IEEE P802.11  
Wireless LANs

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| Minutes for REVmd - Aug 2019 - Toronto | | | | |
| Date: 2019-08-22 | | | | |
| Author(s): | | | | |
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Abstract

This document contains the minutes for the 802.11 md (REVmd) Face to face AdHoc Aug 20-22, 2019 in Toronto, Canada. Thanks to Blackberry for Hosting the session.

1. **TGmd (REVmd) Adhoc in Toronto, Canada Tuesday 20 Aug. 2019 9:00-12:30**
   1. **Welcome – Called to order** at 9:02am ET by the Chair Dorothy STANLEY (HPE).
   2. **Attendance:** 
      1. In Person:
         1. Dorothy STANLEY (HPE)
         2. Mark HAMILTON (Ruckus/CommScope)
         3. Jon ROSDAHL (Qualcomm)
         4. Joe LEVY (Interdigital)
         5. Michael MONTEMURRO (Blackberry)
         6. Edward AU (Huawei)
      2. Call in WebEx
         1. Emily QI (Intel)
         2. Mark RISON (Samsung)
         3. Graham SMITH (SR Technologies)
   3. **Review Patent Slides**
      1. No issues noted
   4. **Review Participation Slide**
      1. <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0180-05-00EC-ieee-802-participation-slide.pptx>
   5. **Review Agenda 11-19/1367r5**
      1. <https://mentor.ieee.org/802.11/dcn/19/11-19-1367-05-000m-2019-july-aug-sept-tgmd-teleconference-agendas.docx>
      2. After discussion, an R6 was prepared, agreed to and posted.
   6. **Editor Report Emily QI**
      1. Editor Review in progress – due today for d2.4
      2. Welcome back Emily from Sabbatical.
      3. Plan to post final draft of D2.4 on Friday.
   7. **Review doc 11-19-0429** Kaz (Kazuyuki Sakoda (Sony))– presented by Michael MONTEMURRO (Blackberry)
      1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0429-02-000m-suggested-resolution-to-mesh-comments.docx>
      2. CID 2331 (PHY)
         1. Review Comment
         2. Discussion on 14.9 general clause – wordsmith to increase clarity.
         3. Review the new 14.9.2 clause changes.
         4. Need to update references that point to 14.9.3 to point to 14.9.2.
         5. D2.2 - P1251.11 needs to update reference.
         6. D2.2 - P1255.5 update table reference as well as the main subclause. Fix first sentence and delete 2nd sentence.
         7. D2.2 P2776.58 – Correct the sentence to clarify the two metrics and the reference to 14.9.2.
         8. D2.2 P4584.23 (Appendix S) Table 14-4 has been deleted, so we need to know which table to reference. Use Table 14-6, but it will become 14-4. The table caption was put in the editing instructions.
         9. Proposed Resolution: REVISED (PHY: 2019-08-20 14:04:10Z) Incorporate the changes in document 11-19/0429r3 <<https://mentor.ieee.org/802.11/dcn/19/11-19-0429-03-000m-suggested-resolution-to-mesh-comments.docx>> under CID 2331
         10. No objection - Mark ready for Motion
      3. CID 2334 and 2335 (PHY)
         1. Review Comment
         2. The changes proposed are included in the resolution for CID 2331.
         3. Proposed Resolution for CID 2334 and 2335: REVISED (PHY: 2019-08-20 14:08:33Z). Replace

“Channel access overhead, which includes frame headers, training sequences, access protocol frames, etc." with

“Channel access overhead (in µs), which includes frame headers, training sequences, access protocol frames, etc."

Replace “Number of bits in nominal frame” with

“Number of bits in the frame body of a nominal frame”.

Note to the editor: The resolution to CID 2331 incorporates these changes.

* + - 1. No Objection - Mark Ready for Motion
    1. CID 2475 – Already motioned in May.
    2. CID 2654 was in Dorothy’s notes for KAZ, but really should be Mark RISON (Samsung).
    3. Change CID 2474 to CID 2475 in the Abstract as 2474 is assigned to Menzo and not part of this document.
    4. 3 Comments were completed today that were outstanding – this document is now complete.
    5. R3 will be posted.
  1. **Review list of CIDS to review in 11-19/856r8**
     1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0856-08-000m-resolutions-for-some-comments-on-11md-d2-0-lb236.docx>
     2. Mark RISON (Samsung) CIDs –
        1. CID 2357 – not ready for today, waiting some input from Mark HAMITON. – proposed resolution was made, but not ready for motion yet. Schedule for the 23 Aug Telecon
        2. CID 2316 (GEN)
           1. May be waiting on consensus on email discussion.
           2. After a check to see if it is in document 11-19-0856r8, determined it was, so reviewed CID
           3. Reviewed TBTT issue.
           4. The point of the beacon interval is a period of time. It is not a point in time, but rather an interval.
           5. There are 3 concepts around “beacon interval”

1- a period of time between events, without a necessary a priori starting point in time.

2. When TBTT occur – when Beacons are anticipated.

3. When Beacons actually come which is shortly after TBTT time. Note that the TBTT is point in time which are beacon intervals apart and anticipate when the beacons come (a short time later).

So, when the client does not know the TBTT points, it may be told to wait one beacon interval before it can start.

* + - * 1. It would be good to document the 3 separate concepts to help people understand the 3 concepts.
        2. Review proposed changes
        3. There was not consensus on the definition of TBTT and beacon interval. So, we need to work offline to resolve this issue.
        4. Time duration for the beacon interval is not tied to the TBTT times.
        5. Discussion on the changes in 1697.64 – this is only correct if the beacon period is locked to the TBTT.
        6. Some changes were agreed to regardless on the final version of the definition we agree on.
        7. We will need an opportunity to discuss thee definition with clear alternatives. We need to may be pull from document to separate the information for easier discussion.
        8. The following changes were acceptable: At 2086.58 (10.54.3), 1373.46 (9.4.2.192) and at 1379.30 (9.4.2.195).
      1. CID 2376 (MAC) –
         1. Will prepare reject - insufficient detail
      2. CID 2418 (GEN)
         1. Reviewed status from Aug 9, 2019 telecon:

4.9 CID 2418 (GEN)

4.9.1 Reviewed the comment.

4.9.2 Discussion on ACK/Block ACK and immediate response or not.

4.9.3 RTS/CTS is considered a successful exchange? No, need following frame also to be considered successful.

4.9.4 If that’s try, then the proposed changes are not correct.

4.9.5 Review usage of RDS

4.9.6 Review usage for PMKSA

4.9.7 Comment: changes seem to be broader than the comment. Deleting a lot of other text.

4.9.8 More work needed re: RTS/CTS exchange.

4.9.9 Action: Members to review PMKSA changes.

4.9.10 Comment: RRB change – frames not being allowed to be exchanged. Need a definition for what successfully means in the context of RRB.

4.9.11 Review sentence in context.

4.9.12 Change to state that the 2 shall be in the same mobility domain.

4.9.13 More work needed.

* + - * 1. Resume discussion on the proposed changes as described in 11-19/856r8.
        2. Changes that Mark RISON was proposing are in an R9 that has not been posted yet.
        3. The changes of successful SAE authentication references are combined to a single sentence to remove the word “successful”.
        4. Discussion on the loss of 802.1X reference and if that is an issue.
        5. The changes were minimized, so the R9 may be an agreeable alternative.
        6. Post R9 and mark ready for Motion
        7. Proposed Resolution: REVISED (GEN: 2019-08-20 19:13:50Z); incorporate the changes for CID 2418 in 11-19/856r9 <<https://mentor.ieee.org/802.11/dcn/19/11-19-0856-09-000m-resolutions-for-some-comments-on-11md-d2-0-lb236.docx>> which makes changes in the direction requested by the commenter.
        8. No objection – Mark Ready for Motion
      1. CID 2470 (GEN)
         1. Discussion on the rational for Reject or not.
         2. Discussion on the change made in CID 2469.
         3. While there was some change of Transition to Transfer and some changes that were made that did not change.
         4. Review the resolution for CID 2469:

REVISED (GEN: 2019-04-03 16:51:49Z) Make the following changes:

D2.1 284.37 change "the session transition" to "the fast session transfer"

D2.1 2445.46 and 2448.38 change "FST session transition" to "fast session transfer"

D2.1 1303.52 change "FST transition" to "fast session transfer"

D2.1 2447.36 change "FST transition" to "state transition"

D2.1 2450.11 change "FST transition" to "fast session transfer"

d2.1 2448.51 change "State transition" to "state transition"

* + - * 1. There seem to be about 3 or 4 left to identify the changes.
        2. Changing of the element name is not viewed a good thing for now.
        3. ACTION ITEM: Mark RISON (Samsung) – to add to his document the specific changes for this CID that is being proposed.
        4. Add CID 2470 to discussion on 22 Aug AM1. To revisit with Mark RISON’s Document.
      1. 2473 (EDITOR)
         1. Review comment – Global change request.
         2. Submission required
         3. Needed to find the locations where subfield and field have the same name.
         4. Discussion on the use of Subfield vs field.
         5. Consensus on any change has not been made.
         6. Operating Class – element, field, subfield.
         7. See in D2.2 page 1212.61 where we see use of subfield of a field.
         8. The context of the use of subfield being used when discussing a field seems to provide value.
         9. Discussion on the context of the subfield usage.
         10. The discussion on getting rid of subfields does not seem we will get consensus.
         11. Discussion on possibly having a global definition of what a “subfield” is.
         12. One proposal would be to add “A subfield is just a field contained in another field.” To the conventions section.
         13. Request to have identification where this sentence would provide clarity.
         14. Proposed Resolution: Reject, the comment cannot be addressed as a single issue; or does not relate to a specific line, paragraph, figure, or equation in the balloted draft.
         15. Mark Ready for Motion
      2. 2654 (MAC)
         1. Not ready to discuss before Hanoi.
         2. insufficient information - Already on the MAC insufficient tab
      3. CID 2584 and 2585 (MAC)
         1. These CID’s have a resolution, but there are some Editorial changes that are still open from our 9 Aug telecon. That are identified in extra Editorial section.
         2. The change for the direction of adding field description for each element. This would make subelement and element definition the same.
         3. Straw poll:

Make Sub-element and Element style the same:

Results 5 yes and 3 abstains

* + - * 1. Mark RISON will go and do more work.
  1. **Recess at 11:45am** - will resume at 13:00 ET

1. **TGmd (REVmd) Adhoc in Toronto, Canada Tuesday 20 Aug. 2019 13:00-15:00**
   1. **Welcome – Called to order** at 1:01pm ET by the Chair Dorothy STANLEY (HPE).
   2. **Attendance:** 
      1. In Person:
         1. Dorothy STANLEY (HPE)
         2. Mark HAMILTON (Ruckus/CommScope)
         3. Jon ROSDAHL (Qualcomm)
         4. Joe LEVY (Interdigital)
         5. Michael MONTEMURRO (Blackberry)
         6. Edward AU (Huawei)
      2. Call in WebEx
         1. Emily QI (Intel)
         2. Mark RISON (Samsung)
         3. Graham SMITH (SR Technologies)
         4. Osama ABOUL-MAGD (Huawei Technologies)
         5. Thomas DERHAM (Broadcom)
   3. **Reminder of Patent Policy**
      1. No issues noted
   4. **Review Agenda 11-19/1367r6**
      1. <https://mentor.ieee.org/802.11/dcn/19/11-19-1367-06-000m-2019-july-aug-sept-tgmd-teleconference-agendas.docx>
      2. Reviewed Plan for the time slot.
      3. No Changes.
   5. **Review doc 11-19/796r1** Michael MONTEMURRO (Blackberry)
      1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0796-01-000m-comment-resolutions-for-d2-0-operating-classes-comments.docx>
      2. CID 2290 (PHY)
         1. Review Comment
         2. Change “Channel Spacing” to “Channel Width”
         3. A Capitalization issue also addressed checking each instance to make the change consistent.
         4. Discussion on the Meaning of Channel Spacing vs Channel Width.
         5. After checking, it would seem we should not change the column heading.
         6. The Comment will be rejected, but there were some capitalization and a “field” that should be “column”.
         7. Prepared a resolution that starts with Revised; Per the definition on 4337.48 (relative to D2.2), the fourth column is indeed channel spacing.

In table 15-6, see the 2.4Ghz channel plan.

* + - 1. Proposed Resolution: Revised; Per the definition on 4337.48 (relative to D2.2), the fourth column is indeed channel spacing.

In table 15-6, see the 2.4Ghz channel plan.  
Incorporate the changes in 11-19/0796r2 for CID 2290 <<https://mentor.ieee.org/802.11/dcn/19/11-19-0796-02-000m-comment-resolutions-for-d2-0-operating-classes-comments.docx> > which corrects the capitalization of the use of “Channel spacing” .

* + 1. CID 2630 (PHY)
       1. Review Comment
       2. Proposed Resolution: Rejected – Submission 18/1366r2 has previously motioned resolutions for all comments on operating classes [CIDs 1418, 1445 and 1446]. CID 1418 resolution made an operating class not an indicator of support for any channels in a channel set. CID 1445 was rejected. CID 1446 resolution clarified the definition of an operating class. CID 2630 is rejected because no specific remedy is proposed.
       3. Mark Ready for Motion - Put in a separate motion.
    2. CID 2442 (PHY)
       1. Review Comment
       2. Proposed Resolution: Incorporate the changes in 11-19/0796r2 for CID 2442 <<https://mentor.ieee.org/802.11/dcn/19/11-19-0796-02-000m-comment-resolutions-for-d2-0-operating-classes-comments.docx> > which changes the Reserved to m-dash.
       3. No Objection - Mark Ready for Motion
    3. CID 2441 (PHY)
       1. Review Comment
       2. Review table and the format of the column 2. It is not consistent. The intent of the comment is to get rid of the “>” and correct the references.
       3. Need to add a note for the end of the table as well to explain the nominal definition of the links.
          1. NOTE---E-x-y refers to operating class y in Table E-x.
       4. Proposed Resolution: Incorporate the changes in 11-19/0796r2 for CID 2441 <<https://mentor.ieee.org/802.11/dcn/19/11-19-0796-02-000m-comment-resolutions-for-d2-0-operating-classes-comments.docx> > which removes the “>” character and makes the 2nd column format consistent and adds a note to the end of the table.
       5. No objection – Mark Ready for Motion
    4. CID 2701 (PHY)
       1. Review Comment
       2. Discussion on what should be in the Behavioral Limit column
       3. There were other columns that have since been deleted that made the original rows unique.
       4. The distinction between, for example, classes 8 and 11 is nt the behaviour limit set, but the transmit power limit and emissions limit set. (Table J.3 in 802.11j-2004).
       5. Proposed Resolution: Revised – Because both fixed and nomatic operation are permitted, LicenseExemptBehavior can apply to 4940-4990 MHz operating classes in Japan. However, the distinction between, for example, classes 8 and 11 is not the behavior limit set, but the transmit power limit and emissions limit set columns, which have been removed. See Table J.3 in IEEE 802.11j-2004.

TGm Editor: Page 4341 line 30 classes 8, 11, 17, 20, 25, 26, 29 Change the Behavior Limits Set entry from blank to “LicenseExemptBehavior” as shown: LicenseExemptBehavior (#2701)

* + - 1. No Objection – Mark Ready for Motoin.
    1. CID 2700 (PHY)
       1. Review the comment
       2. Proposed Resolution: Incorporate the changes in 11-19/0796r2 for CID 2700 <<https://mentor.ieee.org/802.11/dcn/19/11-19-0796-02-000m-comment-resolutions-for-d2-0-operating-classes-comments.docx> > which removes the use of the bandwidth between 5,030 and 5,091 MHz which is no longer allowed in Japan since November 30, 2017.
       3. No Objection – Mark Ready for Motoin.
    2. CID 2129 (PHY)
       1. Review Comment
       2. Editor Note #11 needed a comment in LB236. The editorial notes will be removed with this resolution.
       3. Proposed Resolution: REVISED (PHY: 2019-08-20 19:03:57Z) - Incorporate the changes in 11-19/0796r2 for CID 2700 <https://mentor.ieee.org/802.11/dcn/19/11-19-0796-02-000m-comment-resolutions-for-d2-0-operating-classes-comments.docx > which adds the operating class entries for 11aj.
       4. No objection – Mark Ready for Motion.
  1. **Review doc 11-19/720r4** – Thomas DERHAM (Broadcom)
     1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0720-04-000m-individually-addressed-probes-cid2216.docx>
     2. CID 2216 (MAC)
        1. Review Comment
        2. Figure 9-XX should be in Figure 11-xx
        3. An R5 will be posted with the correction.
        4. Proposed Resolution: REVISED (MAC: 2019-08-20 18:48:30Z) : Incorporate the changes in 11-19/720r5 which resolves the comment in the direction suggested by the commentor.
        5. No objection -Mark Ready for Motion
  2. **Review doc 11-19/721r4**– Thomas DERHAM (Broadcom)
     1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0721-04-000m-multiple-bssid-support-in-rnr.docx>
     2. CID 2696 (MAC)
        1. Review Comment
        2. Review proposed changes since last review.
        3. Discussion on legacy impacts.
        4. Discussion on the direction of the document and the changes…there was concern in some of the location that may have the changes.
        5. There was some sense that this should not be in REVmd and may be better to have in another amendment. 11ax may also be making this a mandatory feature in addition to R&R.
        6. Discussion that features that are coming in 11ax should not be added in parallel to 11md at the same time.
        7. Straw Poll:
           1. Do you support the changes in this document in 11md?

Yes/No/abstain

Results: 1-2-5 –

* + - 1. Suggestion is to consider taking to 11ax.
      2. The Commenter may withdraw the comment, if so, then the resolution would be: Reject – Commenter has withdrawn the comment.
  1. **Recess at 3:07pm**

1. **TGmd (REVmd) Adhoc in Toronto, Canada Tuesday 20 Aug. 2019 15:30-17:30**
   1. **Welcome – Called to order at 3:31pm ET by the Chair Dorothy STANLEY (HPE)**.
   2. **Attendance**:
      1. In Person:
         1. Dorothy STANLEY (HPE)
         2. Mark HAMILTON (RUCKUS/COMMSCOPE)
         3. Jon ROSDAHL (Qualcomm)
         4. Joe LEVY (Interdigital)
         5. Michael MONTEMURRO (Blackberry)
         6. Edward AU (Huawei)
      2. Call in WebEx
         1. Emily QI (Intel)
         2. Mark RISON (Samsung)
         3. Thomas DERHAM (Broadcom)
         4. Rodger Marks (EthAirNet Associates)
         5. Antonio de la Oliva (Interdigital; University Carlos III of Madrid)
   3. **Reminder of Patent Policy**
      1. No issues noted
   4. **Review Agenda 11-19/1367r6 + changes**
      1. <https://mentor.ieee.org/802.11/dcn/19/11-19-1367-06-000m-2019-july-aug-sept-tgmd-teleconference-agendas.docx>
      2. PM2 agenda

i. 11-19-586r5 – Thomas DERHAM (Broadcom)

ii. 11-19-286 – Rodger MARKS (EthAirNet Associates)

iii. CID 2234 - 11-19-610 – Emily QI (Intel)

iv. 11-19-1444 – Edward AU (Huawei) – MEC Review

v. 11-19-1443- CID 222/11-19-1396 2273 (GEN) Edward AU (Huawei)

vi. 11-19-551 - CID 2242, 2692 MAC CIDs – Mark HAMILTON (RUCKUS/COMMSCOPE)

vii. Carlos CORDEIRO CIDs

* + 1. Agenda for last time slot adjusted during PM1
    2. No objection
  1. **Review Doc 11-19/586r5** Thomas DERHAM (Broadcom)
     1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0586-06-000m-pmksa-caching-and-mac-randomization.docx>
     2. CID 2689 (PHY)
        1. Review Comment
        2. Security experts have reviewed the document.
        3. The Document is to be revised to ensure that the dates in the header and front page are correct.
        4. Proposed resolution: Revised Incorporate the changes in doc 11-19/586r7 <<https://mentor.ieee.org/802.11/dcn/19/11-19-0586-06-000m-pmksa-caching-and-mac-randomization.docx>> which addresses the comment in the direction suggested by the commentor
  2. **Review Doc 11-19/286 r8** Rodger Marks (EthAirNet Associates)
     1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0286-08-000m-mac-address-policy-anqp-and-beacon-element.docx>
     2. CID 2685 (PHY)
        1. Review Comment
        2. Review current status since last presentation.
        3. Discussion on SAI quadrant – (Standard Assigned Individual)
        4. Discussion on how to get the address spaced allocated.
        5. The reference is to the standard does not exist yet, but 802.1CQ will be a standard that defines the protocol, but it is not done yet. Once it gets done, it would only be half the solution.
        6. Addition of an Informative reference until it is a final standard.
        7. Add a note to the Editor to add a reference in Annex A.
        8. Note that 802.1CQ is not expected to be done in 2020, so maybe we don’t want to add at this time.
        9. We can have Bit 0 held in Reserved until the IEEE 802.1CQ has published.
        10. Discussion on the method for identifying the quadrant numbers.
        11. Discussion on referencing IEEE 802c-2017.
        12. Discussion in consistencies for wording in the proposed changes.
        13. Discussion on the referencing to 802.1CQ as it is not publishing ahead of 11md.
            1. Add a foot note. indicating it is not published yet.
        14. Quadrant numbering may not need to be renumbered.
        15. Waiting for the 802.1CQ may be better path.
        16. Discussion on the value of bit 1 is used for address server that is different from the bit indicating 802.1CQ. Suggestion was to leave it as reserved prior to publication of 802.1CQ.
        17. Plan to have an update circulated to those that are interested and get some feedback prior to the presentation being presented at the next session.
        18. Schedule to revisit Friday Sept 6th Teleconference.
        19. Also schdule some time on Monday PM1 in Hanoi – Antonio will be there.
  3. **Review doc 11-19/0610r2** Emily QI (Intel)
     1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0610-02-000m-lb236-proposed-resolutions-for-cid-2234.doc>
     2. CID 2234 (MAC)
        1. Review Comment
        2. Review the proposed changes
        3. Two sections may not be changed – 9.3.1.7.4 and 9.3.1.8.3
        4. Question on the use of “indicates”.
        5. Discussion on if n is a number or something else.
        6. N indicates the number of STA Info blocks in the VHT NDP Announcement frame format.
        7. Proposed resolution: : REVISED (MAC: 2019-08-20 20:42:18Z):; Incorporate the changes indicated in 11-19/610r3 <<https://mentor.ieee.org/802.11/dcn/19/11-19-0610-03-000m-lb236-proposed-resolutions-for-cid-2234.doc> > which corrects the listing of repeating subfields.
        8. No Objection – Mark Ready for Motion
  4. **MEC Review** - Edward AU (Huawei)
     1. <https://mentor.ieee.org/802.11/dcn/19/11-19-1444-00-000m-proposed-changes-re-ieee-sa-mec-comment-related-to-draft-2-1-of-ieee-p802-11revmd.docx>
     2. Review the MEC Review
     3. Discussion on if the Figure is or is not Normative/Informative.
     4. The IEEE editor is not allowing “Informative” in our captions.
     5. Change many of the “Shown in” to “Defined in”
     6. Discussion on removing words like “is not meant to be exhaustive of all possible protocol uses”.
     7. At 816.44, Delete Note 7 from Table 9.25. –
     8. For Table 10.1 remove “Informative”, from the 7th Column name.
     9. Tentatively be on the 3 Sept Telecon
  5. **Recess at 5:35pm**

1. **TGmd (REVmd) Adhoc in Toronto, Canada Wednesday 21 Aug. 2019 9:00-11:30**
   1. **Welcome – Called to order at 9:01am ET by the Chair Dorothy STANLEY (HPE)**.
   2. **Attendance**:
      1. In Person:
         1. Dorothy STANLEY (HPE)
         2. Mark HAMILTON (RUCKUS/COMMSCOPE)
         3. Jon ROSDAHL (Qualcomm)
         4. Joe LEVY (Interdigital)
         5. Michael MONTEMURRO (Blackberry)
         6. Edward AU (Huawei)
      2. Call in WebEx
         1. Emily QI (Intel)
         2. Mark RISON (Samsung)
         3. Assaf KASHER (Qualcomm)
         4. Osama ABOUL-MAGD (Huawei Technologies)
   3. **Reminder of Patent Policy**
      1. No issues noted
   4. **Review Agenda 11-19/1367r7**
      1. <https://mentor.ieee.org/802.11/dcn/19/11-19-1367-07-000m-2019-july-aug-sept-tgmd-teleconference-agendas.docx>
      2. **2019-08-21 TGmd Ad-hoc AM1 9:00-11:45 am Eastern**
2. 11-19-1286, 11-19-1441 CIDs 2041, 2042, 2047, 2069, 2498, 2050, 2291 – Assaf KASHER
3. 11-19-1195 – Menzo WENTINK CIDs
4. 11-19-1443- CID 2221-19-1396 2273 (GEN) Edward AU (Huawei)
5. 11-19-551 - CID 2242, 2692 MAC CIDs – Mark HAMILTON (RUCKUS/COMMSCOPE)
6. Carlos CORDEIRO CIDs
   * 1. No objections nor change requested.
   1. Issue with Assaf’s audio, so we skipped Assaf and went to Edward AU (Huawei)
   2. **Review doc 11-19/1443r0** Edward AU (Huawei)
      1. <https://mentor.ieee.org/802.11/dcn/19/11-19-1443-00-000m-resolution-for-cid-2222.docx>
      2. CID 2222 (MAC)
         1. Review Comment
         2. Previously discussed last February.
         3. Review proposed changes.
         4. Discussion on if “STA/Supplicant” or “AP/Authenticator” should be used in the figures.
         5. Discussion on changing “Trusted Third Party” to “Authentication Server”. See Figure 4-35. Caption and the figure do not seem to match the text in the clause 4.10.3.6.2.
            1. Could we change “Authentication Server” to “TTP”?
            2. In figure 12-55.
            3. Clause 12.2.1 – line 45 – TTP is already used and so is not needed to be redefined here again.
            4. P297.48 – Change “Supplicant/AS authentication” to “Supplicant and AS authentication”. Will look for other instances in the draft and bring back on Sept 3.
         6. Will work on updating the proposed resolution and bring back on Sept3 Telecon.
   3. **Review doc 11-19/1286r1** Assaf KASHER (Qualcomm)
      1. <https://mentor.ieee.org/802.11/dcn/19/11-19-1286-01-000m-lb236-some-xdmg-phy-cids.docx>
      2. CID 2041 (EDITOR)
         1. Review comment
         2. This comment was motioned:
            1. REVISED (PHY: 2019-07-16 06:21:09Z) - Incorporate the changes for CID 2041 under Proposed Resolution in document https://mentor.ieee.org/802.11/dcn/19/11-19-1034-03-000m-proposed-resolutions-for-11aj-related-comments-in-revmd-lb236.doc
         3. Discussion: MCS0 sensitivity has been defined in 11-19-1034. However, that resolution did not align the new sensitivity numbers.

Editor: Change P3511L31 as follows:

MCS 0 (–7481 dBm for 540 MHz, –7178 dBm for 1080 MHz) shall cause CCA to indicate busy with a

Editor: Change P3532L52 as follows:

the minimum sensitivity for MCS 0 (–7481 dBm for 540 MHz, –7178 dBm for 1080 MHz) shall cause CCA to

* + - 1. Concern on the values that are put in the table 25-2.
      2. See 25.5.7.2.2 CCA – the numbers are not matching in the table.
      3. Discussion on duplication in the standard is a potential cause of errors.
      4. One solution would be to change the numbers in the parenthetical to just a reference to the table where the numbers are defined.
      5. Assaf is going to go offline and look for a single location for defining the numbers and come back with proposal.
      6. We may want to separate the issues for sensitivity and CCA Sensitivity and the terms may or may not be the same, and we will need to ensure the proper cross-references be used.
      7. We can have a separate motion for just this change proposed by Assaf, and the issue of the clean-up on one definition and referencing will be a bigger issue that we can take up later.
      8. Concern on the lack of clear definitions for sensitivity type terms.
      9. Separate motion for these changes will be brought in Hanoi.
    1. CID 2047 and 2048 (EDITOR)
       1. Also already motioned.
       2. Check on the change in D2.4 (pre-draft).
    2. CID 2069 (PHY)
       1. Review Comment
       2. The proposed change is similar to 2047 and 2048.
       3. The change may have been already been made, and it was marked as 2047.
       4. We can mark CID 2069 – ready for Motion – with the same resolution for CID 2047.
       5. Another instance of the issue of “Any transmit…” in another location. In Clause 25.7.2.4. see page 537 – it has been corrected.
       6. It seems that the proposed changes are all in D2.4.
       7. Proposed Resolution: REVISED (PHY: 2019-08-21 14:17:36Z) - Make the changes shown under “Proposed changes” for CID 2047 in <https://mentor.ieee.org/802.11/dcn/19/11-19-1034-03-000m-proposed-resolutions-for-11aj-related-comments-in-revmd-lb236.doc> , which make the change proposed by the commenter, and additionally make a similar change in Clauses 20 and 25.

Note to Editor: These changes have already been implemented in the resolution to CID 2047

* + - 1. No objection – Mark Ready for Motion
    1. CID 2498 (PHY)
       1. Review Comment
       2. Review the discussion:

The Differential Encoder Initialization bit is part of the header. As such it used by the encoder to create the LDPC parity bits and the general structure of the first LDPC CW as described in 20.4.3.3.3 Encoder. In the receiver, there are different ways to recover the Differential Encoder Initialization bit. The “simplest” way is to use, as an input to the LDPC decoder a value that indicates no knowledge as to whether this bit is 0 or 1. The LDPC decoder has enough power to recover this bit. Therefore, we cannot state that the Differential Encoder Initialization field is not affected by the encoder

* + - 1. Discussion of the history of how we seemed to have arrived at this point.
      2. Page 3093 - 20.4.3.3 Encoder – discussion on the LDPC operation.
      3. Proposed Resolution: REJECTED (PHY: 2019-08-21 14:29:00Z) - The Differential Encoder Initialization bit is part of the header. As such it used by the encoder to create the LDPC parity bits and the general structure of the first LDPC CW as described in 20.4.3.3.3 Encoder. In the receiver, there are different ways to recover the Differential Encoder Initialization bit. The “simplest” way is to use, as an input to the LDPC decoder a value that indicates no knowledge as to whether this bit is 0 or 1. The LDPC decoder has enough power to recover this bit. Therefore, we cannot state that the Differential Encoder Initialization field is not affected by the encoder.
    1. CID 2050 (PHY)
       1. Review comment
       2. Discussion on the conditions for success and failure of CRC and LDPC Codeword.
       3. More discussion offline may be needed.
       4. Clause 25.3.12 Encoding of Data Field - has the CRC reference of 25.3.6 CRC calculation.
       5. p778 of D2.3 has a PHY Rx Code that can be given that the CRC failure state.
       6. Discussion on the use or validity of MPDU if there is a CRC failure in the LPDC code fails.
       7. The “When Generated section” needs to be completed.
       8. Discussion on if this allows the entire MPDU if the LDPC check fails. The process gets a speed up if you can determine an error in the packet quicker.
       9. Discussion on the flow chart – Each LDPC has a crc check.
       10. Discussion on what happens when an error occurs. Which entity gets to drop it.
       11. The Direction and value of the proposal was discussed.
       12. It is not clear if this primitive is asynchronous to the bit stream, and it would be better in the PHY-Data Indication
       13. The comment and proposed change is not really sufficient detail, so a rejection of the comment and those that have interest can discuss offline.
       14. Proposed Resolution: REJECTED (PHY: 2019-08-21 14:56:55Z)

The comment fails to identify changes in sufficient detail so that the specific wording of the changes that will satisfy the commenter can be determined. It is not clear if this new primitive is asynchronous to the bit stream, and it would be better in the PHY-Data Indication

* + - 1. Mark Ready for Motion.
  1. Review doc 11-19/1441r1 Assaf KASHER (Qualcomm)
     1. <https://mentor.ieee.org/802.11/dcn/19/11-19-1441-01-000m-lb236-resolution-to-cid2291.docx>
     2. CID 2291 (PHY)
        1. Review Comment
        2. Review discussion: The text in 20.9.2.2.1 was intended to be an introduction, not a definition. It is possible to improve it, with the danger of repeating text in the following paragraphs. The beginning of 20.9.2.2.2 can be removed as it repeats in TXVECTOR terms things that are defined in 20.9.2.2.2
        3. Review the proposed changes.
        4. Question on if AGC Training field is the right term. – The AGC Training field is for the CCMG, and the AGC field is for the DMG.
        5. Need to update the Header date, the Document Title and the Title date.
        6. Discussion on the use of “packets” and this is the one of the last places that “packets” is left in the standard.
        7. Changing the word packet to PPDUs
        8. The change would be — BRP-RX PPDUs are PPDUs that have an AGC field and a TRN training subfields field following the data part.
        9. Discussion on making more changes to the proposed changes to remove “Packet” and correct where this applies and if Beam Tracking is used or not.
        10. A new revision of 11-19/1441 will need to be posted.
        11. Assign to the Sept 6 Telecon for more discussion.
  2. Need to have any CIDs for assigned to Assaf –
     1. About 13 CIDs left for Assaf to present on.
        1. PHY – 2670, 2051, 2291
        2. MAC - 2071, 2070, 2066, 2106, 2062, 2058, 2055, 2054, 2060, 2059
     2. CID 2387 (PHY)
        1. Reject for Insufficient Detail.
        2. Proposed Resolution: REJECTED (PHY: 2019-08-21 14:56:55Z)
        3. The comment fails to identify changes in sufficient detail so that the specific wording of the changes that will satisfy the commenter can be determined. It is not clear if this new primitive is asynchronous to the bit stream, and it would be better in the PHY-Data Indication
     3. CID 2058 (MAC)
        1. Bring presentation.
     4. CID 2059, 2055, 2054, 2062 (MAC)
        1. Reject for Insufficient Detail
        2. Proposed Resolution: CIDs 2054, 2055, 2059, 2062 (all MAC): REJECTED (MAC: 2019-08-21 15:35:32Z): The comment fails to identify changes in sufficient detail so that the specific wording of the changes that will satisfy the commenter can be determined.
        3. Mark ready for Motion.
     5. Documents 11-19-286, and 1-19/1045, 11-19/1441 contain submissions by Assaf.
  3. **Review doc 11-19/1396r0** – Edward AU (Huawei)
     1. <https://mentor.ieee.org/802.11/dcn/19/11-19-1396-00-000m-resolution-for-cid-2273.docx>
     2. CID 2273 (GEN)
        1. Review comment
        2. Figure updates reviewed (5-2 and 5-7.)
        3. For Figure 5-2:
           1. As per the discussion with Mark Hamilton, agree to

[1] add 802.1AC convergence function entities

[2] add the corresponding layer “802.1 convergence, bridging and related functions

[3] add “Legend” in the “Legend box” to make it clearer that this is the purpose of the box per the discussion in the July 11th call.

* + - 1. For Figure 5-7:
         1. As per the discussion with Mark Hamilton, agree to

[1] replace “LLC/SNAP” with “LPD/EDP”

[2] add the corresponding layer “802.1 convergence, bridging and related functions

[3] add “Legend” in the “Legend box” to make it clearer that this is the purpose of the box per the discussion in the July 11th call

[4] modify the text in the “Role-specific box” as “Non-STA AP behavior” in Figure 5-7, to reflect that in this case (an S1G relay) we know the specific role is a non-AP STA.

* + - 1. Discussion on the specific changes.
      2. Need to update figure 5-1 “Legend” box to have the label “Legend” added.
      3. Proposed Resolution: Revised; Incorporate the changes in 11-19/1396r1 <https://mentor.ieee.org/802.11/dcn/19/11-19-1396-01-000m-resolution-for-cid-2273.docx> which resolves the CID in the direction requested by the Commenter.
      4. No Objection - Mark ready for Motion
  1. Recess at 11:47am – reconvene at 1pm ET.

1. **TGmd (REVmd) Adhoc in Toronto, Canada Wednesday 21 Aug. 2019 13:00-15:00**
   1. **Welcome – Called to order at 9:01am ET by the Chair Dorothy STANLEY (HPE)**.
   2. **Attendance**:
      1. In Person:
         1. Dorothy STANLEY (HPE)
         2. Mark HAMILTON (RUCKUS/COMMSCOPE)
         3. Jon ROSDAHL (Qualcomm)
         4. Joe LEVY (Interdigital)
         5. Michael MONTEMURRO (Blackberry)
         6. Edward AU (Huawei)
      2. Call in WebEx
         1. Emily QI (Intel)
         2. Mark RISON (Samsung)
         3. Osama ABOUL-MAGD (Huawei Technologies)
         4. Gabor BAJKO (Mediatek)
         5. Dan HARKINS (HPE)
         6. Thomas DERHAM (Broadcom)
         7. Rob SUN (Huawei)
   3. **Review Agenda 11-19/1367r7**
      1. <https://mentor.ieee.org/802.11/dcn/19/11-19-1367-07-000m-2019-july-aug-sept-tgmd-teleconference-agendas.docx>
      2. 08-21 TGmd Ad-hoc PM1 13:00-15:00 Eastern
2. PHY CIDs – Michael MONTEMURRO (Blackberry)
3. MAC CIDs – Mark HAMILTON (RUCKUS/COMMSCOPE)
4. August 21 – 2pm Eastern: 11-19-1173 – Dan Harkins
   * 1. No changes noted.
   1. **Review PHY CIDS** Michael MONTEMURRO (Blackberry)
      1. 5 CIDs to discuss – 2436, 2052, 2021, 2068 and 2067
      2. CID 2436 (PHY)
         1. Review Comment
         2. Review random items from the long list of adding or deleting “protected” before “robust Management frame”
         3. Thanks to Jouini MALINEN for the work on this CID.
         4. Proposed Resolution: REVISED (PHY: 2019-08-21 17:14:37Z) - Delete or add "protected" before "robust Management frame" as described

in the following list of locations (all page/line references are to

REVmd/D2.3)

4.5.4.6 P273 L4 delete protected

4.5.4.7 P273 L17 delete protected

6.3.29.2.2 P453 L41 add protected

6.3.29.3.2 P454 L38 add protected

6.3.35.2.2 P468 L32 add protected

6.3.35.4.2 P470 L30 add protected

6.3.36.2.2 P473 L4 add protected

6.3.36.4.2 P473 L36 add protected

6.3.36.5.2 P474 L26 add protected

6.3.37.2.2 P476 L26 add protected

6.3.37.3.2 P477 L33 add protected

6.3.37.4.2 P478 L22 add protected

6.3.37.5.2 P479 L22 add protected

6.3.38.1.2 P480 L18 add protected

6.3.38.2.2 P481 L18 add protected

6.3.71.2.2 P584 L30 add protected

6.3.71.3.2 P586 L16 add protected

6.3.71.4.2 P587 L46 add protected

6.3.71.5.2 P589 L31 add protected

6.3.92.2.2 P665 L39 add protected

6.3.92.4.2 P667 L16 add protected

6.3.95.2.2 P672 L31 add protected

6.3.95.3.2 P673 L24 add protected

6.3.95.4.2 P674 L13 add protected

6.3.95.5.3 P675 L16 add protected

6.3.96.2.2 P676 L28 add protected

6.3.96.3.2 P677 L35 add protected

6.3.96.4.2 P678 L42 add protected

6.3.96.5.2 P679 L52 add protected

6.3.97.2.2 P680 L42 add protected

6.3.97.3.2 P681 L26 add protected

6.3.98.2.2 P682 L23 add protected

6.3.98.3.2 P683 L13 add protected

6.3.98.4.2 P684 L12 add protected

6.3.98.5.2 P685 L12 add protected

6.3.99.2.2 P686 L17 add protected

6.3.99.3.3 P687 L14 add protected

6.3.99.4.4 P688 L13 add protected

6.3.99.5.2 P689 L4 add protected

9.3.3.1 P853 L38 add protected

12.2.6 P2541 L17 add protected

* + - 1. No objection – Mark Ready for Motion
    1. CID 2052 (PHY)
       1. Review Comment.
       2. Comment: "China directional multi-gigabit (CDMG): Pertaining to operation in DMG and where the channel is contained within the Chinese 60 GHz frequency band" - it seems that Chinese 60GHz band is contained with other regulatory domain bands: US or Europe for example. Can CDMG BSS operate in Europe or the US?
       3. Assign to Edward AU (Huawei) for resolution.
       4. Add to Agenda for PM1 on Thursday.
    2. CID 2021 (PHY)
       1. Review Comment
       2. Assign to Edward for resolution.
       3. There are two questions – Is it really Obsolete? And if it is, what is the actual text changes required to affect that.
       4. Two responses to the CID will be created by Michael MONTEMURRO (Blackberry), one will be a reject and one will be revised depending on what is returned by Edward’s research.
       5. Add to Agenda for PM1 for Thursday.
    3. CID 2068 (PHY)
       1. Review Comment
       2. Reject with Insufficient Details.
       3. Proposed Resolution: REJECTED (PHY: 2019-08-21 17:26:59Z) - The comment fails to identify changes in sufficient detail so that the specific wording of the changes that will satisfy the commenter can be determined.
       4. No objection - Mark Ready for Motion
    4. CID 2067 (PHY)
       1. Review Comment
       2. Assign to Edward AU (Huawei) for response
       3. Add to Agenda for PM1 for Thursday.
    5. 14 CIDs left to process.
  1. **Review doc 11-19/551r10** - MAC CIDs Mark HAMILTON (Ruckus/CommScope)
     1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0551-10-000m-revmd-lb236-comments-assigned-to-hamilton.docx>
     2. CID 2242 (MAC)
        1. Review Comment
        2. Similar to CID 2236.
           1. From CID 2236 – AdHoc Notes:

GEN: 2019-04-26 15:12:13Z - Strawpoll:

Do you support changing the field name "Forty MHz Intolerance Field" name to "40MHz Intolerance field"?

Yes: No: Abstain:

Results: 1-4-3

* + - 1. Discussion the current direction is that we are reluctant to field names.
      2. Proposed Resolution: REVISED (MAC: 2019-08-21 18:05:33Z): Change "The STA sets the Forty MHz Intolerant field of the 20/40 BSS Coexistence element based on A STA's FortyMHzIntolerant (see 11.15.11)." to "The STA sets the Forty MHz Intolerant field of the 20/40 BSS Coexistence element per the rules listed in 11.15.11."No objection – Mark Ready for Motion
    1. CID 2472 (MAC)
       1. Review comment
       2. Discussion on if transitions happen “at” or “just before” the next TBTT.
       3. The use of the word “until” seems to be the issue contention.
       4. Proposed Resolution REVISED (MAC: 2019-08-21 18:06:55Z): The language “number of TBTTs until” is not obvious to indicate “just before” or “just after” that number of TBTTs happens. The example in 9.4.2.18 clarifies this. Similarly, the example in 9.4.2.52 deals with the same ambiguity. However, the text in 9.4.2.22 is clear and unambiguous without such an example, so the description of the behaviour when the Quiet Count field is set to 1 is unnecessary.

REVmd Editor: Delete the sentence “A value of 1 indicates the quiet interval starts during the beacon interval starting at the next TBTT.” from 9.4.2.22.

* + - 1. Mark Ready for Motion. – Put it on a separate tab.
    1. CID 2224 (MAC)
       1. Review comment
       2. The definition for MLME should be expanded in the definition of TCLAS.
       3. Proposed Resolution: ACCEPTED (MAC: 2019-08-21 18:08:12Z) - Note to the Editor: Please expand the acronym for “MLME”.
       4. No objection – Mark Ready for Motion
  1. **Review doc 11-19/1173r11** Dan HARKINS (HPE)
     1. <https://mentor.ieee.org/802.11/dcn/19/11-19-1173-11-000m-pwe-in-constant-time.docx>
     2. Review Discussion: “SAE requires use of a secret element, PWE, discovered in an agreed upon finite cyclic group. Due to the way the key exchange was initially developed, this PWE discovery cannot be done before the SAE protocol starts.

This element is deterministically discovered by repeatedly hashing the password with some additional information until the resulting hash is the abscissa of a point on the elliptic curve (for ECC) or by exponentiating the hash digest to a constant to produce an element (for FFC). Both of these techniques are prone to side channel attack. While much work has gone into countermeasures to mitigate these attacks, for instance looping 40 times regardless of how soon an abscissa is found, the countermeasures render the whole method of PWE discovery inefficient and very fragile.

When a group is rejected, another one is tried. A man-in-the-middle could exploit this to do a downgrade attack where “good” groups are rejected by the attacker until a “not so good” group is offered which is allowed to go through. There is no way to detect this attack.”

* + 1. Review Submission and proposed changes.
    2. On top of page 4 an “or <ANA-1>” was missing after the first “Status 76”.
    3. Discussion on the SWU Method equation.
    4. Discussion on how to determine which group is rejected.
    5. Discussion on the format of the “salt” information.
    6. Request to include a reference to 12.4.74 for commit messages for salt definition.
    7. Test Vector is still pending getting verification done.
    8. References to R Wahby paper missing. It is cited in the Internet Draft.
    9. An R12 will be created.
    10. “SAE\_HASH\_TO\_ELEMENT” status code name needs to be consistent, change in definition table.
    11. Request for more external review is being done.
    12. Dan has received some comments and has incorporated them into the draft.
    13. A Motion to adopt the document will be considered on the Tuesday of the September Interim in Hanoi.
    14. AI: Jon ROSDSAHL to get an IEEE Copyright release form from Johnathan GOLDBERG to send to Dan.
  1. **Review doc 11-19/551r11** Mark HAMILTON (RUCKUS/COMMSCOPE)
     1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0551-11-000m-revmd-lb236-comments-assigned-to-hamilton.docx>
     2. CID 2005 (MAC)
        1. Review Comment
        2. CID 2289 has corrected the same cited location.
        3. Proposed Resolution: REVISED (MAC: 2019-08-21 19:13:53Z): In Figure 9-335, replace subfield names “Delayed Block Ack” and “Immediate Block Ack” with “Reserved”. Note to Editor, “Delayed Block Ack” has already been changed in 11-19/639r1 for CID 2289.
        4. Mark Ready for Motion
  2. Recess at 3:02pm

1. **TGmd (REVmd) Adhoc in Toronto, Canada Wednesday 21 Aug. 2019 13:00-15:00**
   1. **Welcome – Called to order at 9:01am ET by the Chair Dorothy STANLEY (HPE)**.
   2. **Attendance**:
      1. In Person:
         1. Dorothy STANLEY (HPE)
         2. Mark HAMILTON (RUCKUS/COMMSCOPE)
         3. Jon ROSDAHL (Qualcomm)
         4. Joe LEVY (Interdigital)
         5. Michael MONTEMURRO (Blackberry)
         6. Edward AU (Huawei)
      2. Call in WebEx
         1. Emily QI (Intel)
         2. Mark RISON (Samsung)
         3. Thomas DERHAM (Broadcom)
         4. Ganesh Venkatesan (Intel Corporation)
   3. **Review Agenda 11-19/1367r7**
      1. <https://mentor.ieee.org/802.11/dcn/19/11-19-1367-07-000m-2019-july-aug-sept-tgmd-teleconference-agendas.docx>
      2. 2019-08-21 TGmd Ad-hoc PM2 15:30-17:30 Eastern
2. 11-19-660 CID 2115 – Ganesh VENKATESAN
3. CIDs 2222 (MAC), 2273 (GEN) - Edward AU (Huawei)
4. MAC CIDs – Mark HAMILTON
   * + 1. Add Edward’s submission 11-19/1452
       2. No objection
   1. **Review doc 11-19/1452** Edward AU (Huawei)

* + 1. <https://mentor.ieee.org/802.11/dcn/19/11-19-1452-00-000m-resolution-for-cid-2052.docx>
    2. CID 2052 (PHY)
       1. Review Comment
       2. Discussion on if CDMG and if DMG are dependent on each other.
       3. Discussion on CDMG vs CCMG band usage.
       4. Discussion on the Table E-4 and there is no 60Ghz band listed in the table. So, we need to specify something about where the band actually starts as it is not at 45 or 60.
       5. Discussion on the proper way to define the Chinese 60GHz band.
       6. Discussion on the Chinese Band definition.
       7. We may want to just reject the comment and have a new resolution. Identified.
  1. **Review doc 11-19/551r11** Mark HAMILTON (RUCKUS/COMMSCOPE)
     1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0551-11-000m-revmd-lb236-comments-assigned-to-hamilton.docx>
     2. CID 2603 (MAC)
        1. Review Comment
        2. Proposed Resolution: Revised. At P2213, lines 3, 5 and, 8, replace “beacon interval units” with “units of beacon intervals”.
        3. No objection – Mark Ready for Motion
     3. CID 2279 (MAC)
        1. Review Comment
        2. Proposed Resolution: Accept
     4. CID 2282 (MAC)
        1. Review comment
        2. Discussion on “is” vs “shall be”
        3. For p1876 “A STA may transmit information that is too large to fit by fragmenting it into a series...”
        4. For p1877 “is not” changes to “shall not”
        5. Discussion on the change of “appears” –
        6. Discussion on GAS fragmentation example.
        7. For p1877 change “appears” to “shall be in”.
        8. Discussion on finding defragmentation definition.
        9. We need to determine if this is where the fragmentation is actually defined, or if the declarative is fine. If the defragmentation is defined elsewhere, then are is fine.
        10. Clause 10.29.11 is the location for the normative statement.
        11. We may need to have all the verbs in the p1877 changed to normative statement.
        12. Subclause on Defragmentation may have the same issues, and some of the text in the Fragmentation clause should be moved.
        13. More work will need to be done.
     5. CID 2287 (MAC)
        1. Review comment
        2. Proposed Resolution: Revised.

Make changes as suggested by the commenter (Change "AID field" to "AID12 subfield" at P1924.62 and P1925.3. Replace "AID subfield" with "AID12 subfield" throughout this subclause.). Also, change the heading of the left column of Table 9-31 from “Field” to “Subfield”.

* + - 1. No objection – Mark Ready for Motion
    1. CID 2288 (MAC)
       1. Review Comment.
       2. PSMP is obsolete – we do not fix obsolete stuff.
       3. Proposed Resolution: Rejected. Generally, features that are marked deprecated or obsolete are not maintained. PSMP is obsolete.
       4. Mark Ready for Motion
    2. CID 2564 (GEN)
       1. Review Comment
       2. Proposed Resolution: Rejected. An OCT-capable, multi-band device is not a relay.  It is a type of multi-band device similar in structure to that shown in Figure 4-29.  As such, there are SMEs within each STA, which can coordinate with each other through the multi-band management entity, to arrange the “exchange of MLME primitives” as described.  Thus, the comment fails to identify a problem.
       3. No objection – Mark Ready for motion
    3. CID 2240 (MAC)
       1. Review Comment
       2. Proposed Resolution: Accepted
       3. No objection – Mark Ready for motion
  1. **Review doc 11-19/660** Ganesh Venkatesan (Intel Corporation)
     1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0660-01-000m-resolution-to-cid-2115.docx>
     2. CID 2115 (MAC)
        1. Review comment
        2. Reviewed history of submission.
        3. Fixed fields that should be “subfield”.
        4. Some of the changes could be completed by tomorrow.
        5. The field to subfield changes can be completed offline.
        6. Discussion on the measurements for the TOA field. The suggested text would need to be created.
        7. More offline work needs to be done.
        8. Add to agenda for Thursday PM2.
  2. **Review doc 11-19/1195** Menzo WENTINK (Qualcomm) Presented by Dorothy
     1. <https://mentor.ieee.org/802.11/dcn/19/11-19-1195-04-000m-assorted-crs.docx>
     2. CID 2474 (MAC)
        1. Review Comment
        2. Discussion on the value of deleting the citing text.
        3. Discussion on the changes since d2.0 to d2.4, and the comment collection period may have caused the broken reference.
        4. Review the history of the clause reference.
        5. CID 1308 put back just the one paragraph rather than the whole subclause from D1.0
           1. 10.26.3 was added to the draft 2.0.
        6. Proposed Resolution: REVISED (MAC: 2019-08-21 21:16:27Z):, Change the cited text to “Once the block ack exchange has been setup, QoS Data frames are transferred in A-MPDUs and acknowledged using the procedure described in 10.26.3 ().
        7. No objection – Mark Ready for Motion
     3. CID 2477 (MAC)
        1. Review Comment

Proposed Resolution: REVISED (MAC: 2019-08-21 21:32:10Z) - The use of PIFS is required before transmission of an RTS with a bandwidth signalling TA, to allow determining the CCA conditions on the non-primary channels.

TGmd Editor: at 1805.21(D2.0), modify as shown:

(or RIFS, if the conditions defined in 10.3.2.3.2

(RIFS) are met, or PIFS, if the frame contains a bandwidth signalling TA)

* + - 1. No objection Mark Ready for Motion
    1. CID 2478 (MAC)
       1. Review Comment
       2. Proposed Resolution: ACCEPTED (MAC: 2019-08-21 21:33:19Z)
       3. No objection – Mark Ready for Motion
    2. CID 2481 (MAC)
       1. Review Comment
       2. Proposed Resolution: ACCEPTED (MAC: 2019-08-21 21:38:37Z)
       3. No objection – Mark Ready for Motion
  1. Review Tomorrow’s agenda – see 11-19/1367r8
     1. <https://mentor.ieee.org/802.11/dcn/19/11-19-1367-08-000m-2019-july-aug-sept-tgmd-teleconference-agendas.docx>
  2. Recess at 5:33pm

1. **TGmd (REVmd) Adhoc in Toronto, Canada Thursday 22 Aug. 2019 9:00-11:45**
   1. **Welcome – Called to order at 9:02am ET by the Chair Dorothy STANLEY (HPE)**.
   2. **Attendance**:
      1. In Person:
         1. Dorothy STANLEY (HPE)
         2. Mark HAMILTON (RUCKUS/COMMSCOPE)
         3. Jon ROSDAHL (Qualcomm)
         4. Joe LEVY (Interdigital)
         5. Michael MONTEMURRO (Blackberry)
         6. Edward AU (Huawei)
      2. Call in WebEx
         1. Emily QI (Intel)
         2. Mark RISON (Samsung)
         3. Graham SMITH (SR Technologies)
   3. **Review Agenda 11-19/1367r8**
      1. <https://mentor.ieee.org/802.11/dcn/19/11-19-1367-08-000m-2019-july-aug-sept-tgmd-teleconference-agendas.docx>
      2. 2019-08-22 TGmd Ad-hoc AM1 9:00-11:45 am Eastern
2. 11-19-856 – Mark RISON (Samsung) CID 2470
3. 11-19-1195 – Menzo WENTINK CIDs
4. MAC CIDs – Mark HAMILTON (RUCKUS/COMMSCOPE)
5. Carlos CORDEIRO CIDs
   * 1. Agreed to the plan for today.
     2. Need to let Mark RISON (Samsung) post updated document.
   1. Review doc 11-19/856 Mark RISON (Samsung)
      1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0856-09-000m-resolutions-for-some-comments-on-11md-d2-0-lb236.docx>
      2. CID 2470 (GEN)
         1. Review comment history
            1. GEN: 2019-04-26 15:54:07Z - status set to: Submission Required -- Need explanation of the changes and make sure not to conflict with the changes in CID 2469. Need text change example and the possible change to field or element name changes identified.
         2. Review locations for changes
         3. Proposed Resolution: REVISED (GEN: 2019-08-22 13:11:45Z), Make the changes shown under “Proposed changes” for CID 2470 in 11-19/856r9 <<https://mentor.ieee.org/802.11/dcn/19/11-19-0856-09-000m-resolutions-for-some-comments-on-11md-d2-0-lb236.docx>>, which resolves the comment in the direction suggested by the commentor.
         4. No objection – Mark Ready for Motion
      3. CID 2316 (GEN)
         1. Review comment
         2. Discussion on what is the Beacon Interval.
         3. From the submission:

Having said all this, there is a definition of “beacon interval”:

**beacon interval:** The time interval between two consecutive target beacon transmission times (TBTTs).

so anything that is referring to either the time between beacons on the air or the time to the next beacon or TBTT is using the wrong terminology.

Consider the following timeline, for a BSS where the value in the Beacon Interval field of beacons is 100, representing 102.4 ms:



Is “a beacon interval”:

1) A to D only (anything from one TBTT to the next)

2) A to D, or C to F, etc. (anything 102.4 ms long)

3) B to E only (anything from the start of one beacon to the next)

4) B to D only (anything from the start of a beacon to the next TBTT)

5) Some combination of the above

6) Something else

* + - 1. More discussion on the Beacon Interval. Some said it is not 2, other said it is 2. The Beacon interval can be described as just an interval of time, but when the time starts is debatable. The TBTT to TBTT slot is a beacon interval, and other times it is the time between beacons. Some people use these two intervals interchangeably. The Standard is not clear on which interpretation or consistent on the usage. Before we can address the ambiguities, we need to have an agreed upon definition of Beacon Interval and maybe a set of definitions for how it is used.
      2. Given the discussion, reviewed the proposed changes.
      3. More discussion on what the interval length vs the time interval. Is it tied to a particular start and end point in time?
      4. Note that the time between B to F is not equal to the TBTT interval.
      5. There is a lot of work to do once we determine a definition, and then we would have to make the consistent change to the draft to ensure we have a clear and consistent use of “beacon interval”.
      6. Review the proposed changes.
         1. 1373.49 change - concern was expressed.
         2. 1379.30 change – concern was expressed. The sentence of concern should not be in clause 9, but it should be expressed somewhere. – delete the sentence.

2086.58 change – reviewed the change – make the change.

* + - 1. Proposed resolution: Make the changes shown in green under “Proposed changes” for CID 2316 in 11-19/856 <<https://mentor.ieee.org/802.11/dcn/19/11-19-0856-09-000m-resolutions-for-some-comments-on-11md-d2-0-lb236.docx>> which make some changes in the direction suggested by the commenter.
      2. No objection – Mark Ready for Motion
  1. **Review doc 11-19/551r12** MAC CIDS – Mark HAMILTON (RUCKUS/COMMSCOPE)
     1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0551-12-000m-revmd-lb236-comments-assigned-to-hamilton.docx>
     2. CID 2486 (MAC)
        1. Review comment
        2. The Style Guide says that the field names should be capitalized. It does not make a distinction of helper words or other words in the field name.
        3. For the Change “Link Adaptation per Normal Control Response Capable" to "Link Adaptation Per Normal Control Response Capable"   
           throughout. – there are only 4 instances, so make the change.
        4. Reviewed the other type of requested changes as indicated in the comment. There was consensus to make the change.
        5. There are some changes that have been made from D2.0 to D2.3, so we will need to ensure the resolution has the correct reference noted.
        6. Proposed Resolution: REVISED (MAC: 2019-08-22 14:35:06Z):

In D2.0:

- Change

"Link Adaptation per Normal Control Response Capable"

to

"Link Adaptation Per Normal Control Response Capable"

throughout.

- In Table 9-301 change

"normal control frame"

to

"a Control frame that is not an NDP CMAC frame".

- In 10.3.2.17 change

"normal control response frame"

to

"control response frame that is not an NDP CMAC frame".

- In 10.33.3 change

"normal control response frames"

to

"control response frames that are not NDP CMAC frames"

and

"normal control frame" (or “normal Control frame”)

to

"a Control frame that is not an NDP CMAC frame

* + - 1. No objection – Mark Ready for Motion
    1. CID 2495 (MAC)
       1. Review Comment
       2. Discussion on the use of DMSID vs DMSID field usage.
       3. Discussion on the style guide of field and the 1.4 usage in the standard.
       4. Identified two locations where the “field” should not be used.
       5. Need to delete the “that of the” (see page 7).
       6. Proposed Resolution: Revised. In 9.4.2.88, P1244L59 (D2.3), change “The DMS field is assigned” to “The DMSID is assigned”. Same thing at P1244L63.

In 11.22.16.2, delete the phrase “that of” in 5 occurrences. (All occurrences are in a phrase like “DMSID field set to that of the DMSID” such-and-such.)

At P2385L56 (D2.3), change “the DMSID shall be set to that of the DMS Descriptor” to “the DMSID field shall be set to the DMSID carried in the DMS Descriptor”. Same thing at P2385L59.

* + - 1. Mark Ready for Motion
    1. CID 2502 and 2503 (MAC)
       1. Review Comments.
       2. Proposed resolution: Accepted
       3. No objection – Mark Ready for Motion
    2. CID 2513 (MAC)
       1. Review Comment
       2. Proposed Resolution: Accepted
       3. No objection - Mark Ready for Motion
    3. CID 2617 (MAC)
       1. Review Comment
       2. Proposed Resolution: REVISED; At the cited location, delete "A STA that implements BSS transition management has dot11BSSTransitionImplemented equal to true."

At the cited location, change

"When dot11BSSTransitionImplemented is true, dot11WirelessManagementImplemented shall be true."

to

"When dot11BSSTransitionActivated is true, dot11WirelessManagementImplemented shall be true."

Deprecate dot11BSSTransitionImplemented in the MIB:

- Change its STATUS to "Deprecated".

- Insert a new first line in the DESCRIPTION: "Deprecated as unnecessary; dot11BSSTransitionActivated is used instead".

- For any reference to the variable in any GROUPs, re-instate this reference:

---- Change the group's STATUS to "Deprecated".

---- In the DESCRIPTION, insert a new first line: "Superseded by YYYY." (Note that "YYYY" is the new GROUP name.)

---- Make a copy of the group, set its STATUS to "Current" and increment (or add) a number after the name of the group name (e.g. dot11SMTbase11 -> dot11SMTbase12).

---- Remove dot11BSSTransitionImplemented in the new group.

---- For each reference to the group from a compliance statement, update it to refer to the new group.

Note that this is the same resolution for CID 2618.

* + - 1. No objection – Mark Ready for Motion
  1. **Review doc 11-19/1195r5** Menzo WENTINK (Qualcomm) presented by Dorothy
     1. <https://mentor.ieee.org/802.11/dcn/19/11-19-1195-05-000m-assorted-crs.docx>
     2. CID 2520 (MAC)
        1. Review Comment
        2. Similar to CID 2429 also in this document.
           1. CID 2429 addresses the “short” and “long” counters.
           2. We renamed the short counter and deleted the long counter.
        3. Discussion on “QSRC” which is defined as “QoS STA retry Count”
           1. See CID 2431.
        4. Discussion on how many counters are being referenced. Frame Retry Count, QOS STA retry Count, or more?
        5. Needs to be resolved along with CIDs 2429, Also see 2431 (2431 changed from counter to count).
     3. CID 2521 (MAC)
        1. Review comment
        2. Proposed Resolution: Rejected -

The proposal effectively removes the frame retry counters, and ties frame discards only to the lifetime.

The effect of retry count based frame discards appears to be that in the presence of frequent unsuccessful frame transmissions frames get discarded before their lifetime expires.

Discarding frames before the end of their lifetime, for example in the presence of excessive interference, may provide feedback to higher layers to throttle their output. At least for TCP it would have that effect, but for RTP/RTCP it might have the same effect.

Therefore, it seems that frame retry count based discards may have a positive effect and should not be removed.

* + - 1. Discussion about the proposed rejection.
      2. By having a per-packet retry mechanism stops us from flooding the network with retries until the lifetime limits are reached (e.g. 5 sec TCP). Lifetime of Packets? TU (half a second). Half a second is too long to stay in a retry queue. Concern with implementations waiting too long.
      3. Discussion on the lifetime value and expectations.
      4. Some implementations have AC retry and AC lifetime limits and so we should not make a change to make them non-compliant.
      5. Updated Proposed Resolution: Rejected

The CRC discussed the proposed change and did not come to consensus to make the change. Concerns raised in changing the requirements as proposed by the commenter include:

Having a per-packet retry mechanism stops us from flooding with retries until lifetime limits are reached (e.g. 5sec TCP). Lifetime of packets? TU (half a second). Half a second is too long to stay in a retry queue. Concern with implementations waiting too long. Some implementations have per-AC packet and lifetime limits as per the standard today. Makes existing implementations non-compliant.

Having per packet retry mechanism in the standard enables requirements to be uniform across vendors. Creates openings to flooding the medium.

* + - 1. Mark Ready for Motion.
    1. CID 2549 (MAC)
       1. Review Comment
       2. Proposed Resolution: Rejected - resetting CW to CWmin provides a periodic exit out of a very large CW. This mitigates at least somewhat the adverse effects of exponential backoff, wherein a successful transmitter keeps winning the medium successively at the expense of transmitters with a high CW. Sort of like a temporary capture effect.

(Note that the access probabilities across nodes will be the same on average, but this capture effect is an important source of jitter in exponential backoff.)

* + - 1. Mark Ready for Motion
    1. CID 2610 (MAC)
       1. Review Comment
       2. Proposed Resolution: Accepted.
       3. Then when we were reviewing the draft standard, we noted a similar problem on the next paragraph.
       4. Updated Proposed Resolution: REVISED (MAC: 2019-08-22 15:27:21Z) - Make the change indicated by the commenter at the cited location (1805.6), AND also at 1805.9.
       5. No objection – Mark Ready for Motion
    2. CID 2664 (MAC)
       1. Similar to CID 2429 – need to have more work on it with the other set in CID 2520.
    3. CID 2666 (MAC)
       1. Review Comment
       2. Discussion on the NAV setting and invoking EIFS. Discussed different cases where a large NAV is set, the EIFS is used at the end of the NAV.
       3. Discussion on the scenario of when the NAV is set –
       4. The sentence was introduced in 2012 and included an example, then in 2016 the example was removed.
       5. LSIG-TXOP was included in the example, and it has been removed, so this case may not occur now.
       6. We may want to delete this because it was a feature of LSIG-TXOP.
       7. Proposed Resolution: Revised - agree with the comment.

At 1700.49, delete

"EIFS shall not be invoked if the NAV is updated by the frame that would have caused an EIFS."

* + - 1. ACTION AI: Jon to contact TGax Chair about adding a statement about EIFS not being invoked if the NAV is updated by a frame that would have caused an EIFS See CID 2666 for more detail.
      2. No objection – Mark Ready for Motion
  1. Review status of submissions and what to review this afternoon.
  2. Recess 11:52am

1. **TGmd (REVmd) Adhoc in Toronto, Canada Thursday 22 Aug. 2019 13:00-15:00**
   1. **Welcome – Called to order at 1:02am ET by the Chair Dorothy STANLEY (HPE)**.
   2. **Attendance**:
      1. In Person:
         1. Dorothy STANLEY (HPE)
         2. Mark HAMILTON (RUCKUS/COMMSCOPE)
         3. Jon ROSDAHL (Qualcomm)
         4. Joe LEVY (Interdigital)
         5. Michael MONTEMURRO (Blackberry)
         6. Edward AU (Huawei)
      2. Call in WebEx
         1. Emily QI (Intel)
         2. Mark RISON (Samsung)
   3. **Review Agenda 11-19/1367r8**
      1. <https://mentor.ieee.org/802.11/dcn/19/11-19-1367-08-000m-2019-july-aug-sept-tgmd-teleconference-agendas.docx>
      2. 2019-08-22 TGmd Ad-hoc PM1 13:00-15:00 Eastern
2. CID 2052, 2021, 2067 – Edward AU (Huawei)
3. 11-19-1195 – Menzo WENTINK CIDs
4. MAC CIDs – Mark HAMILTON (RUCKUS/COMMSCOPE)
   * 1. Move Mark HAMILTON to PM2 as we do not believe we will get to it.
   1. **Review doc 11-19/1452r1** Edward AU (Huawei)
      1. <https://mentor.ieee.org/802.11/dcn/19/11-19-1452-01-000m-resolution-for-cid-2052.docx>
      2. CID 2052 (PHY)
         1. Review Comment
         2. Discussion on if the proposed rejection rational is sufficient or not.
         3. Question on how table E-6 addresses the definition of Chinese 60GHz set.
         4. Proposed Resolution: Rejected No, the CDMG BSS cannot operate in Europe of the US as of now. While it is true that Chinese 60GHz band is contained with other regulatory domain bands, the CDMG PHY supports a 1.08 GHz channel width in comparison with the DMG PHY in Clause 20 (Directional multi-gigabit (DMG) PHY specification), which supports a 2.16 GHz channel width.
         5. Argument on the reject rationale.
         6. Change to include insufficient detail reason.
         7. Updated Proposed Resolution: REJECTED (PHY: 2019-08-22 17:12:33Z) - No, the CDMG BSS cannot operate in Europe of the US as of now. While it is true that Chinese 60GHz band is contained with other regulatory domain bands, the CDMG PHY supports a 1.08 GHz channel width in comparison with the DMG PHY in Clause 20 (Directional multi-gigabit (DMG) PHY specification), which supports a 2.16 GHz channel width.

The comment fails to identify changes in sufficient detail so that the specific wording of the changes that will satisfy the commenter can be determined.

* + - 1. Mark Ready for Motion
  1. **Review Doc 11-19/1453r0** Edward AU (Huawei)
     1. <https://mentor.ieee.org/802.11/dcn/19/11-19-1453-00-000m-resolution-for-cid-2067.docx>
     2. CID 2067 (PHY)
        1. Review Comment
        2. Proposed Resolution: REVISED (PHY: 2019-08-22 17:15:52Z)

At 3468.64, add “The STF and CE fields at the end of the BRP PPDU have the same structure as those at the beginning of the PPDU as defined in 24.3.6 (Common preamble).” after the following sentence “If the Enhanced Beam Tracking Request field in the PHY header is equal to 1, each BRP PPDU(#1379) is composed of an STF, a CE field, and a data field followed by a training field containing an AGC training field, a receiver training field (TRN-R/T), an STF, and a CE field.”

* + - 1. No Objection - Mark Ready for Motion
  1. **Review CID 2021 (PHY**) Michael MONTEMURRO (Blackberry)
     1. Review Comment
     2. Thanks to Edward AU (Huawei) for some of the homework.
     3. Proposed Changes that makes “CDMG lower power SC Mode” obsolete.
     4. DMG has a section in PIFs that was not updated for its obsolete, we will add that to this resolution.
     5. Proposed Resolution: REVISED (PHY: 2019-08-22 17:22:19Z) - Make the following changes in the direction of the proposed resolution (relative to D2.2):

At 3432.21, in Table 24-1 in the Value column, change: "The value is an index to Table 24-11 (CDMG low-power SC mode modulation and coding schemes(11aj))."

to

"The value is an index to Table 24-11 (CDMG low-power SC mode modulation and coding schemes(11aj)). The CDMG low-power SC mode is obsolete. Support for this mechanism might be removed in a later revision of the standard."

At 3449.62, in Clause 24.6.1, insert the following paragraph at the beginning of the clause: "The CDMG low-power SC mode is obsolete. Support for this mechanism might be removed in a later revision of the standard."

At 3777.49, in Table B.30.2, in the CDMG-P2.3 row, in the Protocol Capability column, add the following paragraph under the entry: "The CDMG low-power SC mode is obsolete. Support for this mechanism might be removed in a later revision of the standard."

At 3778.8, in Table B.30.2, in the CDMG-P2.4.3 row, in the Protocol Capability column, add the following paragraph under the entry: "The CDMG low-power SC mode is obsolete. Support for this mechanism might be removed in a later revision of the standard."

Also, the DMG low-power SC mode has not been marked obsolete in the PICS:

At 3731.54, in Table B.24.2, in the DMG-P2.3 row, in the Protocol Capability column, add the following paragraph under the entry: "The DMG low-power SC mode is obsolete. Support for this mechanism might be removed in a later revision of the standard."

* + 1. No objection – Mark Ready for Motion.
  1. **Review doc 11-19/1195r5** Menzo Wentink (Qualcomm) by Dorothy STANLEY (HPE)
     1. <https://mentor.ieee.org/802.11/dcn/19/11-19-1195-05-000m-assorted-crs.docx>
     2. CID 2567 (GEN)
        1. Review Comment
        2. Review context – Comment did not give actual reference.
           1. P2083 10.50 Sync Frame Operation
        3. Similar to CID 2406 which makes changes only in 11.6.
        4. There are a lot of instances of “sync frame” to convert to “sync PPDU”.
        5. Discussion on if “sync frame” is defined well enough to determine what it is. There is a “should use” NDP CTS frame” for the “sync frame”.
        6. There seems to be a lot of work needed to clarify the procedure.
        7. NDP CTS frame use is only a “should”.
        8. We may find another location that it may be defined as the NDP CTS frame explicitly, then we could change to PPDU, but where we cannot, the change should not be made.
        9. Proposed resolution: Rejected. The proposed change may not be true in all cases. The statement (See 2084.48 (D2.3)), “The UL-Sync capable AP should use (M101) an NDP CTS frame as a sync frame.” is a “should” only, thus making the proposed change possibly invalid.
        10. Mark Ready for Motion
     3. CID 2398 (GEN)
        1. Review Comment
        2. Proposed Resolution: ACCEPTED (GEN: 2019-08-22 18:01:21Z)
        3. No objection – Mark Ready for Motion
     4. CID 2349 (GEN)
        1. Review Comment.
        2. Discussion on the acceptance of NDP frame should be NDP PPDU.
        3. The order of the application of the Editors edits will affect the standard.
        4. Need to apply CID 2349 first and then the change for CID 2398.
        5. There are examples of NDP Frame that are not to be used for CMAC PPDU.
        6. There is also a concern for the overload of CMAC – 1 it is used in security and Carrying MAC used by S1G and CDMG
        7. Proposed Resolution: REJECTED (GEN: 2019-08-22 18:14:42Z) The global change of “NDP frame” to “NDP CMAC frame” would make the text at 1806.53 (D2.3) incorrect. Each location needs to be analysed to evaluate the impact of the change. A submission is required.
        8. No objection – Mark Ready for Motion
     5. CID 2348 (GEN)
        1. Review Comment
        2. The problem is that there is a noun missing wiht this proposed change.
        3. NDP stands for NULL data PPDU
        4. A VHT NDP announcement is a normal MAC frame that announces an NDP PPDU
        5. Question on if a VHT NDP has an RXVector? Yes, all PPDUs have an RXVector.
        6. Proposed Resolution: ACCEPTED (GEN: 2019-08-22 18:20:54Z)
        7. No Objection – Mark Ready for Motion
     6. CID 2305 (GEN)
        1. Review Comment
        2. Search for NDP PPDU – there were about 29 instances.
        3. Proposed Resolution: ACCEPTED (GEN: 2019-08-22 18:26:29Z)
        4. No objection – Mark Ready for Motion
     7. CID 2580 (GEN)
        1. Review Comment
        2. Proposed Resolution: ACCEPTED (GEN: 2019-08-22 18:28:23Z)
        3. No objection – Mark Ready for Motion
     8. List of CIDS in the document that are not complete:
        1. CID 2429 (and 2520 and 2664)
           1. Add to 8-27 Telecon Tuesday 3pm for review
        2. CID 2394 – Ready for motion
        3. CID 2432 – Resolved (Motion 123)
        4. CID 2099 – More work – Ask Carlos for help
        5. CID 2100 – More work – Ask Carlos for help
  2. **Database check for assignments for Menzo**
     1. GEN -= 0
     2. MAC CIDs= 6 = 2520, 2429, 2664), 2099, 2100, 2186
     3. PHY CIDs = 5 = 2284, 2298, 2244, 2186, 2712
        1. CID 2284 (PHY)
           1. Review Comment
           2. Reject for Insufficient Detail.
           3. Commenter will not have time to propose resolution.
           4. Proposed Resolution: REJECTED (PHY: 2019-08-22 18:38:31Z) The comment fails to identify changes in sufficient detail so that the specific wording of the changes that will satisfy the commenter can be determined.
           5. Mark Ready for Motion
        2. CID 2298 (PHY)
           1. Review comment
           2. CID 2310 and CID 2309 are similar
           3. Review the changes made previously
           4. Proposed resolution: REVISED (PHY: 2019-08-22 18:46:52Z) - Incorporate the changes in doc 11-19/656r5 <https://mentor.ieee.org/802.11/dcn/19/11-19-0656-05-000m-proposed-comment-resolutions-2309-2310.doc> which addresses the changes in the direction specified by the commenter.

Note to the editor: this the same resolution as CIDs 2309, 2310.

* + - 1. CID 2244 (PHY)
         1. Review Comment
         2. Need to create the language for marking these obsolete. There is a method to marking the set obsolete, and the editor has a set of instructions for making the deprecation possible.
         3. Mark this CID rejected
         4. Proposed Resolution: REJECTED (PHY: 2019-08-22 18:49:29Z) The comment fails to identify changes in sufficient detail so that the specific wording of the changes that will satisfy the commenter can be determined.
         5. Mark Ready for Motion
      2. CID 2186 (PHY)
         1. Need to allocate time on a teleconference or to Sept Interim.
         2. This was originally a proposal from Sean COFFEY and then Menzo WENTINK was assigned to the CID.

See doc 11-19/0181r0.

Move to Sept Interim - Monday PM1 –

ACTION ITEM: Michael MONTEMURRO (Blackberry) to see if they are available for Sept 3 Telecon.

* + - 1. CID 2712 (PHY)
         1. Review Comment
         2. CID 2177 was in the same document
         3. Doc 11-19/0857r0.
         4. Proposed Resolution was made in May at the Atlanta Interim:
         5. REVISED (PHY: 2019-05-16 15:23:21Z). The commenter is correct that Equations (17-6) and (19-8) are not identical. While commenter’s option 2 is a valid approach, updating mathematical equations for PHY should be done with caution and should be avoided if possible. Note that 19.3.10.3.3 has all the necessary information to clearly define the L-STF waveform on its own. Hence, the proposal is to delete the sentence with the phrase “identical”, and instead add a NOTE to inform readers that L-STF sequence of HT-mixed format is essentially the same as that of 11a, except for the scaling difference. Instruction to Editor: Implement the text updates for CID 2712 in 11-19/0857r0 < https://mentor.ieee.org/802.11/dcn/19/11-19-0857-00-000m-lb236-phy-cr.docx>.
      2. Mark ready for Motion
  1. **Recess at 3:02pm**

1. **TGmd (REVmd) Adhoc in Toronto, Canada Thursday 22 Aug. 2019 15:30-17:30**
   1. **Welcome – Called to order at 3:31pm ET by the Chair Dorothy STANLEY (HPE)**.
   2. **Attendance**:
      1. In Person:
         1. Dorothy STANLEY (HPE)
         2. Mark HAMILTON (Ruckus/CommScope)
         3. Jon ROSDAHL (Qualcomm)
         4. Joe LEVY (Interdigital)
         5. Michael MONTEMURRO (Blackberry)
         6. Edward AU (Huawei)
      2. Call in WebEx
         1. Emily QI (Intel)
         2. Mark RISON (Samsung)
         3. Ganesh Venkatesan (Intel Corporation)
   3. **Review Agenda 11-19/1367r8**
      1. <https://mentor.ieee.org/802.11/dcn/19/11-19-1367-08-000m-2019-july-aug-sept-tgmd-teleconference-agendas.docx>
      2. Updated PM2 Agenda:

n. 2019-08-22 TGmd Ad-hoc PM2 15:30-17:30 Eastern

i. 11-19-551r12 - MAC CIDs 2556, 2581, 2566, 2562– Mark HAMILTON (RUCKUS/COMMSCOPE)

ii. 11-19-660 CID 2115 – Ganesh VENKATESAN

iii. Carlos CORDEIRO 11-19-0841 - CIDs – 2638, 2103, 2102, 2098, 2093, 2084 [+13 more]

iv. Review of remaining CIDs – insufficient detail

v. Adjourn

* + 1. No objection to the updated agenda
  1. **Review doc 11-19/055r13** Mark HAMILTON (RUCKUS/COMMSCOPE)
     1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0551-13-000m-revmd-lb236-comments-assigned-to-hamilton.docx>
     2. CID 2556 (MAC)
        1. Review Comment
        2. Proposed Resolution: Accept.
        3. No objection – Mark Ready for Motion
     3. CID 2562 (MAC)
        1. Review Comment
        2. Discussion on when encryption or tunnelling happens.
        3. OTC data is not encrypted.
        4. ACTION ITEM: Mark HAMILTON - Send a note to Carlos or Jouni.
     4. CID 2581 (MAC)
        1. Review Comment
        2. Proposed Resolution: Revised: Add "contains" after "that" in the cited text at the referenced location. Delete “Request” in “Neighbor Report Request element”.
        3. No objection – Mark Ready for Motion
     5. CID 2566 (MAC)
        1. Review Comment
        2. Discussion on possible Resolution: Revised: add “non-AP” before “STA” in the first sentence (2 occurrences).
        3. Change second “the STA” -> “it”.
        4. Primarily an editorial change.
        5. Proposed Resolution:

REVISED (MAC: 2019-08-22 20:17:47Z): At the cited location, change:

It might take a long time for a STA to change its operating mode following the transmission of the Operating

Mode Notification frame and during that time the STA might not be able to receive frames resulting in frame loss. If a non-AP STA cannot tolerate frame loss during that period it can set the Power Management subfield of the Frame Control field of the Operating Mode Notification frame to 1 to indicate that the STA has entered power save. When the non-AP STA has completed its operating mode change, it can send another frame (such as a QoS Null) with the Frame Control Power Management subfield set to 0 to indicate that the STA has exited power save.

to:

It might take a long time for a STA to change its operating mode following the transmission of the Operating

Mode Notification frame and during that time it might not be able to receive frames resulting in frame loss. If a

non-AP STA cannot tolerate frame loss during that period it can set the Power Management subfield of the Frame

Control field of the Operating Mode Notification frame to 1 to indicate that it has entered power save. When it has completed its operating mode change, it can send another frame (such as a QoS Null) with the Frame

Control Power Management subfield set to 0 to indicate that it has exited power save.

* + - 1. No objection – Mark Ready for Motion
    1. CID 2292 (MAC)
       1. Already resolved by CID 2293 (Editor)
       2. Approved in February
       3. Proposed Resolution: REVISED (MAC: 2019-08-22 20:19:37Z)At 2460.49, replace “A source REDS, a destination REDS, and an RDS can establish the types of relay operation as specified in (An example of the fast link adaptation procedure is shown in Link adaptation using the CMMG link measurement(#64)..).” with “A source REDS, a destination REDS, and an RDS can establish the types of relay operation as specified in 10.46.1.”.

At 2463.16, replace “NOTE–As described in (An example of the fast link adaptation procedure is shown in Link adaptation using the CMMG link measurement(#64)..),” with “NOTE–As described in 10.46.3.2.3,”.

At 3724.18, replace “(An example of the fast link adaptation procedure is shown in Link adaptation using the CMMG link measurement(#64)..)” with “10.46”.

Note to Editor: This is the same resolution as for CID 2293.

* + - 1. No Objection - Mark Ready for Motion
    1. CID 2296 (MAC)
       1. Similar to CID 2140.
       2. Proposed Resolution: REVISED (MAC: 2019-08-22 20:20:16Z):

At this time, WEP is obsolete and TKIP are deprecated.

Relative to D2.0

(WEP and TKIP)

At 203.35 replace "A deprecated" with "An obsolete" .

At 298.48 change "The use of WEP for confidentiality, authentication, or access control is deprecated" to "WEP is obsolete"

At 2513.28 change "The use of WEP for confidentiality, authentication, or access control is deprecated" to "WEP is obsolete"

At 3546.36, Change “Wired equivalent privacy (WEP) algorithm. This capability is deprecated (applicable only to systems that are backward compatible).” To “Wired equivalent privacy (WEP) algorithm. This capability is obsolete. Support for this mechanism might be removed in a later revision of the standard.”

At 3554.7. Add the following sentence at the end of the existing text. “This capability is deprecated (applicable only to systems that are backward compatible).”

(dual CTS)

At 1166.62 change "deprecated" to "obsolete".

At 1735.32 change “deprecated” to “obsolete”.

At 3664.18 change “deprecated” to “obsolete”.

(dual beacon)

At 1166.50 change "deprecated" to "obsolete".

Note to commenter: This resolution adds to the changes suggested by the commenter.

Note to Editor: This is the same resolution as for CID 2140.

* + - 1. No objection - Mark Ready for Motion
  1. **Review doc 11-19/660r2 -** Ganesh Venkatesan (Intel Corporation)
     1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0660-02-000m-resolution-to-cid-2115.docx>
     2. CID 2115 (MAC)
        1. Review comment
        2. Review changes from yesterday.
        3. Discussion on changes and adjustment to the wording.
        4. Proposed Resolution: Incorporate the changes in 11-19/660r3 <<https://mentor.ieee.org/802.11/dcn/19/11-19-0660-03-000m-resolution-to-cid-2115.docx>> which resolves the comment in the direction suggested by the commenter.
        5. No objection – Mark Ready for Motion
  2. **Review doc 11-19/841r0** Carlos Cordeiro (Intel)
     1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0841-00-000m-cid-resolution.docx>
     2. CID 2638 (MAC)
        1. Review Comment
        2. From the AdHoc Notes:

MAC: 2019-06-15 16:52:31Z - Discussed on May 31 telecon:

2.9.2.5 Reviewed text in 11.32.5 and considered legacy device behavior. A legacy device may or may not support OCT, but it isn’t signaled. So, agree with the comment, in general. But, deleting the text doesn’t work.

2.9.2.6 Some belief that this isn’t a problem in the field. Consider a legacy device that attempts to perform OCT with a device that doesn’t support it. Such devices have to deal with this anyway (in legacy behavior). But, under legacy behavior support for OCT was required if multi-band was indicated.

2.9.2.7 We believe this isn’t an issue in practice, as known existing implementations have already been updated to address this.

* + - 1. Review Context in D2.0
      2. The context review shows that the descriptions in the draft while different it is not a real problem.
      3. Concern with potential implementation with Multi-band in the market place.
      4. Proposed Resolution: Proposed resolution: Reject

Discussion: as discussed in https://mentor.ieee.org/802.11/dcn/18/11-18-1324-05-000m-fixes-to-multi-band-operations.docx, this was done to be able to deal with legacy devices that implement OCT and which assume that OCT is always supported. Therefore, with the decision to make this feature optional, this setting of this field had to be 0 (not 1) when it comes to indication of support. See also the first paragraph of (11.32.5 On-channel Tunneling (OCT) operation). Regarding existing implementations, believe this isn’t an issue in practice, as known existing implementations have already been updated to address this.;

* + - 1. ACTION ITEM: Dorothy will send an email to the 802.11 reflector indicating the concerns with the text cited in CID 2638.
      2. No objection – Mark Ready for Motion
  1. **Review CIDS assigned to Carlos from the database**
     1. CID 2130 (MAC)
        1. Review Comment
        2. Review Context
        3. Proposed Resolution: Accept
        4. No objection – Mark Ready for Motion
     2. CID 2103 (MAC)
        1. Review Comment
        2. Changes were applied from CID 2064 (doc 11-19/1045r1) to this same section.
        3. So, the resolution will be revised.
        4. Proposed Resolution: REVISED (MAC: 2019-08-22 20:36:37Z): Incorporate the changes in 11-19-1054r1 which resolve the comment in the direction suggested by the commenter. Note to editor: this is the same as the resolution to CID 2064.

Additionally,

Delete this sentence in P2029L35(D2.0): "BRP frames transmitted during beam tracking may be aggregated within A-MPDUs."

* + - 1. No objection - Mark Ready for Motion
    1. CID 2102 (MAC)
       1. Review Comment
       2. Review Clause 9.4.2.199 and Table 9-256.
       3. Proposed Resolution: REVISED (MAC: 2019-08-22 20:41:42Z):: Change the three instances of "as part of the channel measurement feedback" in Table 9-256 to "as part of the returned Channel Measurement element(s)"

Note to the commenter: The plural element(s) is for cases Channel Measurement IE needs ot be broken into multiple IEs because of its length). The requested change is adopted.

* + - 1. Non objection – Mark Ready for Motion
    1. CID 2098 (MAC)
       1. Review Comment
       2. The discussion seemed to agree with the commenter, but the proposed change needs some work to make it reasonable for the editor to implement.
       3. Discussion on “regularly” is not a good word to use.
       4. Mark submission required.
       5. ACTION ITEM: Carlos – Post a submission detailing the changes.
    2. CID 2093 (MAC)
       1. Review comment
       2. About 23 instances
       3. Editor said it was clear.
       4. Review the instances in context.
       5. Proposed Resolution: Accept
    3. CID 2084 (MAC)
       1. Review comment
       2. Need more work.
    4. There are 15 CIDs that remain for Carlos
       1. (13 we have not reviewed at all).
  1. **Review Teleconference schedule and agenda:**
     1. See 11-19/1367r9
  2. **Review of remaining CIDs – insufficient detail**
     1. EDITOR2– 1 CID - 2246 – Assigned to Mark HAMILTON
        1. Mark insufficient Detail
        2. If we get to it great otherwise it is marked ready for motion
     2. GEN – 6 CIDS - 2107, 2304, 2266, 2360, 2232, 2294
        1. Review all CIDs and all are marked ready for motion
     3. PHY Insufficient details: 5 CIDS: 2670, 2685, 2690, 2051, 2291
        1. CID 2670, 2051
           1. Comment is assigned to Assaf, - on schedule
        2. CID 2685
           1. Comment from Rodger MARKS– on schedule
        3. CID 2690
           1. Comment from Thomas DERHAM – on schedule
        4. CID 2291
           1. Comment is assigned to Assaf on schedule
     4. MAC has about 30 that are insufficient detail.
        1. 8-10 people are claiming to be working on them.
  3. **Thanks for those that participated with the AdHoc** – those that called in and those that attended in person.
  4. **Special Thanks** for Michael MONTEMURRO and BlackBerry for hosting the AdHoc this week in Toronto.
  5. **Adjourn – 5:15pm**

**References:**

1. **Tuesday 20 Aug. 2019 9:00-12:30:**
2. <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0180-05-00EC-ieee-802-participation-slide.pptx>
3. <https://mentor.ieee.org/802.11/dcn/19/11-19-1367-05-000m-2019-july-aug-sept-tgmd-teleconference-agendas.docx>
4. <https://mentor.ieee.org/802.11/dcn/19/11-19-0429-02-000m-suggested-resolution-to-mesh-comments.docx>
5. <https://mentor.ieee.org/802.11/dcn/19/11-19-0429-03-000m-suggested-resolution-to-mesh-comments.docx>
6. <https://mentor.ieee.org/802.11/dcn/19/11-19-0856-08-000m-resolutions-for-some-comments-on-11md-d2-0-lb236.docx>
7. <https://mentor.ieee.org/802.11/dcn/19/11-19-0856-09-000m-resolutions-for-some-comments-on-11md-d2-0-lb236.docx>
8. **Tuesday 20 Aug. 2019 13:00-15:00:**
9. <https://mentor.ieee.org/802.11/dcn/19/11-19-1367-06-000m-2019-july-aug-sept-tgmd-teleconference-agendas.docx>
10. <https://mentor.ieee.org/802.11/dcn/19/11-19-0796-01-000m-comment-resolutions-for-d2-0-operating-classes-comments.docx>
11. <https://mentor.ieee.org/802.11/dcn/19/11-19-0796-02-000m-comment-resolutions-for-d2-0-operating-classes-comments.docx>
12. <https://mentor.ieee.org/802.11/dcn/19/11-19-0720-04-000m-individually-addressed-probes-cid2216.docx>
13. <https://mentor.ieee.org/802.11/dcn/19/11-19-0721-04-000m-multiple-bssid-support-in-rnr.docx>
14. **Tuesday 20 Aug. 2019 15:30-17:30:**
15. <https://mentor.ieee.org/802.11/dcn/19/11-19-1367-06-000m-2019-july-aug-sept-tgmd-teleconference-agendas.docx>
16. <https://mentor.ieee.org/802.11/dcn/19/11-19-0586-06-000m-pmksa-caching-and-mac-randomization.docx>
17. <https://mentor.ieee.org/802.11/dcn/19/11-19-0286-08-000m-mac-address-policy-anqp-and-beacon-element.docx>
18. <https://mentor.ieee.org/802.11/dcn/19/11-19-0610-02-000m-lb236-proposed-resolutions-for-cid-2234.doc>
19. <https://mentor.ieee.org/802.11/dcn/19/11-19-0610-03-000m-lb236-proposed-resolutions-for-cid-2234.doc>
20. <https://mentor.ieee.org/802.11/dcn/19/11-19-1444-00-000m-proposed-changes-re-ieee-sa-mec-comment-related-to-draft-2-1-of-ieee-p802-11revmd.docx>
21. **Wednesday 21 Aug. 2019 9:00-11:30:**
22. <https://mentor.ieee.org/802.11/dcn/19/11-19-1367-07-000m-2019-july-aug-sept-tgmd-teleconference-agendas.docx>
23. <https://mentor.ieee.org/802.11/dcn/19/11-19-1443-00-000m-resolution-for-cid-2222.docx>
24. <https://mentor.ieee.org/802.11/dcn/19/11-19-1286-01-000m-lb236-some-xdmg-phy-cids.docx>
25. <https://mentor.ieee.org/802.11/dcn/19/11-19-1034-03-000m-proposed-resolutions-for-11aj-related-comments-in-revmd-lb236.doc>
26. <https://mentor.ieee.org/802.11/dcn/19/11-19-1441-01-000m-lb236-resolution-to-cid2291.docx>
27. <https://mentor.ieee.org/802.11/dcn/19/11-19-1396-00-000m-resolution-for-cid-2273.docx>
28. <https://mentor.ieee.org/802.11/dcn/19/11-19-1396-01-000m-resolution-for-cid-2273.docx>
29. **Wednesday 21 Aug. 2019 13:00-15:00:**
30. <https://mentor.ieee.org/802.11/dcn/19/11-19-1367-07-000m-2019-july-aug-sept-tgmd-teleconference-agendas.docx>
31. <https://mentor.ieee.org/802.11/dcn/19/11-19-0551-10-000m-revmd-lb236-comments-assigned-to-hamilton.docx>
32. <https://mentor.ieee.org/802.11/dcn/19/11-19-1173-11-000m-pwe-in-constant-time.docx>
33. <https://mentor.ieee.org/802.11/dcn/19/11-19-0551-11-000m-revmd-lb236-comments-assigned-to-hamilton.docx>
34. **Wednesday 21 Aug. 2019 13:00-15:00**
35. <https://mentor.ieee.org/802.11/dcn/19/11-19-1367-07-000m-2019-july-aug-sept-tgmd-teleconference-agendas.docx>
36. <https://mentor.ieee.org/802.11/dcn/19/11-19-1452-00-000m-resolution-for-cid-2052.docx>
37. <https://mentor.ieee.org/802.11/dcn/19/11-19-0551-11-000m-revmd-lb236-comments-assigned-to-hamilton.docx>
38. <https://mentor.ieee.org/802.11/dcn/19/11-19-0660-01-000m-resolution-to-cid-2115.docx>
39. <https://mentor.ieee.org/802.11/dcn/19/11-19-1195-04-000m-assorted-crs.docx>
40. <https://mentor.ieee.org/802.11/dcn/19/11-19-1367-08-000m-2019-july-aug-sept-tgmd-teleconference-agendas.docx>
41. **Thursday 22 Aug. 2019 9:00-11:45:**
42. <https://mentor.ieee.org/802.11/dcn/19/11-19-1367-08-000m-2019-july-aug-sept-tgmd-teleconference-agendas.docx>
43. <https://mentor.ieee.org/802.11/dcn/19/11-19-0856-09-000m-resolutions-for-some-comments-on-11md-d2-0-lb236.docx>
44. <https://mentor.ieee.org/802.11/dcn/19/11-19-0551-12-000m-revmd-lb236-comments-assigned-to-hamilton.docx>
45. <https://mentor.ieee.org/802.11/dcn/19/11-19-1195-05-000m-assorted-crs.docx>
46. **Thursday 22 Aug. 2019 13:00-15:00:**
47. <https://mentor.ieee.org/802.11/dcn/19/11-19-1367-08-000m-2019-july-aug-sept-tgmd-teleconference-agendas.docx>
48. <https://mentor.ieee.org/802.11/dcn/19/11-19-1452-01-000m-resolution-for-cid-2052.docx>
49. <https://mentor.ieee.org/802.11/dcn/19/11-19-1453-00-000m-resolution-for-cid-2067.docx>
50. <https://mentor.ieee.org/802.11/dcn/19/11-19-1195-05-000m-assorted-crs.docx>
51. **Thursday 22 Aug. 2019 15:30-17:30:**
52. <https://mentor.ieee.org/802.11/dcn/19/11-19-1367-08-000m-2019-july-aug-sept-tgmd-teleconference-agendas.docx>
53. <https://mentor.ieee.org/802.11/dcn/19/11-19-0551-13-000m-revmd-lb236-comments-assigned-to-hamilton.docx>
54. <https://mentor.ieee.org/802.11/dcn/19/11-19-0660-02-000m-resolution-to-cid-2115.docx>
55. <https://mentor.ieee.org/802.11/dcn/19/11-19-0841-00-000m-cid-resolution.docx>