoll: CIDs 40, 43, 56 should be resolved as “revised” with a comment resolution of “Incorporated the text changes indicated in 11-12-1256r6”
				1. Yes -4 No- 0 Agree but not r6 - 6 Abstain – 2
			4. Strawpoll: CIDs 40, 43, 56 should be resolved as “revised” with a comment resolution of “Incorporated the text changes indicated in 11-12-1256r6”
				1. Yes – 8 No – 3 Abstain – 4
	1. Ran out of time
		1. Recessed at 3:33pm
1. Thursday, 15 November 2012, AM1
	1. Called to order by the chair, Dorothy Stanley, at 8:02am
		1. Reviewed Agenda for this slot:

1. Motion

2. LB Time Frame Decision

3. Gen and Mac comments

 (11-12-1229)

* 1. **Motion #2**

**Approve comment resolutions to comments in**

* + - * Document 11-12-1082-10 , “Ready for Motion” & “Ready for Motion-sp” tabs (Editorial comments, telecons, San Antonio)
			* Document 11-12-1189-07, “Motion MAC-B” tab (MAC comments, telecons)
			* Document 11-12-1394-01, “Motion Gen-A” & “GEN-1297” tabs (GEN comments September, San Antonio)
		1. Moved: Adrian Stephens 2nd: Mark Hamilton
		2. Result 9-1-0 – motion passed
		3. Concern on motion – Mark Rison
			1. CID 258 – missing issue
			2. Editorial Comment missing point of individual address was noted, but not included.
			3. Doc 1256r6 – CID 40-56-96
				1. This was not part of the motion
			4. CID 355 – this was supposed to be part of assigned to Mark R.
			5. Request Mark R. to send the details again, and will be addressed as appropriate.
	1. Other Motions will be addressed in the afternoon
		1. Allow for more review time.
	2. LB Time Frame Decision
		1. We are most responsible to target Jan for the LB
	3. GEN comments see doc 11-12-1229r0
		1. CID 27
			1. Review the discussion and proposed resolution
			2. Question on Operational? Does that mean only receive?
				1. The HT OperationalMCSSet is used to determine what speed to send not a lmit of what you are required tx
			3. This is in context of SCAN.confirm
				1. In other contexts, would this need a different description?
				2. Start.request would also need to be updated
				3. Join would also need to be updated
				4. Where OperationalMCS is used would at least need to be checked.
				5. There is another resolution (CID that deletes the HT Operational Element from the other locations, and so it only needs to be defined in one place and then refer to it later.
			4. Question on if we need to talk about the Basic Rate – not today.
			5. Proposed Resolution: Revised make changes as described in 11-12-1229r1 under CID 27.
		2. CID 63
			1. Review comment
			2. When removing put in “temporary” placeholders to avoid renumbering
			3. When deleting from a table that effects over the air protocol, entry will be marked as reserved.
			4. Proposed Resolution: Revised Make changes as indicated in 11-12-1229r1 for CID 63
		3. CID 64
			1. Review comment
			2. Proposed Resolution: Revised Make changes as indicated in 11-12-1229r1 for CID 64
		4. CID 73:
			1. Review comment
			2. Proposed Resolution: REVISED (GEN: 2012-11-15 14:52:15Z) - Delete Clause 14 (as shown in resolution for CID 63), Clause 15 (as shown in the resolution for CID 64) and Annex J.
			3. There was a shout of Great Rejoicing when agreed.
		5. CID 84
			1. Review Comment
			2. Proposed Resolution: ACCEPTED (GEN: 2012-11-15 14:55:01Z)
		6. CID 101
			1. Review comment
			2. Proposed Resolution: REVISED (GEN: 2012-11-15 14:58:02Z) Delete the FH and IR PHYs as shown in the resolutions to CIDs 63 and 64.
		7. CID 102
			1. Review comment
			2. Proposed Resolution: ACCEPTED (GEN: 2012-11-15 14:58:49Z)
		8. CID 103
			1. Review Comment
			2. Proposed Resolution: ACCEPTED (GEN: 2012-11-15 15:01:04Z)
		9. CID 106
			1. Review Comment
			2. Proposed Resolution: The limit on MPDU length in 802.11n is determined by the MAC, not the PHY. It is related to MAC concepts such as A-MPDU aggregation structure and the maximum MSDU/MMPDU size. Note that 802.11ac will introduce a framework for describing such constraints that will clarify this.
				1. Concern that the aggregation is a red herring
				2. The resolution does not address the issu
				3. There should be a max length definition was debated.
				4. The Constraints of the MAX length of the MSDU is defined above
			3. Defer this one for more conversation --
		10. CID 150
			1. Review comment
			2. Concern with whether PCF has parts that are necessary?
				1. With all the changes that we have made, maybe it is all broken anyway.
				2. What references are being made to the PCF?
				3. Changes that would permenantly effect the PCF would be made in REVmd if needed.
			3. Proposed Resolution: REVISED (GEN: 2012-11-15 15:07:49Z) Make changes as described in 11-12-1229r1 under CID 150
		11. CID 290, 291, 292, 293, 294
			1. Review comments.
			2. These are all obsolete removal comments.
			3. Proposed Resolution as noted in 11-12-1229r1
		12. CID 296
			1. Review comment
			2. Was resolved in this mornings motion – Motion GEN-A tab.
		13. CID 300
			1. Review comment
			2. The extensive list was slowly scrolled.
			3. Potentally there will be some things that could be deleted that are no longer need
			4. Proposed Resolution: REVISED (GEN: 2012-11-15 15:17:49Z) Editor to make the changes as indicated in 11-12-1229r1 for CID 300.
		14. CID 302
			1. Review comment
			2. An Editor comment on the Modulation usefulness. An Extra Editor note on other table parameters that seem useless when they have only one value will be made.
			3. Proposed Resolution: REVISED (GEN: 2012-11-15 15:21:51Z) Make changes as indicated in 11-12-1229r1 for CID 302.
		15. CID 3
			1. Review comment
			2. Propsoed Resolution: REVISED (GEN: 2012-11-15 15:27:31Z) Hopping, Infra-red, PBCC, ERP-PBCC and the SDL Annex are removed in response to other comments. The use of WDS is resolved by comment 301.
		16. CID 28
			1. Review Comment
			2. Review the embedded PDF file for changes in clause 6 and 8
			3. Proposed Resolution: REVISED (GEN: 2012-11-15 15:31:32Z) Make changes as shown in 11-12-1229r1 in the CID 28 section -- make changes as per the embedded PDF file marked #28
		17. CID 125
			1. Review Comment
			2. A submission would be required
			3. Action Item: Assigned to Mark Rison – Comment Grouping will be changed to GEN Assigned.
		18. CID 218
			1. Review Comment
			2. Proposed Resolution reviewed:

The commenter doesn’t indicate a specific issue to resolve or specific changes that would satisfy their comment.

In reply, generally we have three things:

1. Manadatory rates

2. Basic rates

3. Operational rates

Operational rates necessarily include all the basic rates.

The STA starting a BSS has complete freedom in selection of the basic rates from the set of rates it supports.

The mandatory rates are the mandatory rates defined “for the attached PHY”, and are fixed by specification.

* + - * 1. There was an e-mail with the specific issue to resolve listed, but that leaves the term Mandatory confusing to the commentor
				2. It would seem that the confusion is in the distinction between mandatory vs basic
			1. Defer the comment
			2. Action Item: Assigned to Mark Rison – Comment Grouping will be changed to GEN Assigned.
		1. CID 228
			1. Review Comment
			2. Mark says that he had a discussion that is not reflected in the doc.
			3. Action Item: Assigned to Mark Rison – Comment Grouping will be changed to GEN Assigned.
		2. CID 229
			1. Review Comment
			2. Mark says that he had a discussion that is not reflected in the doc.
			3. Action Item: Assigned to Mark Rison – Comment Grouping will be changed to GEN Assigned.
		3. CID 231
			1. Review Comment
			2. Note that a 802.11 SG was not able to convert to a TG to do this task in the past. Unlikely to see change as noted in comment.
			3. The commentor asked if there was value in the exercise of doing this work.
			4. It wsa decided that a rejection was fine.
			5. Proposed Resolution: REJECTED (GEN: 2012-11-15 15:52:23Z) The commenter has not indicate a specfic issue to be resolved or specific changes that would satisfy the commenter.
		4. CID 183
			1. Review Comment
			2. Mark says that he had a discussion that is not reflected in the doc.
			3. Action Item: Assigned to Mark Rison – Comment Grouping will be changed to GEN Assigned.
		5. CID 119
			1. Status assigned to Mark Rison-- See submission 11-12/1199 that may address this issue. This submission should be considered first.
		6. CID 111
			1. Review comment
			2. Proposed Resolution: REJECTED (GEN: 2012-11-15 15:55:54Z) While accepting that High Rate is now no longer an accurate description, changing its name would create more confusion than it resolved.
		7. CID 114
			1. Review comment
			2. Review alternate resolutions and discuss pros and cons for each
			3. Proposed Resolution: REJECTED (GEN: 2012-11-15 15:57:28Z) A STA has only one attached PHY. In the case that a PHY provides backwards compatibility to earlier PHY’s signals, it is still a single PHY. It incorporates the behaviour of the earlier PHY by reference.
				1. Need to continue the discussion in PM1
	1. Ran out of time
		1. Will will start with CID 96, and then continue CID 114.
		2. Recessed at 10:01
1. Thursday, 15 November 2012, PM1
	1. Chairperson Dorothy Stanley called the meeting to order at 1:30pm
		1. Review the agenda for todays final slot:

1.Comment resolution – 96 (11-12-1256), GEN review tab, 11-12-1229, 11-12-1369

2. Motion

3.Plans for January

4.AOB

* + 1. No changes to the proposed agenda after sorting the Gen Order.
	1. CID 96 – 11-12-1256
		1. This is the last CID in the doc
		2. Review the comment –
		3. Review the proposed changes in 11-12-1256r7
		4. There is an r8 of the file on the server.
			1. r8 was created with comments in the section being reviewed.
			2. Mark Rison had sent material that was added to the new r8.
		5. Protection time within 4 micro seconds is a new constraint
		6. Detect and to indicate seem to be used without a consistency that we should use.
			1. We need to determine the way to detect, and then indicate.
			2. The debate was on where or not it is an indicate or detect.
				1. The PHY indicates, and the CCA detects is what was desire, but not what ended up on the paper.
				2. Neeed to change PHY to CCA in the 4th Para of 18.3.10.6.
				3. Change CCA to CS/CCA mechanism
			3. CCA-ED has an issue that will need to be fixed later, but the comment here is on CS/CCA.
			4. The PHY has a CS/CCA and an CCA-ED component.
				1. CS/CCA uses both energy and carrier detect
				2. Long debate on what the components are that make up the detect.
			5. Proposed resolution: Editor to make the changes as indicated in 11-12-1256r9 for CID 96.
	2. GEN Comments – Notes from Mark Hamilton – Thanks
		1. Review of 1394r1, “Review” tab
		2. CID10: ACCEPTED. Ready for Motion. Motion GEN-B
		3. CID18: REVISED, delete cited variable. Ready for Motion. Motion GEN-B
		4. CID62: REJECTED: 802 requires the existence of the MIB. The MIB should not be deleted. Ready for Motion. Motion GEN-B
		5. CID210: Haven’t had further off-line discussion. Looked at 8.4.1.14. There is information about what 0 means. Nothing about the upper limit (here). The NOTE clarifies that this is a count of fragments, which means it could be 16, times 64, which is 1024, hence the 10 bits. Per text in clause 9, it looks like there is a limit of 64 for HT, but only for HT. It is 1024 for other PHYs. Looked at the ADDBA primitives. In 6.3.29.4.2 and 6.3.29.2.2 change the valid range of the "BufferSize" parameter from "0-127" to "0-1023" and in 6.3.29.5.2 and 6.3.29.3.2 change the valid range of the "BufferSize" parameter from "0-127" to "1-1023” Ready for Motion. Motion GEN-B.
		6. CID298: Agreed in concept. But, don’t want to just delete it. Instead, add text (perhaps in the Behavior Limits column) to describe the grandfathering and dates, so the situation is clear. Defer to Peter for exact text.
		7. CID342: ACCEPTED. Ready for Motion. Motion GEN-B
		8. <<< Stopped Comment Resolution processing to do motions, and meeting planning >>>
	3. Motions:
		1. **Motion #3**

**Resolve the following CIDs as indicated in 11-12-1229-01”**

CIDs 27, 63, 64, 73, 84, 101, 102, 103, 150, 290, 291, 292, 294, 295, 300, 302, 3, 28, 231

* + - 1. Moved: Jon Rosdahl 2nd Adrian Stephens
			2. Results: 13-0-4 motion passed
		1. Motion
			1. **Approve comment resolutions to comments in**
			2. Document 11-12-1394-01, “GEN-1256” tab (note: CIDs 40, 43, 56, text changes in 11-12-1256-07)
			3. **Moved:**
			4. **No motion for lack or mover – defer as CIDs and doc is not quite ready.**
		2. Motion #4

Resolve CID 96 as “Revised” with a resolution of “Incorporate the text changes as indicated in 11-12-1256-09 for CID 96”

* + - 1. Moved: Mark Hamilton, 2nd David Hunter
			2. Results: 14-0-4 motion passed.
	1. Meeting Planning – Nov to Jan
		1. Objective – Comment Resolution
		2. Conference Calls 10 am ET 2 hours
			1. Nov 30, Dec 7, 14 and Jan 11
				1. Concern that TGac has a premeeting on Jan 11, so that meeting may be one hour.
			2. No objection to the dates other than the Secretary may have issue on Nov 30 and Dec 7.
	2. Return to GEN comments Comment Group Review
		1. CID345: Is this related to HTM5.5? A non-HT device using PSMP can’t use Multi-TID Block Ack. HTM5.5 and QB4.4 look to be duplicates. QB4.4 is the one that shouldn’t be here (this is an HT feature, not a QoS feature, and only HT devices can use it). We should move (and fix) QB4.3, too, but that is a new comment for someone to do next time. Actually, HTM5.2 is the duplicate of QB4.3, so we can just delete it, too. REVISED: delete the row QB4.4 and QB4.3 this is a duplicate of HTM5.5 and HTM5.2 respectively. Ready for Motion. Motion GEN-B
		2. CID346: REVISED: delete the row QB4.4 and QB4.3 this is a duplicate of HTM5.5 and HTM5.2 respectively. Ready for Motion. Motion GEN-B
	3. Return to Doc 11-1229r1
		1. CID 114
			1. When we left off we had two options for the resolution.
			2. The other PHYs do not make a mention of a behavior. For example there is only one reference into the HR Phy. So if you transmit at 1mbp then you are in the HR Phy and not the DSS Phy. The Newer Phy was to determine if we were going to repeat the definition or if they would “call” the other PHY as a sub-routine.
			3. So you incorporate by reference, but then have to make changes, so not really different phys.
			4. Discussion about putting in a statement that there is only one PHY
			5. 4 alternatives now available:
				1. Proposed Resolution 0:

Rejected. A STA has only one attached PHY. In the case that a PHY provides backwards compatibility to the signals of earlier PHY(s), it is still a single PHY. It incorporates the behaviour of the earlier PHY by reference.

* + - * 1. Alternate Proposed Resolution 1:

Revised. Add the following statement at 104.30, after “the specific manner in which these MAC and PHY LMEs are integrated into the overall MAC sublayer and PHY is not specified within this standard.” add:

“Note that a STA includes only one instance of a PHY entity. When a STA supports modes of operation that are compatible with those of an earlier-standardized PHY entity, it does so by incorporating the behaviour of the earlier-standardized PHY entity by reference into the later-standardized PHY entity.”

* + - * 1. Alternate Proposed Resolution 2:
				2. Revised. Add the following statement at 104.30, after “the specific manner in which these MAC and PHY LMEs are integrated into the overall MAC sublayer and PHY is not specified within this standard.” add: “Note that a STA includes only one instance of a PHY entity.”
				3. Alternate Proposed Resolution 3:
				4. Revised. Add the following statement at 104.30, after “the specific manner in which these MAC and PHY LMEs are integrated into the overall MAC sublayer and PHY is not specified within this standard.” add: “A STA includes only one instance of a PHY entity.”
			1. StrawPoll on Alternatives – Chicago style.
				1. #0 – Reject: 5
				2. #1 – Add lage text set: 2
				3. #2 – text starts with “Note”: 7
				4. #3 – Text small: 7
				5. Result Option #1 drops off.
				6. This round: only vote for one.

#0 -2 #2- 0 #3-6

Option #3

* + - * 1. Proposed Resolution: Revised. Add the following statement at 104.30, after “the specific manner in which these MAC and PHY LMEs are integrated into the overall MAC sublayer and PHY is not specified within this standard.” add: “A STA includes only one instance of a PHY entity.”
		1. CID 152 –
			1. Review Comment
			2. Check on page 828.10 – definition of correctly received.
				1. Correctly does add value.
			3. Doc 11-12/1229r1 shows a proposed resolution:
				1. Proposed Resolution: Revised

Replace all “correctly received” with “received”, except at:

* 826.03 “When a frame containing an acknowledgement is lost, the MAC that initiated the frame exchange does not receive a protocol indication of whether the initial frame was correctly received.”
* At 828 (twice) “slot boundary as defined in 9.3.7 after a correctly received frame, and its backoff time has expired. A correctly received frame is one where the PHY-RXEND.indication primitive does not indicate an error and the FCS indicates the frame is error free.” and “after a correctly received frame, and the backoff time for that AC has expired.”
* 878.12, Replace “followed by a correctly received ACK frame transmitted by a STA (either a non-AP STA or an AP).” with “followed by a received ACK frame.”
* 959.55 is broken. Leave it well alone.
* At 1805 (twice): “Hold CCA busy for packet duration of a correctly received PLCP but carrier lost during reception of MPDU”
* At 1812, 1822
	+ - 1. Discussion – PLCP was not a packet.
			2. The resolution was not agreed to as we ran out of time. This topic will be continued during the next telecom.
	1. Ran out of Time to complete comment resolutions.
	2. TG REVmc was adjourned at 3:30pm

**References:**

TG REVmc Meeting Agenda Slides:

 <https://mentor.ieee.org/802.11/dcn/12/11-12-1279-07-000m-agenda-november-2012.ppt>

 <https://mentor.ieee.org/802.11/dcn/12/11-12-1279-06-000m-agenda-november-2012.ppt>

<https://mentor.ieee.org/802.11/dcn/12/11-12-1279-05-000m-agenda-november-2012.ppt>

<https://mentor.ieee.org/802.11/dcn/12/11-12-1279-02-000m-agenda-november-2012.ppt>

<https://mentor.ieee.org/802.11/dcn/12/11-12-1279-01-000m-agenda-november-2012.ppt>

<https://mentor.ieee.org/802.11/dcn/12/11-12-1279-00-000m-agenda-november-2012.ppt>

Minutes from Sept Interim and Telecons:

<https://mentor.ieee.org/802.11/dcn/12/11-12-1214-04-000m-minutes-tg-revmc-teleconferences-sept-nov-2012.docx>

<https://mentor.ieee.org/802.11/dcn/12/11-12-1214-03-000m-minutes-tg-revmc-teleconferences-sept-nov-2012.docx>

Editor’s Report:

 <https://mentor.ieee.org/802.11/dcn/12/11-12-1274-00-000m-editor-s-reports-2012.ppt>

Comment Proposed Resolutions:

<https://mentor.ieee.org/802.11/dcn/12/11-12-1297-01-000m-lb802-11-2012-cids-46-66-299-355.doc>

<https://mentor.ieee.org/802.11/dcn/12/11-12-1256-03-000m-lb187-cid40-43-56-96-cca.doc>

<https://mentor.ieee.org/802.11/dcn/12/11-12-1256-01-000m-lb187-cid40-43-56-96-cca.doc>

<https://mentor.ieee.org/802.11/dcn/12/11-12-1249-01-000m-802-11-2012-cid-46-47-48.doc>

<https://mentor.ieee.org/802.11/dcn/12/11-12-1247-02-000m-802-11-2012-resolutions-for-integerification-zoo.xlsx>

<https://mentor.ieee.org/802.11/dcn/12/11-12-1369-00-000m-bufferable-unit-additions.docx>

<https://mentor.ieee.org/802.11/dcn/12/11-12-1247-01-000m-802-11-2012-resolutions-for-integerification-zoo.xlsx>

MAC AdHoc comment File:

<https://mentor.ieee.org/802.11/dcn/12/11-12-1189-05-000m-mac-adhoc-pre-ballot-comment-collection-resolutions.xls>

Gen AdHoc comment file:

<https://mentor.ieee.org/802.11/dcn/12/11-12-1394-00-000m-gen-adhoc-preballot-comment-collection-resolutions.xlsx>