IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Minutes for REVmd Telecon in Sept and Oct | | | | |
| Date: 2018-10-12 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Jon Rosdahl | Qualcomm Technologies, Inc. | 10871 N 5750 W  Highland, UT 84003 | +1-801-492-4023 | jrosdahl@ieee.org |
| Michael Montemurro | BlackBerry Ltd | 4701 Tahoe Blvd, Mississauga, ON CANADA L4W 0B4 | +1-289-261-4183 | [mmontemurro@blackberry.com](mailto:mmontemurro@blackberry.com) |

Abstract

This document contains the minutes for the September, October and November 2018 TGmd teleconferences (September 28, October 5, 12, 15, November 2).

R0: Sept 28, 2018

R1: Oct 5, 2018

R2: Oct 12, 2018

As approved at the recent 802.11 WG September 2018 session, TGmd will hold teleconferences:

Fridays September 28, October 5, 12, 19, and Nov 2, 2018 at 10am Eastern for 2 hours.

With over a 10-day notice, the 19th was changed to 15th.

We’ll use the [join.me](http://join.me) bridge:  <https://join.me/ieee802.11>,

Teleconferences are subject to applicable policies and procedures, see below.

•       IEEE Code of Ethics

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

•       IEEE Standards Association (IEEE-SA) Affiliation FAQ

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

•       Antitrust and Competition Policy

–       <https://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/antitrust.pdf>

•       IEEE-SA Patent Policy

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

–       <https://standards.ieee.org/about/sasb/patcom/>

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

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

•       IEEE 802 LMSC Chair's Guidelines (Approved 13 Jul 2018)

–       <https://mentor.ieee.org/802-ec/dcn/17/ec-17-0120-27-0PNP-ieee-802-lmsc-chairs-guidelines.pdf>

•       Participation in IEEE 802 Meetings

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

•       IEEE 802.11 WG OM: (Approved 10 Nov 2017)

–       <https://mentor.ieee.org/802.11/dcn/14/11-14-0629-22-0000-802-11-operations-manual.docx>

1. **802.11md - REVmd – Telecon, Friday 28 September 2018, 10:00- 12:00 ET**
   1. **Called to order** 10:03am ET by the TG Chair, Dorothy STANLEY (HPE)
   2. **Attendance**:
      1. Dorothy STANLEY (HPE)
      2. Emily QI (Intel)
      3. Jon ROSDAHL (Qualcomm)
      4. Graham SMITH (SR Technologies)
      5. Mark HAMILTON (Ruckus/ARRIS)
      6. Menzo WENTINK (Qualcomm)
      7. Sean COFFEY (RealTek)
      8. Jerome Henry (Cisco)
      9. Mark RISON (Samsung)
      10. Michael MONTEMURRO (BlackBerry)
      11. Edward AU (Huawei)
   3. **Review Patent Policy**
      1. No issues noted
   4. **Review Participation slide**
   5. **Review agenda** – 11-18/1694r0:
      1. <https://mentor.ieee.org/802.11/dcn/18/11-18-1694-00-000m-2018-sept-oct-nov-teleconference-agendas.docx>
2. Call to order, attendance and patent policy
   1. **Patent Policy: Ways to inform IEEE:**
      1. Cause an LOA to be submitted to the IEEE-SA ([patcom@ieee.org](mailto:patcom@ieee.org)); or
      2. Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible; or
      3. Speak up now and respond to this Call for Potentially Essential Patents

If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance, please respond at this time by providing relevant information to the WG Chair

* 1. **Participation slide:** [https://mentor.ieee.org/802-ec/dcn/16/ec-16-0180-05-00EC-ieee-802-participation-slide.pp](https://mentor.ieee.org/802-ec/dcn/16/ec-16-0180-05-00EC-ieee-802-participation-slide.pptx)2.

1. Editor report – Emily QI
2. Comment resolution and presentations
   1. **2018-9-28** 
      1. PHY CIDs 1002, 1003 (Menzo), 1329 (Mark Hamilton); Also CID 1272 (Chris Hansen), 1284 (revisit from Waikoloa), 1611, 1612, 1613 (Yusuke Asai)
      2. EDITOR2 CID 1095
      3. EDITOR CID 1379
      4. CIDs 1415/1526 (ack policy) and 1379 ("packet") in 11-18-1306 (Mark RISON)
      5. Additional Available CIDs
   2. **2018-10-05**
      1. GEN CIDs 1413, 1417, 1432, 1434, 1435, 1438, 1439, 1453, 1501, 1507, 1524, 1525, 1567
      2. Available CIDs
   3. **2018-10-12**
      1. MAC CIDs 1081, 1090, 1122, 1123, 1124, 1126, 1128, 1192, 1286
   4. **2018-10-19**
      1. MAC CIDs 1315, 1378, 1396, 1431, 1442, 1449, 1450, 1454, 1498, 1500
      2. Available CIDs
   5. **2018-11-02**
      1. MAC CIDs 1503, 1509, 1511, 1519, 1520, 1532, 1553, 1556, 1560, 1569, 1573, 1593
      2. Available CIDs
3. AOB
4. Adjourn
   * 1. Emily asked for addition to Oct 12th Telecon
     2. Request for more time for CID 1002 and 1003; reschedule for next week (Oct 5th)
     3. CID 1505 and CID 1195 are ready for today instead.
     4. No objections to the modified agenda
   1. **Review Doc 11-18/1426r2** – Menzo WENTINK (Qualcomm)
      1. <https://mentor.ieee.org/802.11/dcn/18/11-18-1426-02-000m-cid-1505.docx>
      2. CID 1505 (MAC)
         1. Review comment
         2. Reivew updates to the proposal from what was presented in the interim Session.
         3. Review events – RTS failure, CTS failure, RTS/CTS succeeds, but packet fails.
         4. Review contention window change
         5. Discussion of deletion of “case f)” – you have a choice of backoff or PIFs recovery. Not sure if the behaviour would change with the deletion.
         6. Why is CW cycled from CWmax and then back to CWmin?
            1. Discussion on the reason for cycling the counters limits
            2. Previous discussion on this behaviour was to preclude STAs getting into the CWmax for all, it would provide a pseudo random reset of the value for CW.
         7. Discussion on if the changes would affect legacy devices. The assertion was that these changes will not impact the legacy devices. These changes are streamlining the text.
         8. If we don’t delete Case f, then the new note should not be added.
         9. Discussion of the statement “for [AC] VO the CW max is reached after just 2 retries. I think it must be tied to saying that the packet must be dropped. Otherwise the packet suddenly has priority.”
         10. Remember to deprecate the MIB Variable.
         11. Editor will need more detail on how to deprecate the MIB Variable.
         12. CID 1505 (MAC): Reviewed 11-18/1426r2. Generally, agree, after rejecting the change to delete "f)" from the list at P1775.44. Need to also mark associated MIB attributes as no longer used.
         13. Will review again next week and hope for being ready for sending for motion next week.
   2. **Review 11-18/1260r3** Menzo WENTINK (Qualcomm)
      1. <https://mentor.ieee.org/802.11/dcn/18/11-18-1260-03-000m-resolution-to-cid-1195.docx>
      2. CID 1195 (MAC)
         1. Review changes from what was presented in the Sept Interim.
         2. The proposed NOTE should be normative text.
         3. More discussion may be needed for the admission control mechanisms.
         4. This change is allowing higher priority traffic in the lower traffic.
         5. Question on if the higher priority queues should not be used even if the high priority queue wants to use a lower queue.
         6. We do not want to cheat from the lower queues gaining the medium and then transmitting the higher priority queues
         7. The way it is written seems odd.
         8. It was noted: that in Annex K it is recommended that Admission Control should only be used for AC\_VO and AC\_VI
         9. Discussion on where to place the NOTE, but in normative language.
         10. Changes will be made as discussed and reviewed next week preparatory to marking ready for motion.
         11. Reviewed 11-18/1260r3. Agree with direction. Updates to wording. Need to confirm all admission control limits are covered and this doesn't allow a "cheat".
      3. Please notify the reflector when the document has been uploaded.
   3. **Review doc 11-18/1566r1** Edward AU (Huawei)
      1. <https://mentor.ieee.org/802.11/dcn/18/11-18-1566-01-000m-proposed-resolution-for-cid-1095.docx>
      2. CID 1095 (EDITOR2)
         1. Review Comment
         2. Discussion on the proposed rejection reason.
         3. Suggested replacement text: "Implementation of the Multiple BSSID capability is mandatory for a FILS STA(11ai). A STA that implements the Multiple BSSID capability has dot11MultiBSSIDImplemented equal to true. A STA in which dot11MultiBSSIDActivated is true is defined as a STA that supports the Multiple BSSID capability. The STA shall set to 1 the Multiple BSSID field of the Extended Capabilities elements that it transmits.”
            1. This was discussed in the September Interim, and at that time some thought deleting was not ok. Now maybe it is ok to delete.
            2. We may need to look at the FILS case and we need to ensure to take that into account.
            3. More discussion may be needed to understand the logic and the dependency. We do not want to tie the concept of WNM with Multiple BSSID capability.
         4. If we unhook WMM from Multiple BSSID, then does that affect other dependencies? Need more thought on that.
      3. Suggest that more work be done to polish the proposed text
      4. A suggested update “"A STA that implements the Multiple BSSID capability has dot11MultiBSSIDImplemented equal to true shall set to 1 the Multiple BSSID field of the Extended Capabilities elements that it transmits. Implementation of the Multiple BSSID capability is mandatory for a FILS STA(11ai).
   4. **Review PHY CIDs 1611, 1612, 1613** – Michael MONTEMURRO (BlackBerry)
      1. CID 1611 (PHY)
         1. Review comment
         2. Review Figure 21-7 – fourth line has no arrow on either end.
         3. Proposed Resolution: REVISED (PHY: 2018-09-28 14:54:52Z)
         4. Update the cited figure to remove the line without arrowhead (fourth line) that connects the upper-left block with the spatial mapper.
         5. No objection – Mark ready for Motion
      2. CID 1612 (PHY)
         1. Review Comment
         2. Review Figure 21-9
         3. Extends the two lines back to the “Spatial Mapping”
         4. Proposed Resolution: : (REVISED (PHY: 2018-09-28 14:56:39Z)
         5. Update the figure such that the arrows ending in the first and third “IDFT” block start at the block labelled “Spatial Mapping”.
         6. Note: the page number for the comment looks wrong. Figure 21-9 is on page 2914.
         7. No objection – Mark Ready for Motion
      3. CID 1613 (PHY)
         1. Review comment
         2. Review Figure 21-9
         3. Proposed Resolution: REVISED (PHY: 2018-09-28 14:58:01Z)
         4. Revise the figure so that the upper line coming out of the “Segment Parser” block is an arrow that continues to the block labelled “BCC Interleaver”.

Note: the page number for the comment looks wrong. Figure 21-9 is on page 2914

* + - 1. No objection – Mark ready for Motion
  1. **Review doc 11-18/1306r4** Mark RISON (Samsung)
     1. <https://mentor.ieee.org/802.11/dcn/18/11-18-1306-04-000m-resolutions-for-some-comments-on-11md-d1-0-lb232.docx>
     2. CID 1379 (MAC)
        1. Review comment
        2. Discussion on the use of “packet” and if it is used consistently with the style guide.
        3. Discussion the use of “packet” vs “PPDU”
        4. The implantation is that the research was done through clause 14, but global change is still thought to be ok.
        5. Discussion on the size of the change and if there is support for it.
        6. Proposed changes:

|  |  |  |
| --- | --- | --- |
| Change (case ignored) | To (case preserved except “PPDU” always all-uppercase) | In |
| BRP packet | BRP PPDU | whole document |
| BRP-TX packet | BRP-TX PPDU | whole document |
| BRP-RX packet | BRP-RX PPDU | whole document |
| null data packet | null data PPDU | whole document |
| non-HT portion of packet | non-HT portion of PPDU | whole document |
| HT portion of packet | HT portion of PPDU | whole document |
| sounding packet | sounding PPDU | whole document |
| packet type | PPDU type | whole document except Clauses 12 and 13 |
| PACKET-TYPE | PPDU-TYPE | whole document except Clauses 12 and 13 |
| packet | PPDU | 9.4.2.136 (2x), T9-313 (2x), T9-316, 10.32, 10.35.3 (4x), 10.35.5 (2x), 10.43.3.1 (6x), 10.43.3.2 (4x), 10.43.6.3.2 (5x), 10.43.6.3.3 (2x), 10.43.6.4.1 (2x), 10.43.6.4.4, 10.43.7 (12x not covered elsewhere), 10.43.9 (11x not covered elsewhere), 10.46.3.2.3, 10.54.4 (11x), 12.5.4.4 |
| packet | frame | 13.6.3, 14.12.2 |
| PHY packet | PPDU | 9.4.2.142.1, 9.4.2.232.1 |

* + - 1. Reviewed 10.46.3.2.2 as an open question:
         1. Need more review.
         2. May need an 11ah expert review.
      2. Reviewed 12.5.4.4 as an open question:
         1. This should be per frame.
      3. Question on the change notation.
         1. The “(nx)” the “n” is the number of changes in the cited clause. If there is not number of changes, then the number should match the number of changes.
    1. Proposed Resolution: REVISED; Make the changes shown under “Proposed changes” for CID 1379 in 11-18/1306r5 < <https://mentor.ieee.org/802.11/dcn/18/11-18-1306-05-000m-resolutions-for-some-comments-on-11md-d1-0-lb232.docx> >, which address the issue throughout the MAC clauses.
       1. No objection but will need review next week.
  1. **Next Call on Oct 5th**
     1. Possible call on Oct 9th on the afternoon
        1. Look at a call starting 9pm UK
        2. Not able to find a time for an extra call
     2. Consensus to Extend the call on the 5th for 60 minutes instead.
     3. Quick review of items for next week:

 **2018-10-05 – Extend to 3 hours**

1. From 2018-09-28: CIDs 1505, 1195 (review 11-18-1426, 11-18-1260 changes identified last week),
2. From 2018-09-28: PHY CIDs 1002, 1003 (Menzo)
3. From 2018-09-28: EDITOR2 CID 1095 (Review changes per past week discussion)
4. From 2018-09-28: EDITOR CID 1379 – Assigned to Mark RISON (Review changes from discussion last week)
5. From 2018-09-28: Mark Rison – 11-18—1306 CIDs 1415/1526 (ack policy)
6. From 2018-09-28: 1329 (Mark Hamilton); Also, CID 1272 (Chris Hansen), 1284 (revisit from Waikoloa)
7. GEN CIDs 1413, 1417, 1432, 1434, 1435, 1438, 1439, 1453, 1501, 1507, 1524, 1525, 1567
8. CIDs 1456/1524 (TXVECTOR applicability) and 1375 (DMS cancellation) in 11-18-1306 (Mark RISON)
   * 1. Jon is not able to attend on the 5th, so will have Michael MONTEMURRO take minutes.
   1. **Adjourned** at 12:06pm ET
9. **802.11md - REVmd – Telecon, Friday 5 October 2018, 10:00-13:00 ET**
   1. **Called to order** 10:03am ET by the TG Chair, Dorothy STANLEY (HPE)
   2. **Attendance**:
      1. Dorothy STANLEY (HPE)
      2. Emily QI (Intel)
      3. Mark HAMILTON (Ruckus/ARRIS)
      4. Menzo WENTINK (Qualcomm)
      5. Sean COFFEY (RealTek)
      6. Joseph LEVY (Interdigital)
      7. Mark RISON (Samsung)
      8. Graham SMITH (SR Technologies)
      9. Jerome HENRY (Cisco)
      10. Kazuyuki SAKODA (Sony)
      11. Michael MONTEMURRO (BlackBerry)
   3. **Review Patent Policy**
      1. No issues noted
   4. **Review Participation slide**
   5. **Review agenda** – 11-18/1694r2:
      1. <https://mentor.ieee.org/802.11/dcn/18/11-18-1694-02-000m-2018-sept-oct-nov-teleconference-agendas.docx>
10. Call to order, attendance and patent policy
    1. **Patent Policy: Ways to inform IEEE:**
       1. Cause an LOA to be submitted to the IEEE-SA ([patcom@ieee.org](mailto:patcom@ieee.org)); or
       2. Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible; or
       3. Speak up now and respond to this Call for Potentially Essential Patents

If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance, please respond at this time by providing relevant information to the WG Chair

* 1. **Participation slide:** [https://mentor.ieee.org/802-ec/dcn/16/ec-16-0180-05-00EC-ieee-802-participation-slide.pp](https://mentor.ieee.org/802-ec/dcn/16/ec-16-0180-05-00EC-ieee-802-participation-slide.pptx)2.

1. Editor report – Emily QI
2. Comment resolution and presentations for today’s call.
   1. **2018-10-05**
      * + 1. From 2018-09-28: CIDs 1505, 1195 (review 11-18-1426, 11-18-1260 changes identified last week),
          2. From 2018-09-28: PHY CIDs 1002, 1003 (Menzo)
          3. ~~From 2018-09-28: EDITOR2 CID 1095 (Review changes per past week discussion)~~  *moved to the 10/17 teleconference.*
          4. From 2018-09-28: 1329 (Mark Hamilton); Also CID 1272 (Chris Hansen), 1284 (revisit from Waikoloa)
          5. *Kaz: CID 1249, 11-18/1254r1*
          6. *Graham: CID 1378, 11-18/0666r4*
          7. *Menzo/Graham: CID 1238, 11-18/0672r1Available CIDs*
          8. *GEN CIDs 1413, 1417, 1432, 1434, 1435, 1438, 1439, 1453, 1501, 1507, 1524, 1525, 1567*
          9. *From 2018-09-28: EDITOR CID 1379 – Assigned to Mark RISON (Review changes from discussion last week)*
          10. *From 2018-09-28: Mark Rison – 11-18—1306 CIDs 1415/1526 (ack policy)*
          11. CIDs 1456/1524 (TXVECTOR applicability) and 1375 (DMS cancellation) in 11-18-1306 (Mark RISON)
3. AOB
4. Adjourn
   * 1. Emily asked for addition to Oct 12th Telecon
     2. Request for more time for CID 1002 and 1003; reschedule for next week (Oct 5th)
     3. CID 1505 and CID 1195 are ready for today instead.
     4. No objections to the modified agenda
   1. **From 2018-09-28: CIDs 1505, 1195 (review 11-18-1426, 11-18-1260 changes identified last week)**,– Menzo WENTINK (Qualcomm)
      1. CID 1505
         1. Document <https://mentor.ieee.org/802.11/dcn/18/11-18-1426-04-000m-cid-1505.docx>
         2. Discussion on whether or not to include “[AC]” in the text or not.
         3. The proposed change is not consistent with other sections. However the proposed changes make the rules more clear.
         4. The re-organization of the if…then statements is the improvement.
         5. Consensus is to add the “[AC]” back into the text.
         6. The exponential format should follow the convention in the document. ACTION ITEM #1: Editor to provide guidance on exponential format.
         7. Short-retry counter should be renamed to something like “frame retry counter” since it refers to an MSDU, A-MSDU, or MMPDU. Need a better term to replace “frame” in the name.
         8. Discussion around removing “short” from QoS Short Retry counter in the acronym “QSDRC”.
         9. The document will be updated based on the discussion on this teleconference and offline review.
         10. Proposed Resolution: REVISED (MAC: 2018-10-05 15:05:18Z): Incorporate the changes shown in <https://mentor.ieee.org/802.11/dcn/18/11-18-1426-05-000m-cid-1505.docx>. These changes simplify and clarify the "short/long retry counters” and the Q[SL]RC counters.
         11. Ready for motion.
      2. CID 1195 (MAC)
         1. Document <https://mentor.ieee.org/802.11/dcn/18/11-18-1260-04-000m-resolution-to-cid-1195.docx>
         2. Proposed Resolution: REVISED. Incorporate the changes shown in <https://mentor.ieee.org/802.11/dcn/18/11-18-1260-05-000m-resolution-to-cid-1195.docx>.
         3. Ready for motion
   2. **From 2018-09-28: PHY CIDs 1002, 1003** – Menzo WENTINK (Qualcomm)
      1. CID 1002 and 1003 (PHY)
         1. Document <https://mentor.ieee.org/802.11/dcn/18/11-18-1704-00-000m-cid-1002-and-1003.docx>
         2. Three options proposed for resolution.
         3. The issue is where the delay value starts. Take the line at the beginning of the arrow out.
         4. Similar figures are inconsistent.
         5. Some PHY experts indicate that the decoding delay should start at the end of the time the symbol is received.
         6. One option would be to start the arrow at the beginning of SIG field and rename to “symbol reception and (implementation specific) decoding delay”
         7. From D1.5, the following figures need to be modified. 17-19, 19-25, 19-26, 21-36, 23-33, 23-34, 23-35, 23-36.
         8. Proposed Resolution: REVISED. In figures 17-19, 19-25 (only change to the name, arrow start point is correct), 19-26 (currently has no such arrow, should be added), 21-36, 23-33, 23-34, 23-35, 23-36, Move the start of the "Decoding Delay" arrow to the beginning of the (L-)(HT-)SIG(NAL) field in the lower part and rename "Decoding Delay" to "Symbol reception and implementation specific decoding delay".
         9. Ready for Motion
   3. **From 2018-09-28: 1329 (Mark Hamilton); Also CID 1272 (Chris Hansen), 1284 (revisit from Waikoloa –** Mark HAMILTON (Arris)
      1. CID 1329 (PHY)
         1. After consulting with PHY experts, recommend that the comment be accepted.
         2. The comment refers to Clause 21, so the HT qualifier doesn’t really matter.
         3. The cited text is correct, but not sufficient. It would be better to say that it only operates in the 5 GHz band.
         4. ACCEPTED
         5. Ready for Motion
      2. CID 1587 (PHY)
         1. The proposed statement should be made clearly at the beginning of Clause 21.
         2. ACTION ITEM #2: The commenter will provide a resolution based on the discussion in a future meeting.
      3. CID 1272 (PHY)
         1. ACTION ITEM #3: Michael MONTEMURRO will follow-up with Chris HANSEN and tentatively discuss on a future teleconference.
      4. CID 1284 (PHY)
         1. Offline discussion reached consensus on rejecting the comment. However, the rejection reason would need to change.
         2. ACTION ITEM #4: Emily QI to provide a rejection reason on the next teleconference.
   4. **CID 1238, 11-18/0672r1 Available CIDs –** Graham SMITH (SR Technologies)/Menzo WENTINK (Qualcomm)
      1. CID 1238 (MAC)
         1. Document <https://mentor.ieee.org/802.11/dcn/18/11-18-0672-01-000m-resolutions-for-block-ack-related-comments.docx>
         2. Proposed Resolution: REVISED. Incorporate the changes in 11-18/672r1 <<https://mentor.ieee.org/802.11/dcn/18/11-18-0672-01-000m-resolutions-for-block-ack-related-comments.docx>> for CID 1308. These changes clarify immediate block ack policy and delayed block ack policy, generally.
         3. Ready for Motion
      2. CID 1413 (GEN)
         1. The MAC needs to know how long it needs to wait for the signalling based on the PPDU format.
         2. The change as is cannot be accepted. The change would also need to include how the list of integers is used and when.
         3. Proposed Resolution: CID 1413 (GEN): Reject. The proposed change is insufficient; normative text describing how this list of integers is used or indexed, and when a worst case must be used, is required.
         4. Ready for motion
   5. **Review doc 11-18/1254r1 CID 1249–** Kazuyuki SAKODA (Sony)
      1. Document <https://mentor.ieee.org/802.11/dcn/18/11-18-1254-02-000m-suggested-resolution-for-cid-1249.docx>
      2. CID 1249 (MAC)
         1. Proposed Resolution:REVISED: Incorporate the changes in 11-18/1249r0 <<https://mentor.ieee.org/802.11/dcn/18/11-18-1249-02-0ngv-ngv-mac-discussion.pptx>> , which add a new subclause describing a link metric reporting example, as requested.
         2. Ready for Motion
   6. **From 2018-09-28: EDITOR CID 1379 – Assigned to Mark RISON (Review changes from discussion last week)** – Mark RISON (Samsung)
      1. Document <https://mentor.ieee.org/802.11/dcn/18/11-18-1306-04-000m-resolutions-for-some-comments-on-11md-d1-0-lb232.docx>
      2. CID 1379 (Editor)
         1. REVISED: Incorporate the changes indicated in https://mentor.ieee.org/802.11/dcn/18/11-18-1306-05-000m-resolutions-for-some-comments-on-11md-d1-0-lb232.docx for CID 1379. This accomplishes the changes requested.
         2. Ready for Motion
   7. **From 2018-09-28: 11-18—1306 CIDs 1415/1526 (ack policy) –** Mark RISON (Samsung)
      1. Document <https://mentor.ieee.org/802.11/dcn/18/11-18-1306-04-000m-resolutions-for-some-comments-on-11md-d1-0-lb232.docx>
      2. CID 1415/1526 (MAC)
         1. The group needs to decide whether “no ACK Ack Policy” is sufficient.
         2. STRAW POLL:

Do you prefer:

a) change “ack” to “acknowledgment” – leads to “no ack ack policy”

b) rephrase to “ack policy of No Ack”

c) hyphenate “no ack ack policy” to “No-Ack ack policy”

d) live with “No Ack ack policy”

e) no-ack acknowledgment Policy

Result: a) 1 b) 1 c) 3 d) 1 e) 4

* + - 1. The document will be updated based on this straw poll.
      2. **ACTION ITEM #5**: Everyone to review the resolution before the next call.
  1. **Next Call on Oct 12th**
     1. Extend the call on Oct 12th to 3 hrs
     2. Move the call on Oct 19th to Oct 15th one hour later.
  2. **Adjourned at 12:06pm ET**

1. **802.11md - REVmd – Telecon, Friday 12 October 2018, 10:00- 12:00 ET**
   1. **Called to order** 10:04am ET by the TG Chair, Dorothy STANLEY (HPE)
   2. **Attendance**:
      1. Dorothy STANLEY (HPE)
      2. Emily QI (Intel)
      3. Jon ROSDAHL (Qualcomm)
      4. Mark HAMILTON (Ruckus/ARRIS)
      5. Menzo WENTINK (Qualcomm)
      6. Sean COFFEY (RealTek)
      7. Mark RISON (Samsung)
      8. Michael MONTEMURRO (BlackBerry)
      9. Assaf Kasher (Qualcomm)
      10. Joseph Levy (InterDigital)
      11. Jerome HENRY (Cisco)
   3. **Review Patent Policy**
      1. No issues noted
   4. **Review Participation slide**
   5. **Review agenda** – 11-18/1694r3:
      1. <https://mentor.ieee.org/802.11/dcn/18/11-18-1694-03-000m-2018-sept-oct-nov-teleconference-agendas.docx>
      2. Agenda topics for today:
2. ~~From 2018-09-28: EDITOR2 CID 1095 (Review changes per 2018-09-28 discussion)~~
3. ~~From 2018-10-05: CID 1272 (Chris Hansen)~~
4. From 2018-10-05: 1284 (revisit from Waikoloa)
5. From 2018-10-05: 1587 (Mark Hamilton)
6. From 2018-09-28 and 2018-10-05: Mark Rison – 11-18-1306 CIDs 1415/1526 (ack policy)
7. ~~From 2018-10-05: Graham: CID 1378, 11-18/0666r4~~
8. Assaf Kasher CIDs 1315, 1256, 1351
9. ~~MAC CIDs 1081 (STACEY),~~ Delay for next call
10. ~~MAC CIDs 1090, 1122, 1123, 1124, 1126, 1128 (Menzo)~~ (Moved to November Plenary)
11. MAC CIDs 1192, 1286
12. ~~From 2018-10-05: GEN 1417, 1432, 1434, 1435, 1438, 1439, 1453, 1501, 1507, 1524, 1525, 1567~~ (delay to next call)
13. ~~Editor Notes review – Emily QI~~
14. From 2018-10-15 CIDs 1456/1524 (TXVECTOR applicability) and 1375 (DMS cancellation) in 11-18-1306 (Mark RISON)
15. CIDs 1453/1435 (PHY header) and 1452 (fragments) in in 11-18-1306 (Mark RISON)
    * 1. Request for extending the call for 3 hours
         1. Two people identified to leave prior to 3-hour end time.
         2. Adjust the order of discussion topics to accommodate.
      2. No objection to the R4 of the agenda as displayed.
         1. <https://mentor.ieee.org/802.11/dcn/18/11-18-1694-04-000m-2018-sept-oct-nov-teleconference-agendas.docx>
    1. **Editor Report** – Emily QI (Intel)
       1. An updated Comment File has been posted: 11-18/611r9.
          1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0611-09-000m-revmd-wg-ballot-comments.xls>
       2. D1.6 is available in the members area
    2. **CID 1284 (PHY)**
       1. Review Reject reason that was requested to be revised.
       2. Proposed updated Resolution: Rejected; User Interface benefits from the solution proposed by the commenter are not sufficient to justify the extra bit allocations in the Extended Capabilities field and longer Beacon frames.
       3. No objection – Mark Ready for Motion
    3. **Review doc 11-18/669r8** Mark HAMILTON (Ruckus/ARRIS)
       1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0669-08-000m-revmd-mac-comments-assigned-to-hamilton.docx>
       2. CID 1587 (PHY)
          1. Review Comment
          2. Two options were prepared for discussion
          3. Discussed the two options
          4. No objection to Proposal #2.
       3. Proposed Resolution: Revised; Incorporate the changes in 11-18/669r9 <<https://mentor.ieee.org/802.11/dcn/18/11-18-0669-09-000m-revmd-mac-comments-assigned-to-hamilton.docx> > for CID 1587 which clarifies the operation in the 5Ghz band.
       4. No objection – Mark Ready for Motion
    4. **Review doc 11-18/1306r5** Mark RISON (Samsung)
       1. <https://mentor.ieee.org/802.11/dcn/18/11-18-1306-05-000m-resolutions-for-some-comments-on-11md-d1-0-lb232.docx>
       2. CID 1415 (MAC) CID 1526 (MAC)
          1. Review CIDs and the options of the ordering of the paragraphs.
          2. No strong opinion noted.
          3. No objection to the proposed changes to the table entry of “Normal ACK” proposed in this document.
          4. Proposed Resolution: REVISED (MAC: 2018-10-12 14:40:54Z): Incorporate the changes in 11-18/1306r6 <<https://mentor.ieee.org/802.11/dcn/18/11-18-1306-06-000m-resolutions-for-some-comments-on-11md-d1-0-lb232.docx>> which makes the changes in the direction the commenter requested..
          5. If there is any issue with the resolution, it can be addressed in comments on D2.0 if needed.
          6. No objection – Mark Ready for Motion
    5. **Review doc 11-18/1114r1** Assaf KASHER (Qualcomm)
       1. <https://mentor.ieee.org/802.11/dcn/18/11-18-1114-01-000m-dmg-mac-cid-resolution-i.docx>
       2. CID 1315 (MAC)
          1. Review Comment
          2. Proposed Resolution: CID 1315 (MAC): REVISED (MAC: 2018-10-12 14:45:10Z): Incorporate the changes as shown in 11-18/1114r1 <<https://mentor.ieee.org/802.11/dcn/18/11-18-1114-01-000m-dmg-mac-cid-resolution-i.docx>>, for CID 1315. These changes reword the paragraph to add the usage of TRN unit.
          3. No objection Mark Ready for Motion
       3. CID 1256 (MAC)
          1. Review comment
          2. Review discussion on the use of the “shall” language.
             1. The second paragraph in 10.3.4.2 applies to DMG STA – a DMG STA may transmit if the medium is idle and the backoff counter expired. The AWV setting of the receive antenna while sensing the medium is intentionally kept in a non-binding (no “shall”) language. This is because even the term quasi-omni is fairly vague and defining the relation between RX pattern and TX pattern in any directional mode is very problematic. Considering this, it will be very hard to test whether a device complies with AWV specific sensing requirements. This is the reason the “should” language is used.
          3. Request to capture the essence of the email discussion in the next revision of the document in the discussion portion of the document.
          4. Proposed Resolution: REJECTED (MAC: 2018-10-12 14:51:02Z): The second paragraph in 10.3.4.2 applies to DMG STA – a DMG STA may transmit if the medium is idle and the backoff counter expired. The AWV setting of the receive antenna while sensing the medium is intentionally kept in a non-binding (no “shall”) language. This is because even the term quasi-omni is fairly vauge and defining the relation between RX pattern and TX pattern in any directional mode is very problematic. Considering this, it will be very hard to test whether a device complies with AWV specific sensing requirements. This is the reason the “should” language is used.
          5. No objection – Mark Ready for Motion
    6. **Review doc 11-18/1143r3** Assaf KASHER (Qualcomm)
       1. <https://mentor.ieee.org/802.11/dcn/18/11-18-1143-03-000m-dmg-phy-cid-resolution-i.docx>
       2. CID 1351 (PHY)
          1. Review comment
          2. Review updates to the proposed changes.
          3. Proposed Resolution: REVISED (PHY: 2018-07-12 21:33:03Z) - Make the changes indicated in document 11-18/1143r3 <<https://mentor.ieee.org/802.11/dcn/18/11-18-1143-03-000m-dmg-phy-cid-resolution-i.docx>> indicated for CID 1351. The text changes clarify the scrambler setting for DMG.
          4. No objection – Mark Ready for Motion
       3. An issue without a CID
          1. In figure 10-80 there is a non-exitance field noted and the correction is included in the changes in the document. – this will be an editor correction.
          2. **ACTION ITEM: #6:** The editor will fix the typo in D1.7.
    7. **Review status of the MAC CIDs**
       1. MAC CIDs 1081 (STACEY), Delay for next call
       2. MAC CIDs 1090, 1122, 1123, 1124, 1126, 1128 (Menzo) (Moved to November Plenary)
       3. MAC CIDs 1192 in Mark’s Document
    8. **Review doc 11-18/669r8** Mark HAMILTON (Ruckus/ARRIS)
       1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0669-08-000m-revmd-mac-comments-assigned-to-hamilton.docx>
       2. CID 1192 (MAC)
          1. Review Comment
          2. Review the proposed changes
          3. Discussion on the use of “OUI” and its use.
          4. Discussion on the use of the MA-L and MA-S terms and if it was better to use than OUI in this instance.
          5. Target this for November 2nd to resolve the CID. With an email exchange expected.
          6. We want to ensure the wording is ok with the RAC.
          7. MAC: 2018-10-12 15:15:43Z - Needs further discussion to confirm alignment of the text with the RAC terminology.
          8. ACTION ITEM #7: Michael MONTEMURRO will take the comment and proposed resolution to the RAC for review.
       3. CID 1286 (MAC)
          1. Review the comment
          2. Last discussed in Waikoloa and a list of potential locations where the frames may need to have the MSBs set to one or not. Menzo and Michael FISCHER were reviewing.
          3. Discussion on the potential direction of the Resolution. Either Reject or Accept. If the concerns raised have not been addressed, then we may want to Reject. If we don’t have objection, then we may want to “Accept”.
          4. These two MSBs were set to 1 before, and this is an error that slipped in somehow.
          5. No objection to Accept the Proposed Changes.
          6. Proposed Resolution; Accept
          7. No Objection - Mark Ready for motion
       4. CID 1396 (MAC)
          1. Review comment
          2. Review the discussion
          3. Discussion on the value of the first sentence.
          4. Change “outside an A-MPDU” to “in a non-A-MPDU” in the cited paragraph.
          5. No objection to this proposed change
          6. Proposed Resolution: Revised; Change “outside an A-MPDU” to “in a non-A-MPDU” in the cited paragraph.
          7. No Objection – Mark Ready for Motion
       5. CID 1431 (MAC)
          1. Review Comment
          2. Proposed Resolution: Accept
          3. No Objection – Mark Ready for Motion
       6. CID 1569 (MAC)
          1. Review Comment
          2. We had a straw poll in Waikoloa which was 4-4. Discussion then was mainly on if this was indicating if this was currently using AC power (Mains) or if it was capable of using.
          3. Discussion on what the value of the bit is and what it should be conveying and which device it is of value for.
          4. Does this clarify the use for a Relay or not?
          5. Proposed Resolution: Change to “The A/C Power subfield indicates whether the STA is using AC power, or equivalent. It is set to 1 if the STA is supplied by AC power, including PoE, wall plug, etc.; otherwise, it is set to 0.”
          6. Could we change AC Power (A/C Power) to External Power Source?
          7. Could we change the polarity and call it Battery Power?
          8. Discussion on the name of the field was discussed previously and there was not support for changing it.
          9. Discussion on the change to include external power and power constraints.
          10. Proposed Resolution: Revised; Change to “The A/C Power subfield indicates whether the STA is power constrained or not. It is set to 1 if the STA is not power constrained, i.e., supplied by external power, including PoE, wall plug, etc.; otherwise, it is set to 0.”
          11. No objection – Mark Ready for Motion
       7. CID 1553 (MAC)
          1. Review Comment
          2. Proposed Resolution: Accept
          3. No objection – Mark Ready for Motion
       8. CID 1560 (MAC)
          1. Review Comment
          2. Discussion on the use of “Data MPDU” as opposed to “data frame”
          3. Note to editor needs to be made that a 6th occurrence in 4.3.28.2 also needs to be changed.
          4. Proposed Resolution: Revised; Change 6 occurrences (relative to draft 1.6) of “data MPDU” to “Data Frame”, Note to Editor, locations are P252.47, P1844.24, P1844.26, P1844.50 (note maintain the plural), P1845.43, P1845.45 and P1850.43.
          5. No objection – Mark Ready for Motion
       9. CID 1572 (MAC)
          1. Review Comment
          2. Review discussion and proposed change.
          3. Proposed resolution: Revised; At the cited location, replace

“The NAI Realm Encoding, NAI Realm Length and NAI Realm fields are defined in 9.4.5.10 (NAI Realm ANQP-element).”

with

“The NAI Realm Encoding and NAI Realm Length are defined in 9.4.5.10 (NAI Realm ANQP-element). The NAI Realm subfield is one or more NAI Realms formatted as defined in 9.4.5.10 (NAI Realm ANQP-element).”

* + - 1. No objection – Mark Ready for Motion
    1. CID 1573 (MAC)
       1. Review comment
       2. Proposed Resolution: Accept
       3. No objection – Mark Ready for Motion
  1. **5-minute break** as we are at 12:08pm ET
     1. Resume – 10:14pm ET
  2. **Continue - Review of doc 11-18/669r8** Mark HAMILTON (Ruckus/ARRIS)
     1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0669-08-000m-revmd-mac-comments-assigned-to-hamilton.docx>
     2. CID 1593 (MAC)
        1. Review Comment
        2. Check with Editor if the instructions are clear enough?
           1. Editor said yes.
        3. Proposed Resolution: ACCEPTED (MAC: 2018-10-12 21:05:30Z)
        4. No objection – Mark Ready for Motion
     3. CID 1594 (MAC)
        1. Review Comment
        2. Review Proposed Change
        3. Discussion on if it is encoded octets or code points.
        4. Proposed Resolution: REVISED (MAC: 2018-10-12 21:06:02Z): Replace the cited sentence with, "An ASCII or UTF-8 string is a sequence of ASCII or UTF-8 encoded code points, respectively, without a terminating null."
        5. No objection – Mark Ready for Motion
     4. CID 1614 (MAC)
        1. Review Comment
        2. Review Proposed change and discussion
        3. Proposed Resolution: Revised. Replace the cited paragraph with two paragraphs:

“Elements are defined to have a common general format, per 9.4.2.1. The Length field of an Element is one octet, and thus limited to indicate 255 octets of payload in the Information field. However, since the Element ID Extension field is optional and included in the single-octet Length count, the actual Information payload of an Element is limited to 254 octets if the Element ID Extension is present. If the Information to be represented in an element is too large for this 255 or 254 octet limit, it is necessary to fragment the information as described in 10.28.11 (Element fragmentation(11ai)) and 10.28.12 (Element defragmentation(11ai)).

The format of the Fragment element is shown(#243) in Figure 9-646 (Fragment element format(11ai)).”

* + - 1. No objection – Mark Ready for Motion
    1. CID 1503 (MAC)
       1. Review Comment
       2. Review discussion
       3. Proposed Resolution: Rejected. There is a preceding ‘shall’ statement that one and only one of the actions shall occur, and the actions are each subject to conditions, which are mutually exclusive. Thus, there is no precedence relationship.
       4. No objection – Mark Ready for Motion
  1. **Review doc 11-18/1306r5** Mark RISON (Samsung)
     1. <https://mentor.ieee.org/802.11/dcn/18/11-18-1306-05-000m-resolutions-for-some-comments-on-11md-d1-0-lb232.docx>
     2. CID 1456 (GEN) and CID 1524 (GEN)
        1. Review Comment
        2. Review open points from last time it was presented.
        3. Discussion on putting in an “escape clause” and it is embedded too deep.
        4. Two options are included (highlighted in yellow is option 2).
        5. If we have a broad statement, rather than just fix every location, it may be easier, but still an issue of may have a missed case not seeing the broad statement.
        6. The use of “frame” is context dependant, but we are looking to make the use of frame to be MPDU. There is a “PHY Frame” is PPDU.
        7. The discussion on the yellow text for better clarity.
        8. The yellow text PPDU should may be PSDU. This will need more review. There are portions of the proposed changes that are not highlighted, and we are ok with that part, but the highlighted text should be checked to be consistent with the other changes.
        9. Need to revise most of the PPDU to PSDU in the yellow text.
        10. Discussion on where the broad statement (get out of jail statement) should be placed.
        11. The broad clause allows for fewer changes to the proposed text.
        12. The yellow text will be removed and posted in R6.
     3. CID 1375 (MAC)
        1. Review comment status
        2. The first sentence allows for removal of multiple DMS streams, but the second half suggests only one DMS stream can be removed.
        3. Proposed Resolution: REVISED (MAC: 2018-10-12 21:12:32Z): Make the changes shown under "Proposed changes" for CID 1375 in 11-18/1306r5 <<https://mentor.ieee.org/802.11/dcn/18/11-18-1306-05-000m-resolutions-for-some-comments-on-11md-d1-0-lb232.docx>>, which specify the mechanism whereby multiple DMS streams may be terminated simultaneously.
        4. No objection – Mark Ready for Motion
  2. **Review status for Next call** on Oct 15th (Monday)
     1. Reviewed list of MAC CIDs for consideration on Monday.
  3. **Adjourned at 1:02pm**

**References:**

**28 September 2018:**

1. <https://mentor.ieee.org/802.11/dcn/18/11-18-1694-00-000m-2018-sept-oct-nov-teleconference-agendas.docx>
2. [https://mentor.ieee.org/802-ec/dcn/16/ec-16-0180-05-00EC-ieee-802-participation-slide.pp](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/18/11-18-1426-02-000m-cid-1505.docx>
4. <https://mentor.ieee.org/802.11/dcn/18/11-18-1260-03-000m-resolution-to-cid-1195.docx>
5. <https://mentor.ieee.org/802.11/dcn/18/11-18-1566-01-000m-proposed-resolution-for-cid-1095.docx>
6. <https://mentor.ieee.org/802.11/dcn/18/11-18-1306-04-000m-resolutions-for-some-comments-on-11md-d1-0-lb232.docx>
7. <https://mentor.ieee.org/802.11/dcn/18/11-18-1306-05-000m-resolutions-for-some-comments-on-11md-d1-0-lb232.docx>

**5 October 2018:**

1. <https://mentor.ieee.org/802.11/dcn/18/11-18-1694-02-000m-2018-sept-oct-nov-teleconference-agendas.docx>
2. <https://mentor.ieee.org/802.11/dcn/18/11-18-1426-04-000m-cid-1505.docx>
3. <https://mentor.ieee.org/802.11/dcn/18/11-18-1426-05-000m-cid-1505.docx>
4. <https://mentor.ieee.org/802.11/dcn/18/11-18-1260-04-000m-resolution-to-cid-1195.docx>
5. <https://mentor.ieee.org/802.11/dcn/18/11-18-1704-00-000m-cid-1002-and-1003.docx>

**12 October 2018:**

1. <https://mentor.ieee.org/802.11/dcn/18/11-18-1694-03-000m-2018-sept-oct-nov-teleconference-agendas.docx>
2. <https://mentor.ieee.org/802.11/dcn/18/11-18-1694-04-000m-2018-sept-oct-nov-teleconference-agendas.docx>
3. <https://mentor.ieee.org/802.11/dcn/18/11-18-0611-09-000m-revmd-wg-ballot-comments.xls>
4. <https://mentor.ieee.org/802.11/dcn/18/11-18-0669-08-000m-revmd-mac-comments-assigned-to-hamilton.docx>
5. <https://mentor.ieee.org/802.11/dcn/18/11-18-0669-09-000m-revmd-mac-comments-assigned-to-hamilton.docx>
6. <https://mentor.ieee.org/802.11/dcn/18/11-18-1306-05-000m-resolutions-for-some-comments-on-11md-d1-0-lb232.docx>
7. <https://mentor.ieee.org/802.11/dcn/18/11-18-1306-06-000m-resolutions-for-some-comments-on-11md-d1-0-lb232.docx>
8. <https://mentor.ieee.org/802.11/dcn/18/11-18-1114-01-000m-dmg-mac-cid-resolution-i.docx>
9. <https://mentor.ieee.org/802.11/dcn/18/11-18-1143-03-000m-dmg-phy-cid-resolution-i.docx>