IEEE P802.11
Wireless LANs

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| Minutes for 2017 December and 2018 January telecons |
| Date: 2017-12-15 |
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Abstract

This file will contain the minutes for the TGmd 3 (2-hour) teleconferences after the 2017 November session before the January 2018 session: Friday December 1, 15 and Jan 5 at 10am Eastern for comment collection comment resolution and presentations.

R0: Dec 1st Telecon

R1: Dec 15th Telecon

R2: January 5th Telecon – (Thanks to Mark HAMILTON for taking notes for the first part of the telecon).

Color Code

CIDs Ready for Motion

CIDs needing more work

CIDs previously marked ready and have been updated.

Teleconferences are subject to applicable policies and procedures:

•       IEEE Code of Ethics

–       <http://www.ieee.org/about/corporate/governance/p7-8.html>

•       IEEE Standards Association (IEEE-SA) Affiliation FAQ

–   <http://standards.ieee.org/faqs/affiliation.html>

•       Antitrust and Competition Policy

 –       <http://standards.ieee.org/resources/antitrust-guidelines.pdf>

•       IEEE-SA Patent Policy

–       <http://standards.ieee.org/develop/policies/bylaws/sect6-7.html>

–       [https://development.standards.ieee.org/myproject/Public//mytools/mob/loa.pdf](http://standards.ieee.org/board/pat/pat-slideset.ppt)

–       <http://standards.ieee.org/board/pat/faq.pdf>

–       <http://standards.ieee.org/board/pat/pat-slideset.ppt>

•       IEEE 802 Working Group Policies &Procedures (29 Jul 2016)

–       <http://www.ieee802.org/PNP/approved/IEEE_802_WG_PandP_v19.pdf>

•       IEEE 802 LMSC Chair's Guidelines (Approved 17 Mar 2017)

–       <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0201-00-00EC-ieee-802-lmsc-chairs-guidelines.pdf> as updated in <https://mentor.ieee.org/802-ec/dcn/17/ec-17-0016-06-00EC-march-2017-rule-changes.pdf>

•       Participation in IEEE 802 Meetings

–       <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0180-05-00EC-ieee-802-participation-slide.pptx>

•       IEEE 802.11 WG OM: (Approved 17 Mar 2017)

–       <https://mentor.ieee.org/802.11/dcn/14/11-14-0629-19-0000-802-11-operations-manual.docx>

1.0 **802.11 TGmd Telecon** – December 1, 2017 10:00-12:00 ET

* 1. **Called to order** by the chair, Dorothy STANLEY (HPE) at 10:05am ET.
	2. **Present** during some portion of the call:
		1. Dorothy STANLEY (chair) (HPE)
		2. Jon Rosdahl (Qualcomm)
		3. Graham SMITH – SR Technologies
		4. Emily QI (Intel Corporation)
		5. Mark RISON (Samsung)
		6. Mike MONTEMURRO – (Blackberry)
		7. Manish KUMAR (Marvel)
		8. Sean COFFEY (Realtek)
		9. Mark HAMILTON (Arris/Ruckes Network)
		10. Artyom LOMAYEV (Intel)
		11. Nelson COSTA (Peraso)
		12. Sungeun LEE (Cypress)
		13. Joseph LEVY (InterDigital)
		14. Adrian STEPHENS (Intel)
	3. **Review Patent Policy** and Participation Policy
		1. Patent policy slide set was reviewed
		2. Call for patents issued. No one came forward
		3. Participation Slide was reviewed.
	4. **Review and Approve Agenda**:

Proposed Agenda:

1.       Call to order, attendance, and patent policy

a.       Call for potentially essential patents: **If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance:**

                            i.      Either speak up now or

ii.      Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible or

               iii.      Cause an LOA to be submitted

b.      Review Participation slide: <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0180-05-00EC-ieee-802-participation-slide.pptx>

2.       Editor report – Emily QI

a.       Editor report document: <https://mentor.ieee.org/802.11/dcn/17/11-17-0920-05-000m-802-11revmd-editor-s-report.ppt>

b.      Comments received in the recent comment collection are here: <https://mentor.ieee.org/802.11/dcn/17/11-17-0914-05-000m-revmd-wg-cc-comments.xls>

3.    Comment resolution.

**2017-12-01**

a.       ANQP CID: 351

b.      Menzo CIDs: 194, 222, 223

c.       FILS: CID 47

d.     11-17-1810, 1811 - Artyom LOMAYEV

e.      GEN Discuss CIDs: 29, 76, 324

f.       RNR CIDs: 14, 340, 342

4.       AOB, next meeting: Ad-hoc Dec 7-8 Piscataway NJ (details to follow)

5.       Adjourn

* + 1. Agenda approved no objections.
	1. **Editor report** – Emily QI
		1. a.       Editor report document: <https://mentor.ieee.org/802.11/dcn/17/11-17-0920-05-000m-802-11revmd-editor-s-report.ppt>
			1. This is the version presented at the November Plenary in Orlando
		2. b.      Comments received in the recent comment collection are here: <https://mentor.ieee.org/802.11/dcn/17/11-17-0914-05-000m-revmd-wg-cc-comments.xls>
		3. **about 48 comments approved in November, and editors are working on them.**
		4. **Request for a correction on implementation of a resolution that was made where a “s” is missing in D0.04.**
			1. **P2922 line 29 – there is a “s” missing before the “(k)” CID 291 was not implemented correctly.**
			2. **CID 291 – (doc 11-17/1243) had it correctly noted.**
			3. **The editor will correct the error and it will be in the next revision.**
		5. **D0.05 will have the correction plus the 48 other resolutions implanted.**
	2. **Comment resolution.**
		1. **ANQP CID: 351 (MAC)**
			1. Review comment
			2. Marc and Ping have been exchanging email on this topic, but no resolution has been proposed. Ping and Jouni seemed to be the original authors of this element.
			3. Michael will check with Stephen, but as this is an TGai caused issue, Mark Hamilton will push for a proposed resolution from Marc.
			4. Also, there is a question on the formatting of definition coming before or after a table is appropriate – Emily to check on it.
			5. The field does not seem to be used in any location in the standard. It is in the ANQ usage, but otherwise not shown to be used.
			6. ACTION ITEM #1: Mark HAMILTON to post an email to the reflector about this topic.
		2. CIDs: 194, 222, 223 (GEN) – Menzo
			1. Not on the call – move to the AdHoc
			2. Need to check on Status – Dorothy to send email.
		3. FILS: CID 47 (MAC)
			1. We talked about this in July and Adrian had suggested wording, and we were waiting on confirmation for the new wording.
			2. Action ITEM #2: Mark HAMILTON to send Email on this CID for updating proposed resolution.
		4. Review Doc **11-17/1811r0** - Artyom LOMAYEV
			1. <https://mentor.ieee.org/802.11/dcn/17/11-17-1811-00-000m-20-11-golay-sequences.docx>
				1. Review submission
				2. Review the context, but it was noted in 802.11-2016, so wanted to make sure there were no other changes that may have effected these locations.
				3. It was noted by Emily that the errors are the same in D0.04.
				4. Discussion on the possible errors.
				5. No objection to adopt the changes
				6. Dorothy to prepare a motion for consideration at the January Interim Session in Irvine.
		5. **Review Doc** **11-17/1810r0** - Artyom LOMAYEV
			1. <https://mentor.ieee.org/802.11/dcn/17/11-17-1810-00-000m-20-2-3-phyconfig-vector-parameters.docx>
				1. Review Submission
				2. Missing definition of PHYCONFIG VECTOR
				3. Question on what is being proposed to be added.
				4. A new sub clause being added would need to be instructed differently. There already exists a 20.3.1, so is the intent to add before or after the existing clause.

Suggested wording “insert a new subclause, and renumber the following clauses). This would give the new clause the number to be 20.2.3.

Check the order in 20.1 – make the new 20.3 match the order.

Insert the following as subclause as 20.2.3

The coloring is not material to the instructions.

* + - * 1. Discussion on the indexing method proposed.

Change the “can” to “shall” fixes the concern (in the red text).

* + - * 1. Range 1-11 is correct, but it should only be the odd numbers

Make a cross reference to avoid duplicate definition

* + - * 1. It seems to be a definition for Channel number being defined here, and not in Annex E, so only one place should have the definition.

It would be better to delete “and channel Number” as it is defined a few line later.

* + - * 1. Question on “at least channel 2”?

Channel 2 is the mandatory channel

The “at least” is not necessary in the sentence.

Shall support Channel 2 is the requirement, the other Channels are optional.

Suggest “Shall support Channel 2 and may support other channels as well”.

* + - * 1. The changes will be made offline and then the revision to be posted to the reflector for consideration.
				2. The difference between Channel number and the “Operating Channel” was questioned.

New wording can be created, but will need to be done offline.

* + - * 1. The Channel number is no longer 1-11, it is from 1-6.

Labels on the figure may help

It does seem confusion the overloading of “Channel Number”

* + - * 1. Schedule to review on January 5th.
		1. **GEN Discuss CIDs**: 29, 76, 324
			1. CID 29 (GEN)
				1. Review comment
				2. Proposed Resolution: REVISED (GEN: 2017-12-01 16:11:11Z) - Change cited sentence to "This type of IEEE 802.11 LAN is often formed without preplanning."
				3. Discussion on if the the sentence was accurate.
				4. No objection – Mark Ready for Motion
			2. CID 76 (GEN)
				1. Review comment
				2. Discussion on “space-time stream” having a definition of STS abbreviation. – field names had NUM\_STS. Or equations with Nsts.
				3. Question on “Beamformee STS Capability” usage. Discussion on if the name of a subfield could include an abbreviation “STS” without being in the acronym list.
				4. We may want to just add “STS” to the abbreviation list or in the definition of “space-time stream”.
				5. p2984 line 58 – this could be fixed by just adding the abbreviation.
				6. Proposed resolution: REVISED (GEN: 2017-12-01 16:27:13Z) page 155 d0.4 L54 - Change “space-time streams: Streams of” to "space-time stream (STS): Stream of”

and add "STS space-time stream" to subclause 3.4, if appropriate per our conventions.More discussion on the use of space-time stream vs space-time streams (plural) and what the abbreviation would be “STS” vs “STSs”

* + - * 1. Need to revisit if needed, but for now mark as ready for motion.
			1. CID 324 (GEN)
				1. Find comment – p3565 (d0.4) line 10
				2. Review comment
				3. Rather than say “accept MSDUs” say “indicate at the MAC Service…”
				4. This is in dot11ExcludeUnecrypted – so this is only in WEP text, and as it is marked Obsolete, we are not making any changes to related text.
				5. We find that WEP is marked Obsolete in 12 and in 5.12 it is marked deprecated.
				6. The Pre-RSNA are obsolete is one point.
				7. The comment is to make a change to a MIB variable that is only used in WEP.
				8. Straw-Poll:

Should we make the change to a section that deals with WEP?

Results Yes -3 No-5 Abstain-3

No consensus to make the change

* + - * 1. Proposed Resolution: REJECTED (GEN: 2017-12-01 16:44:25Z) WEP has been deprecated and the task group has determined that they are not making any changes to clauses associated with obsolete/deprecated features. Mark ready for Motion
		1. RNR CIDs: 14, 340, 341
			1. We have had a comple presentations, but we need to review 11-17/666 and 11-17/667 and form an opinion on what we should do.
			2. Action Item #3: Mark Hamilton to follow up with Roger Marks.
	1. **AOB**
		1. none
	2. **Next meeting:** Ad-hoc Dec 7-8 Piscataway NJ
		1. We will use Join.me to allow remote participation
		2. Mtg is 9-5pm ET each day
		3. Proposed Agenda:

1.       Ad-hoc Thursday Dec 7, 2017 9am – 11:30am

a.       Obsolete comments: CIDs 57, 58, 61, 70 in 11-17-1137 – text prepared, pending review – Menzo Wentink

                                                 i.      CID 57    BlockAckReq

                                                ii.      CID 58    Basic BlockAck variant

                                                iii.      CID 61    Non-HT block ack

                                                 iv.      CID 70    HT-delayed block ack

b.       Obsolete comments: CIDs 59 and 62 in 11-17-1518 – text prepared, pending review – Menzo Wentink

                i.      CID 59    DLS

               ii.      CID 58    STSL

c.        Obsolete comments: **CID 72 in 11-17-1261 – text prepared – Annex G**

d.       Graham SMITH – CID 282 in 11-17-987

e.       Mark Rison CIDs

 2.       Thursday 1pm – 3pm

 a.       Matthew Fischer: <https://mentor.ieee.org/802.11/dcn/17/11-17-1192-08-000m-cr-esp.docx>

b.       Update: <https://mentor.ieee.org/802.11/dcn/17/11-17-1738-00-000m-setting-ccf0-for-20-40mhz-bss-bw.docx>

c.        Mark Hamilton CIDs

 3.       Thursday 3:30pm – 5pm

a.       GEN CIDs

 4.       Friday Dec 8, 2017 9-11:30am – Security CIDs and topics

a.       CID 95

b.       Review of M. Vanhoef paper suggestions, see <http://www.ieee802.org/11/email/stds-802-11-tgm/msg01235.html>

c.        Additional security CIDs

 5.       Friday 1-3pm

a.       CID 5 – Chris HANSEN

b.       Additional CIDs

* + - 1. Review of agenda was done – note email sent out had item 5 as Thursday rather than Friday.
	1. **Adjourn at 11:58 ET**
1. **802.11 TGmd Telecon** – December 15, 2017 10:00-12:00 ET
	1. **Called to order** by the chair, Dorothy STANLEY (HPE) at 10:05am ET.
	2. **Present** during some portion of the call:
		1. Dorothy STANLEY (chair) (HPE)
		2. Jon ROSDAHL (Qualcomm)
		3. Adrian STEPHENS (Intel)
		4. Edward AU (Huawei)
		5. Emily QI (Intel Corporation)
		6. Mark HAMILTON (Arris/Ruckus Network)
		7. Osama ABOUL-MAGD (Huawei)
		8. Graham SMITH (SR Technologies)
		9. Stephen MCCANN (Blackberry)
	3. **Review Patent Policy** and Participation Policy
		1. Patent policy slide set was reviewed
		2. Call for patents issued. No one came forward
		3. Participation Slide was reviewed.
			1. <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0180-05-00EC-ieee-802-participation-slide.pptx>
	4. **Review and Approve Agenda**:
		1. **11**-17/1875r1: <<https://mentor.ieee.org/802.11/dcn/17/11-17-1875-01-000m-teleconference-agendas-2017-12-15-and-2018-01-05.docx>>
		2. Proposed Agenda:

1.       Call to order, attendance, and patent policy

a.       Call for potentially essential patents: **If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance:**

 i.      Either speak up now or

ii.      Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible or

 iii.      Cause an LOA to be submitted

b.      Review Participation slide: <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0180-05-00EC-ieee-802-participation-slide.pptx>

2.    Editor report – Emily QI

3.     Comment resolution.

a.     December 15th 2017 10am Eastern 2 hours

i.     Obsolete comments: CIDs 59 and 62 in 11-17-1518 – text prepared, pending review  – Menzo WENTINK

 ii.     Update from Menzo’s review: <https://mentor.ieee.org/802.11/dcn/17/11-17-1738-00-000m-setting-ccf0-for-20-40mhz-bss-bw.docx>

iii.     Menzo WENTINK CIDs: 194, 222, 223

iv.     Mark RISON – CID 233

v.     Edward AU – CID 246

vi.     Guido HIERTZ – CID 289

vii.     Graham SMITH – 11-17-1137r6 includes edits discussed at ad-hoc

viii.     GEN CIDs 140, 290

ix.     MAC CIDs 283, 339, 179, 180, 362, 363

4.  AOB, next meeting: Ad-hoc Dec 7-8 Piscataway NJ (details to follow)

5.  Adjourn

* + 1. No objection to the proposed agenda
	1. **Comment Resolution:**
		1. CID 233 (GEN)
			1. Review comment
			2. See 11-17/1243r6
				1. <https://mentor.ieee.org/802.11/dcn/17/11-17-1243-06-000m-resolutions-for-some-comments-on-11md-d0-1-cc25.docx>
			3. Read out the notes from the Face to face mtg last week (11-17/1856r0)
				1. <https://mentor.ieee.org/802.11/dcn/17/11-17-1856-00-000m-minutes-of-revmd-adhoc-in-piscataway-nj.docx>

“4.8.7 CID 233 (GEN)

4.8.7.1 Review Comment

4.8.7.2 Review context at 157.61

4.8.7.3 Review definition

4.8.7.4 There are 16 instances of non-A-MPDU in the draft.

4.8.7.5 1728.31 did not call out VHT single MPDU

4.8.7.6 Discussion on the way to resolve the comment

4.8.7.7 The proposed resolution causes a problem on line 1728.31.

4.8.7.8 We need to get a correct fix that doesn’t cause other problems.

4.8.7.9 ACTION ITEM #3: GEN: 2017-12-08 15:48:59Z - status set to: Submission Required and assign to Mark RISON to provide an updated resolution “

* + - 1. Continue with reviewing each change in 11-17/1856r0
			2. Proposed resolution: REVISED (GEN: 2017-12-15 15:20:21Z) Make the changes shown under “Proposed changes” for CID 233 in 11-17/1243r6 <https://mentor.ieee.org/802.11/dcn/17/11-17-1243-06-000m-resolutions-for-some-comments-on-11md-d0-1-cc25.docx>, which address the issue raised but (a) reduce future maintenance problems and (b) consistently make S-MPDUs a type of non-A-MPDU frame.
			3. Review where the changes affect the draft.
			4. Discussion on if the change was complete.
			5. Mark CID Ready for Motion
	1. **Review document 11-17/1273r1** - Edward AU
		1. <https://mentor.ieee.org/802.11/dcn/17/11-17-1273-01-000m-resolution-for-cid-246.docx>
		2. CID 246 (Editor2)
			1. Review Comment
			2. Review Discussion
			3. Discussion on “Hash” and what the change does to the use of “Hash”
			4. Is the use of “Hash” unique on purpose on page 2195?
			5. With the change, we may lose information.
			6. Take feedback and will propose another resolution on the next Telecon.
			7. Refer to 12.4.4.2.2 and the text is a bit different, so the search does not give clear results. The function there is defined as “H” rather than “Hash”.
				1. 12.4.2 does have a definition of “H”
			8. We can reject part of the comment, and note that the definition of “Hash” is needed, but some of the other parts of the submission can be included.
			9. Review the other proposed changes. “KDF” to “key derivation function”
			10. Review change for 2078.57
			11. Grammar error was fixed.
			12. Keeping the wording change to match for the change on 2195, but not delete the “Hash” definition.
			13. Removing the “Hash” from the “change” field to eliminate the change.
			14. Review the changes after all the discussion.
			15. An R2 will be uploaded
			16. Question on the “+128” in the description.
				1. The change to indicate the AKM suite selector may not be correct in this location.
				2. The “TK\_Bits+128” may cause the cipher suite selection to change.
			17. Making only the change to “Length” to “*Length*” (italics) may be the only change here.
			18. Discussion on the definition of KDF vs TK\_bits vs the other definition.
			19. Make it a minimum change and only change the italics on page 2195.
			20. After more discussion, just do not make a change on page 2195 (D0.2)
			21. Remove that proposed change also.
			22. Proposed resolution: Revised, Incorporate the changes in 17/1273r2 <https://mentor.ieee.org/802.11/dcn/17/11-17-1273-02-000m-resolution-for-cid-246.docx>. Note that no change is made to the “where” clause (c.f., page 2195 in D0.2) because the reference equations are different than those at the other locations.
			23. Mark ready for Motion
	2. **Editor Report – Emily QI**
		1. Working on D0.5
			1. Reviewers are nearly completed.
			2. 2 comments need to be presented and have the group review.
			3. CID 188 (EDITOR)
				1. Review the proposed resolution
				2. Reviewer noted potential issue:

Changes correctly made. However, there are some problems in the resolution:

1. of "Type Data" and "Type Management" have been changed in REVmc (I think) to some other expression

2. "Ack Policy is 00" - is this related to the renaming of the "Ack Policy" or not? Normally it would say "Ack Policy subfield equal to Normal Ack". Certainly, quoting magic numbers is wrong, and then confusing the issue by having an ambiguous bitstring vs binary number compounds the issue.

3. The cited location for the last change is wrong, but I agree the change is made as intended.

4. PCP/AP terminology has been replaced by "AP or PCP" throughout REVmc.

* + - 1. The proposed plan to address potential issue was described by the Editor.
			2. Changing the “/” to “or” is editorial.
			3. Other changes seemed ok as noted by the editor.

“The following frames require acknowledgment:

 Individually addressed Management frames other than an Action No Ack frames

- Individually addressed non-QoS Data frames

- Individually addressed QoS Data frames where the Ack Policy subfield equal to Normal Ack

- BlockAck frames not sent in immediate response to A-MPDU

- BlockAckReq frames

- PS-Poll frames, which can be acknowledged by generating a Data frame.”

At 3585.29 after “Frame RA has i/g bit equal to 0” add “or is sent to an AP or PCP”;

* + - 1. The changes to clean this up will be noted in the database, and the editor will continue with these editorial changes.
		1. CID 207 (EDITOR)
			1. Review the comment
			2. Issue identified:

The first change: "At 648.5½ add “. If the act" is probably specified wrongly. The editor did what was asked, but the comment is against a STFTwoLength and aLTFTwoLengh. I think the change should be made at D0.1 648.13.

* + - 1. Editor noted:

Agree with the commenter. The change should be made to 648.13 of D0.1 or 709.15 of D0.5. Bring to TGmd for confirmation.

* + - 1. Agree with the issue noted, and the change to the correct location should be done. The change at line 15 was correct, and we need to make the change at 13 as well.
			2. No objection to the correction. The will be a note added to the editor notes that we reviewed the correction during the Dec 15th Telecon.
		1. Expect to get the D0.5 later today for the chair review, and next week to the group.
	1. **Comment Resolution:**
		1. CID 140 (GEN)
			1. Review Comment
			2. Previously marked “Submission Required”
			3. Need a reject reason with proper documentation.
			4. Each change would need to be checked.
			5. The addition of “connector” was added to make it clear if the signal at the antenna is needed to make things clear
			6. ACTION ITEM #1: Change assignee to Jon and he is to research the about 14 locations that don’t have Connector and check with originators of those locations. Due January 5th.
		2. CID 290 (MAC)
			1. Review status
			2. Need more follow-up
			3. From the Sept Interim:

From Waikoloa F2F: Confusion here about the negotiated maximum number, which might be higher than any supported number, versus knowing there is some number of streams that will work. This value is supposed to represent the number of SSs the STA can support, in some mode of operation.

Recommendation: Consensus seems to be that the text says what it means, currently. Need help crafting the reject reason.

* + - 1. Look for update on the January 5th Telecon.
		1. CID 283 (MAC)
			1. Review status
			2. From the Sept Interim:

From Waikoloa F2F: The commenter’s remarks appear to be accurate. However, this sentence has been there a long time, and is probably useful, even if not necessary. Suggest more research into what is not in order, and list them. Needs submission.

* + - 1. There has not been a volunteer to provide submission.
			2. As a default, prepare a rejection along the lines that the group believes there is value in keeping the text, and additional text would be needed.
			3. Discussion on just accepting the proposed resolution.
			4. The Cited text may be misleading.
			5. From the Sept 2017 Interim Minutes – 11-17/1505r1

1.7.9 CID 283 MAC

 1.7.9.1 Review Comment

 1.7.9.2 Discussion on the element id vs element order

 1.7.9.3 This sentence has been there a long time.

 1.7.9.4 Not sure cited sentence needs to be removed.

* + - 1. More research to be done.
			2. Review the effect of acceptance.
			3. Discussion on just removing the entire paragraph.
			4. Concern on the text at p843.24 is covered on p1027.11 (D0.1).
				1. This would mean sentence could be deleted.
			5. Proposed Resolution: Revised, CID 283 (MAC): REVISED (MAC: 2017-12-15 16:44:52Z): Delete the paragraph at 843.18 to 843.27. Insert a NOTE in Table 9-77 (at the end), "See 10.27.6 on the parsing of elements."
			6. Mark Ready for Motion
		1. CID 339 (MAC)
			1. Status – Ganesh is working on it.
			2. Wait until January Interim
			3. The default rejection reason would be the group did not come to consensus.
			4. AdHoc Notes: (MAC): Consider 11-17/1078 one more time in Irvine. If can't reach consensus, reject.
		2. CID 362 (MAC)
			1. Status – was discussed in Waikoloa
			2. CID 363 we already made the change.
			3. The locations for the changes needs to be researched.
			4. Add to Agenda for January Interim
		3. CID 179 (MAC)
			1. Review comment
			2. Reviewed status
			3. A table in one place may be the best solution.
			4. We hope to have a solution to check later.
			5. Default will be a rejection that not all states are identified.
	1. Next mtg is Telecon on January 5th, 2018.
		1. Happy Holiday wishes to all
	2. **Adjourned 9:59pm**
1. **802.11 TGmd Telecon** – January 5, 2018 10:00-12:00 ET
	1. **Called to order** by the chair, Dorothy STANLEY (HPE) at 10:04am ET.
	2. **Present** during some portion of the call:
		1. Dorothy STANLEY (chair) (HPE)
		2. Jon ROSDAHL (Qualcomm)
		3. Adrian STEPHENS (Intel)
		4. Emily QI (Intel Corporation)
		5. Mark HAMILTON (Arris/Ruckus Network)
		6. Graham SMITH (SR Technologies)
		7. Menzo WENTINK (Qualcomm)
		8. Manish KUMAR (Marvell)
		9. Mark RISON (Samsung)
		10. Rama VENKATESHWARAN (Qualcomm)
		11. Sean COFFEY (Realtek)
		12. Youhan KIM (Qualcomm)
		13. Liwen CHU (Marvell)
		14. Sungeun LEE (Cypress)
		15. Stephen MCCANN (BlackBerry)
	3. **Review Patent Policy** and Participation Policy
		1. Updated Patent policy slide set was reviewed
		2. Call for patents issued. No one came forward
		3. Participation Slide was reviewed.

<https://mentor.ieee.org/802-ec/dcn/16/ec-16-0180-05-00EC-ieee-802-participation-slide.pptx>

* 1. **Review and Approve Agenda**:
		1. **11**-17/1875r2: <<https://mentor.ieee.org/802.11/dcn/17/11-17-1875-02-000m-teleconference-agendas-2017-12-15-and-2018-01-05.docx>>
		2. Proposed Agenda:

1. Call to order, attendance, and patent policy

a.       Call for potentially essential patents: **If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance:**

1. Either speak up now or
2. Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible or
3. Cause an LOA to be submitted

b.      <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0180-05-00EC-ieee-802-participation-slide.pptx>

2.       Editor report – Emily QI

1. Editor report document: <https://mentor.ieee.org/802.11/dcn/17/11-17-0920-06-000m-802-11revmd-editor-s-report.ppt>
2. Review implementation comments for CIDs 188, 207
3. Comments received in the recent comment collection are here: <https://mentor.ieee.org/802.11/dcn/17/11-17-0914-06-000m-revmd-wg-cc-comments.xls>

3.       Comment resolution.

1. Jan 5th 2018 10am Eastern 2 hours
	1. Mark HAMILTON – CID 338.
	2. Matthew FISCHER: <https://mentor.ieee.org/802.11/dcn/17/11-17-1192-08-000m-cr-esp.docx>
	3. Obsolete comments: CIDs 59 and 62 in 11-17-1518 – text prepared, pending review  – Menzo WENTINK
	4. Update from Menzo’s review of <https://mentor.ieee.org/802.11/dcn/17/11-17-1738-00-000m-setting-ccf0-for-20-40mhz-bss-bw.docx>
	5. Menzo WENTINK CIDs: 194, 222, 223
	6. Guido HIERTZ – CID 289
	7. Graham SMITH – 11-17-1137r6 includes edits discussed at ad-hoc
	8. GEN CIDs 140, 290
	9. Artyom LOMAYEV 11-17-1810r1 update, per 2017-12-01 telecon discussion, see <https://mentor.ieee.org/802.11/dcn/17/11-17-1810-01-000m-20-2-3-phyconfig-vector-parameters.docx>
	10. CIDs 351, 47 – Mark HAMILTON – 2017-12-01 telecon action item updates

4.       AOB, next meeting: Jan 14-19 2018 Irvine CA

1. MAC CIDs 339, 179, 180, 362, 363
2. Tues PM1: Obsolete topics
	* 1. <https://mentor.ieee.org/802.11/dcn/17/11-17-1807-00-000m-defense-against-multi-channel-mitm-attacks-via-operating-channel-validation.docx>
3. Additional CIDs

5.       Adjourn

* + 1. Moved Menzo and Graham to the beginning
		2. Reminder out next meeting is at the F2F in Irvine
	1. **Editor report** – Emily QI
		1. REVmd draft 0.5 is on the member’s area.
		2. Comment tracking document is 11-17/0914r8, on the server
		3. <https://mentor.ieee.org/802.11/dcn/17/11-17-0914-06-000m-revmd-wg-cc-comments.xls>
	2. **Comment Resolution:**
		1. Obsolete comments: CIDs 59 and 62 in 11-17-1518 – Menzo WENTINK
			1. CIDs 59 and 62 (MAC): 11-17/1518r2 – remove DLS and STSL
			2. Graham’s proposal, reviewed by Menzo.
			3. More changes were found that should be made in 12.7.4 on EAPOL-Key frame, to remove the SMK handshake and the “SM” notation. SMK handshake is only used for the sta-to-sta security modes. This ripples into following subclauses in 12.7.
			4. All STK references in 12.7 should be deleted, as well.
			5. Noticed that first sentence in 12.7.6.6 should also be deleted.
			6. ACTION ITEM #1: Menzo will update the document to add noted changes, and post an r3.
			7. There was a question of whether the sta-to-sta negotiation was used as part of the AP-AP PeerKey (PTK) negotiation. It appears that initially there might have been a dependency/connection between them, however upon review it seems this is no longer the case, but a few dangling references still needed clean-up.
			8. Jouni is also reviewing. Will make sure Dan Harkins can also review.
			9. Will check again at the F2F, on those final reviews.
			10. Have all references to EAPOL-Key been updated to match the removal of SM from the parameter list? Checked references we could find. It looks like Figure 12-46 needs some additional changes. References to EAPOL-Key in 12.7.7.1 and 12.7.7.5 will need to be updated. Check 12.7.9.5, 13.4.2 (P2249) and 12.7.7.2 and following 12.7.7.x subclauses. Check Figures 12-50, 12-52, 13-3 (and related text), 13-15 and 13-18.
			11. ACTION ITEM #2: Menzo will add these.
			12. MLME-SETKEYs primitive needs to have the PeerKey value of Key Type checked. Is this used for AP PeerKey, or only for STS?
			13. ACTION ITEM #3: Confirmed that we have a request to the editors to search for all the related terms/acronyms for these features, and put Editor’s notes on any that are found to remain in the document.
			14. Other “Obsolete” comments will be considered at the F2F, during Tuesday PM1, to not conflict with TGax. We’ll add 11-17/1518 to that block, as well.
		2. On the Estimated Throughput topic, Youhan noted that he has reviewed 11-17/1192r10, and he is fine with this version. – The Chair noted that if we have time we will talk about this later on the call.
		3. **Review doc 11-17/1519r2** Menzo WENTINK
			1. <https://mentor.ieee.org/802.11/dcn/17/11-17-1519-02-000m-resolution-cid-65-remove-pcf.docx>
			2. CID 65 (MAC): Remove PCF
			3. Graham’s proposal, reviewed by Menzo.
			4. Review proposed changes
			5. Discuss the removal of the CF-xxx frame types, as part of this.
			6. Have to keep CF-End because it is used elsewhere, but remove the rest. Change their Type/Subtype to Reserved, in Table 9-1.
			7. Also note that we are *not* deleting QoS CF-xxx frames. These are used in HCCA (as discussed in a minute under the HCCA topic).
			8. We need to scrub the document, and remove all the references in text. There are ~500 of these (some of those are probably QoS CF-xxx, though).
			9. If this removal (of CF-xxx) is too complex to complete by January, we can approve the rest and do this removal as a second step on the next ballot.
			10. For 676.43-48 reject the deletion for now, and then we can address the wording at a later time.
			11. ACTION ITEM #4: Also need to clean up Annex G’s references to contention-free behaviors, such as the CF\* attributes in G.1 and “cf-sequence” in G.2.
				1. Need to address changes to Annex G.
				2. G.1 and G.2 have CF attribute and sequences that need to be addressed.
				3. P3586L50 and P3586L63 onwards needs to be addressed as well.
			12. Discuss the removal of PCF from HCCA.
				1. Concern that we need to be very careful that CAP is still supported correctly, while removing CFP. Menzo thinks he has accomplished this, but it needs review.
			13. ACTION ITEM #5: change “which” to “that” at 1498.41 change. Menzo will update and post.
			14. Question: why do we remove text on P676 that discusses bit 6 and bit 7?
			15. Also noted that bits 4 and 5 are also used for QoS CF-xxx frames.
			16. If we keep the general rule(s) that bits 4 and 5 mean specific things related to CF, then it will be very hard to ever reuse the (non-QoS CF-xxx) frame types that we are changing to Reserved.
			17. ACTION Item #6: Agreed to remove the instruction to delete the text at P676.43-48. We’ll leave it to the future reuse of these Type/Subtypes, to clean up this paragraph correctly.
			18. ACTION Item #7: Add a request to the editors to search for all the related terms/acronyms for these features, and put Editor’s notes on any that are found to remain in the document.
			19. About 429 CF-end instances to be found.
			20. We’ll add 11-17/1519 to the “Obsolete” time block at the F2F, as well.
		4. 11-17/1738 – no update yet
		5. CIDs 194, 222, 223 – no update yet.
		6. **Review Doc 11-17/1137r6** Graham SMITH
			1. <https://mentor.ieee.org/802.11/dcn/17/11-17-1137-06-000m-resolutions-for-obsolete-blockack.docx>
			2. We had issues with the audio on Join.me, so we moved on and will return later.
		7. CID 338 – Mark HAMILTON
			1. Review Comment
			2. Review history of the comment discussion.
			3. FILSC definition may need more finish work.
				1. FILSC Type Field would not be removed, but could be renamed to be more meaningful.
				2. We can do these final definitions later, and just do the changes outlined in the resolution for now.
			4. Proposed Resolution: Revised; Change:

"If the non-AP STA satisfies all of the conditions specified in the present optional fields, the non-AP STA has a FILSC of 1 and it proceeds with a FILS procedure with the AP without additional delays. Otherwise, the non-AP STA shall have a FILSC of 0 and shall postpone the link setup with the AP until the time specified in the last received Differentiated FILS Time field elapses. Each time the non-AP STA receives a Beacon and/or Probe Response frame including a Differentiated Initial Link Setup element, the non-AP STA shall check the FILSC Type field and update its FILSC."

to

"If the non-AP STA satisfies all of the conditions specified in the present optional fields, the non-AP STA shall proceed with a FILS procedure with the AP without additional delays. Otherwise, the non-AP STA shall postpone the link setup with the AP until the time specified in the last received Differentiated FILS Time field elapses."

* + - 1. No objection Mark Ready for Motion
		1. **Review Doc 11-17/1137r6** Graham SMITH
			1. <https://mentor.ieee.org/802.11/dcn/17/11-17-1137-06-000m-resolutions-for-obsolete-blockack.docx>
			2. Review the minutes from the TGmd December 2017 Adhoc on this topic
			3. We may not be ready for all the changes.
			4. Need to have more review
			5. 784.21 - Change the Note to be passed tense and put “In previous revisions” at the start of the note.
			6. Will review at the Face to Face meeting
		2. **Review 11-17/1192r10** – Matthew Fischer
			1. <https://mentor.ieee.org/802.11/dcn/17/11-17-1192-10-000m-cr-esp.docx>
			2. Need to review this document and will discuss at Face to Face.
			3. ACTION ITEM #8: Mark Hamilton to harmonize with Motion MAC ESP tab.
		3. **Document 11-17/1810**
			1. <https://mentor.ieee.org/802.11/dcn/17/11-17-1810-01-000m-20-2-3-phyconfig-vector-parameters.docx>
			2. This document will also be presented for consideration at the face to face.
			3. Request to have task group members review.
	1. **Next meeting will be the 802 Wireless Interim in Irvine, CA.**
	2. **Adjourned 12:04pm**

**References:**

**December 1**:

<https://mentor.ieee.org/802.11/dcn/17/11-17-0920-05-000m-802-11revmd-editor-s-report.ppt>

<https://mentor.ieee.org/802.11/dcn/17/11-17-0914-05-000m-revmd-wg-cc-comments.xls>

<https://mentor.ieee.org/802.11/dcn/17/11-17-1811-00-000m-20-11-golay-sequences.docx>

<https://mentor.ieee.org/802.11/dcn/17/11-17-1810-00-000m-20-2-3-phyconfig-vector-parameters.docx>

**December 15:**

<https://mentor.ieee.org/802.11/dcn/17/11-17-1875-01-000m-teleconference-agendas-2017-12-15-and-2018-01-05.docx>

<https://mentor.ieee.org/802.11/dcn/17/11-17-1243-06-000m-resolutions-for-some-comments-on-11md-d0-1-cc25.docx>

<https://mentor.ieee.org/802.11/dcn/17/11-17-1856-00-000m-minutes-of-revmd-adhoc-in-piscataway-nj.docx>

<https://mentor.ieee.org/802.11/dcn/17/11-17-1273-01-000m-resolution-for-cid-246.docx>

**January 5th**:

<https://mentor.ieee.org/802.11/dcn/17/11-17-1875-02-000m-teleconference-agendas-2017-12-15-and-2018-01-05.docx>

<https://mentor.ieee.org/802.11/dcn/17/11-17-0914-06-000m-revmd-wg-cc-comments.xls>

<https://mentor.ieee.org/802.11/dcn/17/11-17-1519-02-000m-resolution-cid-65-remove-pcf.docx>

<https://mentor.ieee.org/802.11/dcn/17/11-17-1137-06-000m-resolutions-for-obsolete-blockack.docx>

<https://mentor.ieee.org/802.11/dcn/17/11-17-1192-10-000m-cr-esp.docx>

<https://mentor.ieee.org/802.11/dcn/17/11-17-1810-01-000m-20-2-3-phyconfig-vector-parameters.docx>