IEEE P802.11  
Wireless LANs

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| Telecon Minutes for REVmd CRC  - Sept 8, 9, and 10, 2020 | | | | |
| Date: 2020-09-11 | | | | |
| Author(s): | | | | |
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|  |  |  |  |  |

Abstract

This file contains the minutes for the 802.11md REVmd CRC Telecons from September 8 to September 11, 2020.

R0: Minutes for September 8, 2020.

R1: Minutes for September 9, 2020 added.

R2: Minutes for September 11, 2020 added.

1. **IEEE 802.11md REVmd CRC Telecon Tuesday, September 8, 2020 15:00-17:00 ET**
   1. **Called to order at 3:04** pm ET by the TG Chair Dorothy STANLEY (HPE)
   2. **Review Patent and Participation Policy**
      1. No Issues noted.
   3. **Attendance:** -please log with IMAT:
      1. About 13 attendees reported by WebEx

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | TGmd | 9/8 | Au, Kwok Shum | Huawei Technologies Co., Ltd |
|  | TGmd | 9/8 | Coffey, John | Realtek Semiconductor Corp. |
|  | TGmd | 9/8 | Derham, Thomas | Broadcom Corporation |
|  | TGmd | 9/8 | Goodall, David | Morse Micro |
|  | TGmd | 9/8 | Hamilton, Mark | Ruckus Wireless |
|  | TGmd | 9/8 | Kwon, Young Hoon | NXP Semiconductors |
|  | TGmd | 9/8 | Levy, Joseph | InterDigital, Inc. |
|  | TGmd | 9/8 | Montemurro, Michael | Self |
|  | TGmd | 9/8 | Qi, Emily | Intel Corporation |
|  | TGmd | 9/8 | RISON, Mark | Samsung Cambridge Solution Centre |
|  | TGmd | 9/8 | Rosdahl, Jon | Qualcomm Technologies, Inc. |
|  | TGmd | 9/8 | Stanley, Dorothy | Hewlett Packard Enterprise |
|  | TGmd | 9/8 | Wentink, Menzo | Qualcomm Incorporated |

* + 1. Missing from IMAT: None reported
  1. **Review Agenda** 11-20/1211r7:
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-1211-07-000m-2020-august-sept-agendas.docx>
     2. **The draft agenda for the teleconferences is below:**

1.       Call to order, attendance (<https://imat.ieee.org/attendance> ), and patent policy

a.       **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

b.      Patent, Participation and policy related slides: See slides 4-19 in <https://mentor.ieee.org/802.11/dcn/20/11-20-0323-00-0000-2nd-vice-chair-report-july-2020.pptx>

2.       Editor report – Emily QI/Edward AU – see <https://mentor.ieee.org/802.11/dcn/17/11-17-0920-28-000m-802-11revmd-editor-s-report.ppt> and <https://mentor.ieee.org/802.11/dcn/19/11-19-2156> .

3.       Comment resolution and motions

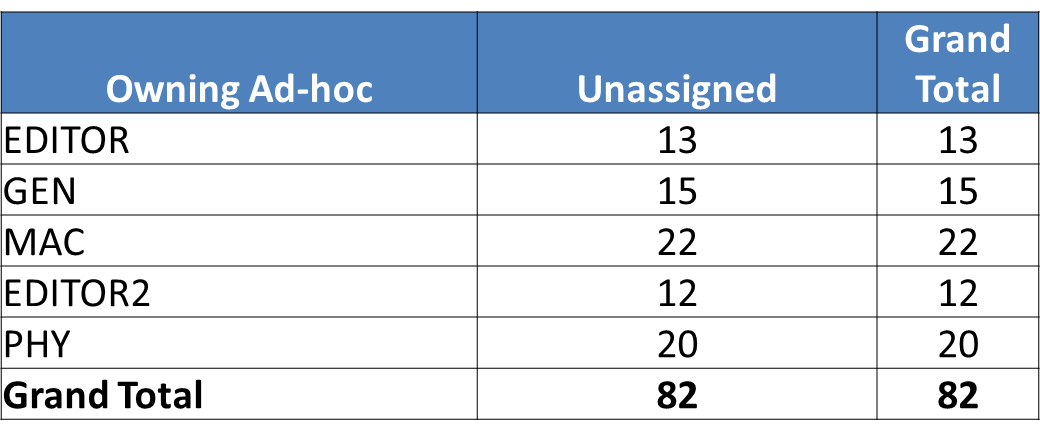
1. **2020-09-08 Tuesday 3PM Eastern 2 hours** 
   1. Emily Qi – comment resolutions, <https://mentor.ieee.org/802.11/dcn/20/11-20-1412-00-000m-revmd-sa2-comments-for-editor-ad-hoc.xlsx> and <https://mentor.ieee.org/802.11/dcn/20/11-20-1413-00-000m-sa2-proposed-resolutions-for-editor-adhoc-and-others.doc>
   2. Edward Au- <https://mentor.ieee.org/802.11/dcn/20/11-20-1414-01-000m-resolutions-for-some-recirculation-sa-ballot-comments.docx>
   3. Menzo Wentink - <https://mentor.ieee.org/802.11/dcn/20/11-20-1405-01-000m-comment-resolutions-on-revmd-draft-4-0.docx>
   4. Mark Rison <https://mentor.ieee.org/802.11/dcn/20/11-20-0435>   
      Discussed in TGmd and agreed: CIDs 5045 (was 4746), 5054 (was 4523), 5065 (was 4629), 5053 (was 4220), 5064 (was 4477), 5069 (was 4725)  
      Discussed in TGmd, direction agreed, pending additional review: CIDs 5044 (was 4247), 5056 (was 4602), 5057 (was 4527), 5058 (was 4699)

Additional SA ballot GEN CIDs: 5037 (was 4808), 5039 &5040 & 5041 (was 4204-4206)

1. **2020-09-09 Wednesday 4-6pm Eastern 2 hours**
   1. Presentations and CID resolutions
   2. Srini Kandala– BSS Max Idle period presentation <https://mentor.ieee.org/802.11/dcn/20/11-20-1313-02-000m-bss-max-idle-period-negotiation-enhancements-for-non-s1g-phys.docx>
2. **2020-09-11 Friday 10 am Eastern 2 hours** 
   1. Motions
   2. Menzo Wentink, <https://mentor.ieee.org/802.11/dcn/20/11-20-1405-00-000m-comment-resolutions-on-revmd-draft-4-0.docx>
3. **Announce next set of teleconferences**

4.       AOB

5. Adjourn

* + 1. No objection to the displayed Agenda.
  1. **Editor Report** Emily QI (Intel)
     1. Review doc 11-17/920r28:
     2. <https://mentor.ieee.org/802.11/dcn/17/11-17-0920-28-000m-802-11revmd-editor-s-report.ppt>
     3. BAllot Comments in 11-19/2156r20
        1. <https://mentor.ieee.org/802.11/dcn/19/11-19-2156-20-000m-revmd-sponsor-ballot-comments.xlsx>
     4. Review submission
     5. 11 Commenters with 82 comments.
     6. THANKS to Emily for organizing the Comments over the weekend.
     7. Plan to get the resolution done in next 2 weeks.
  2. **Review doc 11-20/1412r0** - Emily QI (Intel) – comment resolutions,
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-1412-00-000m-revmd-sa2-comments-for-editor-ad-hoc.xlsx>
     2. Review overview of comment set.
     3. 
     4. Assignments made:
     5. 
     6. Of the 13 assigned to Editor 5 trivial editorial comments
     7. CID 5024, 5026, 5027, 5028, 5055 (EDITOR)
        1. Proposed Resolution: Accepted
        2. Mark Ready for Motion
     8. Remaining Editor CIDs address in submission 11-20/1413r0.
  3. **Review Doc 11-20/1413r0** Emily QI (Intel)
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-1413-00-000m-sa2-proposed-resolutions-for-editor-adhoc-and-others.doc>
     2. CID 5002 (EDITOR)
        1. Review comment.
        2. Review optional changes.
        3. Removing references from figures allows for auto update to references.
        4. P3242 there is another instance of this type reference,
           1. See p3065.23, p3242.8, p3242.22, 3242.25 and at 3063.23.
        5. Discussion on the options.
        6. Discussion on if the references could be added to the text describing the figure.
        7. More work to look for an option to include some text that has the auto updateable reference is included.
        8. Get review of proposed change from PHY group of experts.
     3. CID 5005 and 5006 (EDITOR)
        1. Review CID 5005 comment
        2. Review P1514.3
        3. Review CID 5006 comment
        4. Proposed resolution: CID 5005: Revised; Replace "Table 9-360 (ADDBA Request frame Action field)" with "see Table 9-350 (Basic ADDTS Request frame variant Action field format) and Table 9-351 (DMG ADDTS Request frame variant Action field format)".
        5. Proposed resolution: CID 5006 - Accept
        6. No Objection Mark Both CIDs Ready for Motion
     4. CID 5003 (MAC)
        1. Review Comment
        2. Review P2282.40
        3. Dot11ExtendedChannelSwitchActiveated variable states discussed.
        4. When false, do not send “Extended” versions.
        5. Proposed Resolution: Accept
        6. Discussion on what the false state means.
        7. Mark Ready for Motion
     5. CID 5004 (MAC)
        1. Review comment
        2. Discussion on ECSA frame as a Public Action Frame.
        3. CSA element may not be included in Public Action Frame.
        4. Proposed Resolution: Revised; Remove cited Sentence.
        5. Discussion on if we need to keep the elements in different frames to provide legacy protection.
        6. May need to ensure both elements are in separate frames.
        7. Alternate Proposal: change the sentence to indicate two separate frames or just delete the word “Public”.
        8. Updated Proposed Resolution: Revised: delete the word “Public” from the cited sentence.
        9. Mark Ready for Motion
     6. CID 5019 (EDITOR)
        1. Review comment
        2. Review the proposed change
        3. Proposed Resolution: Accept
        4. Discussion of some alternates to the sentence.
        5. Review 9.7.2.
        6. Alternate proposal: Change to “It is used as a check sequence to protect the fields that recede it in the MPDU delimiter”.
        7. Parent clause is 9.7 frame format.
        8. Then the subsequent sub-clauses are more particular.
        9. Add a reference to the Table 9-528 and table 9-527 that points to 9.7.2.
        10. At 1686.50 and 1687.11 add “(See 9.7.2)”.
        11. Updated Proposed Resolution: Revised.

Change the cited sentence to “It is used as a check sequence to protect the fields that precede it in the MPDU delimiter”.

At 1686.50, 1687.11, add “(see 9.7.2)”.

* + - 1. Mark Ready for Motion
  1. **Review Doc 11-20/1414r1** - Edward Au (Huawei)
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-1414-01-000m-resolutions-for-some-recirculation-sa-ballot-comments.docx>
     2. CID 5082 (EDITOR2)
        1. Review comment
        2. Proposed resolution: Accepted
        3. No objection – Mark Ready for Motion
     3. CID 5080 (EDITOR2)
        1. Review comment
        2. Proposed Resolution: Accepted.
        3. No objection – Mark Ready for Motion
     4. CID 5077 (EDITOR2)
        1. Review comment
        2. Discussion on the use of Antenna connector.
        3. Proposed Resolution: Revised.

At 3089.58 and 3473.23, replace “antenna connector(s)” with “antenna connector”.

At 3642.19 and 3672.34, replace “Antenna connector(s)” with “Antenna connector”,

At 3672.34 and 3672.39, replace “16.3.6.11 (Transmit and receive impedance at the antenna connector)” with “16.3.6.7 (Transmit and receive in-band and out-of-band spurious emissions)”.

* + - 1. ACTION ITEM: Ask Youhan KIM review the resolution.
      2. Mark Ready for Motion
    1. CID 5052 (EDITOR2)
       1. Review comment
       2. Proposed Resolution: Accepted.
       3. No objection – Mark Ready for Motion
    2. CID 5023 (EDITOR2)
       1. Review comment
       2. Proposed Resolution: Accepted.
       3. No objection – Mark Ready for Motion
    3. CID 5072 (EDITOR2)
       1. Review comment
       2. Review editorial style of “set to 1” for a bit field.
       3. Proposed resolution for CID 5072 (EDITOR2): Revised.

At 2559.47, replace

An SAE peer, e.g. a mesh STA or an AP, indicates support for direct hashing to obtain an ECC password element by setting the SAE hash-to-element bit in the Extended RSN Capabilities field in all Beacon and Probe Response frames.

with

An SAE peer, e.g. a mesh STA or an AP, indicates support for direct hashing to obtain an ECC password element by setting the SAE hash-to-element bit to 1 in the Extended RSN Capabilities field in all Beacon and Probe Response frames.:

* + - 1. No objection - Mark CID 5072 Ready for Motion
    1. CID 5015 (EDITOR2)
       1. Review comment
       2. Proposed resolution for CID 5015 (EDITOR2): Rejected.

256QAM 5/6 is supported in 2 MHz as shown in Table 23-47.

* + - 1. No objection Mark Ready for Motion
    1. CID 5067 (EDITOR2)
       1. Review comment
       2. Review potential options.
       3. Proposed resolution: Accepted.
       4. No objection Mark Ready for Motion
    2. CID 5060 (EDITOR2)
       1. Review Comment
       2. Proposed resolution: Accept
       3. Review revised figure.
       4. The letters in the box seemed to be mirrored…
       5. No objection Mark Ready for Motion
    3. CID 5059 (EDITOR2)
       1. Review comment
       2. Review proposed changes.
       3. Proposed resolution for CID 5059 (EDITOR2):

Revised:

Change “<=” to “≤” in the following locations:

824.26 (twice), 2116.5 (twice), 2368.8, 2369.15, 2370.9, 2555.41 (twice), 2555.43 (twice), 2558.33, 3444.37 (twice), 4379.55 (twice), and 4379.59 (twice).

Change “>=” to “≥”in the following locations: 2368.21, 2369.19, 2370.15, 2371.5, 3355.13, 3355.30

Add a space after “≥”in the following locations: 3355.13, 3355.30

Change “-” to a minus glyph in the following location: 824.26

At 2369.54, replace “Example negotiation and measurement exchange sequence, ASAP=1 FTMs Per Burst = 2” with “Example negotiation and measurement exchange sequence, ASAP=1, and FTMs Per Burst = 2”.

Note to the commenter: 11.22.6.4 (Measurement exchange body) should be 11.21.6.4 (Measurement exchange body)

* + - 1. No objection Mark Ready for Motion
    1. CID 5012 (EDITOR)
       1. Review comment
       2. Review discussion in submission.
       3. Confirmed the locations and definitions with DMG experts.
       4. Proposed resolution for CID 5012 (EDITOR):

Revised:

At 324.55, 342.10, 364.36, 384.33, 397.60, replace

“DMG BSS: 0-24, 9.1, or 12.1-12.6, for each member of the set” with

“DMG BSS: 0-12, 9.1, 12.1-12.6, or 25-31, for each member of the set”.

At 328.46, replace

“DMG BSS: 0-12, 9.1, or 12.1-12.6, for each member of the set” with

“DMG BSS: 0-12, 9.1, 12.1-12.6, or 25-31, for each member of the set”.

* + - 1. No objection – Mark Ready for Motion.
    1. Revision 2 will be posted with all these resolutions.
  1. **Review doc 11-20/1405r1** - Menzo Wentink (Qualcomm)
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-1405-01-000m-comment-resolutions-on-revmd-draft-4-0.docx>
     2. CID 5013 (MAC)
        1. Based on CID 4725 on draft 3.0
        2. Propose4d Resolution: Accepted
        3. No objection – Mark Ready for Motion.
     3. CID 5070 (MAC)
        1. Review comment – same comment different proposed change as CID 5013.
        2. Proposed resolution: use the same Proposed change as the Revised resolution for CID 5070
        3. No objection – Mark Ready for Motion.
     4. CID 5069 (GEN)
        1. Review Comment – Same comment with similar proposed change in CID 5013.
        2. Proposed resolution: use the same Proposed change as the Revised resolution for CID 5070
        3. No objection – Mark Ready for Motion.
     5. CID 5034 (MAC), 5035 (EDITOR), 5036 (GEN), 5014 (GEN):
        1. Review comment
        2. Review discussion.
        3. Discussion on the use of “Decimal” and the equation of “dec” is not the same.
        4. Discussion on the reflector will continue this set of comments.
        5. Move CID 5035 and CID 5034 to GEN to group together and assign to Menzo.
  2. Review Agenda for tomorrow
     1. Start with Mark RISON
  3. Adjourn 5:02 pm ET.

1. **IEEE 802.11md REVmd CRC Telecon Tuesday, September 9, 2020 16:00-18:00 ET**
   1. **Called to order at 4:04** pm ET by the TG Chair Dorothy STANLEY (HPE)
   2. **Review Patent and Participation Policy**
      1. No Issues noted.
   3. **Attendance:** -please log with IMAT:
      1. About 15 attendees reported by WebEx

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | TGmd | 9/9 | Asterjadhi, Alfred | Qualcomm Incorporated |
|  | TGmd | 9/9 | Au, Kwok Shum | Huawei Technologies Co., Ltd |
|  | TGmd | 9/9 | Coffey, John | Realtek Semiconductor Corp. |
|  | TGmd | 9/9 | Derham, Thomas | Broadcom Corporation |
|  | TGmd | 9/9 | Kandala, Srinivas | SAMSUNG |
|  | TGmd | 9/9 | Kim, Youhan | Qualcomm Incorporated |
|  | TGmd | 9/9 | Levy, Joseph | InterDigital, Inc. |
|  | TGmd | 9/9 | Montemurro, Michael | Self |
|  | TGmd | 9/9 | noh, yujin | Newracom Inc. |
|  | TGmd | 9/9 | RISON, Mark | Samsung Cambridge Solution Centre |
|  | TGmd | 9/9 | Rosdahl, Jon | Qualcomm Technologies, Inc. |
|  | TGmd | 9/9 | Smith, Graham | SR Technologies |
|  | TGmd | 9/9 | Stanley, Dorothy | Hewlett Packard Enterprise |
|  | TGmd | 9/9 | Torab Jahromi, Payam | Facebook |
|  | TGmd | 9/9 | Wentink, Menzo | Qualcomm Incorporated |

* + 1. Missing from IMAT: None reported
  1. **Review Agenda** 11-20/1211r8:
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-1211-08-000m-2020-august-sept-agendas.docx>
     2. **The draft agenda for the teleconferences is below:**

1.       Call to order, attendance (<https://imat.ieee.org/attendance> ), and patent policy

a.       **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

b.      Patent, Participation and policy related slides: See slides 4-19 in <https://mentor.ieee.org/802.11/dcn/20/11-20-0323-00-0000-2nd-vice-chair-report-july-2020.pptx>

2.       Editor report – Emily QI/Edward AU – see <https://mentor.ieee.org/802.11/dcn/17/11-17-0920-28-000m-802-11revmd-editor-s-report.ppt> and <https://mentor.ieee.org/802.11/dcn/19/11-19-2156> .

3.       Comment resolution and motions

1. **2020-09-09 Wednesday 4-6pm Eastern 2 hours**
   1. Mark RISON <https://mentor.ieee.org/802.11/dcn/20/11-20-0435>
      1. Discussed in TGmd and agreed: CIDs 5045 (was 4746), 5054 (was 4523), 5065 (was 4629), 5053 (was 4220), 5064 (was 4477), 5069 (was 4725)
      2. Discussed in TGmd, direction agreed, pending additional review: CIDs 5044 (was 4247), 5056 (was 4602), 5057 (was 4527), 5058 (was 4699)
      3. Additional SA ballot GEN CIDs: 5037 (was 4808), 5039 &5040 & 5041 (was 4204-4206)
   2. Yujin NOH – <https://mentor.ieee.org/802.11/dcn/20/11-20-1430-00-000m-s1g-phy-resolution-to-cid5021.docx>
   3. Srini KANDALA– BSS Max Idle period presentation <https://mentor.ieee.org/802.11/dcn/20/11-20-1313-02-000m-bss-max-idle-period-negotiation-enhancements-for-non-s1g-phys.docx>
   4. David GOODALL - <https://mentor.ieee.org/802.11/dcn/20/11-20-1433-00-000m-s1g-mac-resolution-to-cid5017.docx>
   5. Payam TORAB – CIDs 5029, 5030, 5031, 5032
2. **2020-09-11 Friday 10 am Eastern 2 hours** 
   1. Motions
   2. Emily QI –<https://mentor.ieee.org/802.11/dcn/20/11-20-1413-00-000m-sa2-proposed-resolutions-for-editor-adhoc-and-others.doc>
   3. Menzo WENTINK, <https://mentor.ieee.org/802.11/dcn/20/11-20-1405-00-000m-comment-resolutions-on-revmd-draft-4-0.docx>
3. **Announce next set of teleconferences**

4.       AOB

5. Adjourn

* + 1. No objection to the displayed Agenda which adds GOODALL and TORAB see Agenda r9.
  1. **Editor Report** Emily QI (Intel)
     1. Nothing to report today.
  2. **Review doc 11-20/0435r14** Mark Rison
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-0435-14-000m-resolutions-for-some-comments-on-11md-d3-0-sb1.docx>
     2. Discussed in TGmd and agreed: CIDs 5045 (was 4746), 5054 (was 4523), 5065 (was 4629), 5053 (was 4220), 5064 (was 4477), 5069 (was 4725)
     3. Discussed in TGmd, direction agreed, pending additional review: CIDs 5044 (was 4247), 5056 (was 4602), 5057 (was 4527), 5058 (was 4699)
     4. Additional SA ballot GEN CIDs: 5037 (was 4808), 5039 &5040 & 5041 (was 4204-4206)
     5. CID 5045 (MAC) (was 4746)
        1. Review comment
        2. Proposed resolution: CID 5045 (MAC): ACCEPTED (MAC: 2020-09-09 20:11:43Z)
        3. No objection – Mark Ready for Motion
     6. CID 5054 (EDITOR2) (was 4523):
        1. Review comment history
        2. Proposed resolution: REVISED (EDITOR2: 2020-09-09 20:17:58Z) - Make the changes shown under "Proposed changes:" under CID 4523 in <https://mentor.ieee.org/802.11/dcn/20/11-20-0435-14-000m-resolutions-for-some-comments-on-11md-d3-0-sb1.docx>
        3. No Objection – Mark Ready for Motion
     7. CID 5065 (PHY) (was 4629),
        1. Review Comment history
        2. Proposed Resolution: Revised; Make the changes shown under "Proposed changes:" under CID 4629 in <https://mentor.ieee.org/802.11/dcn/20/11-20-0435-14-000m-resolutions-for-some-comments-on-11md-d3-0-sb1.docx>
        3. No objection – Mark Ready for Motion.
     8. CID 5053 (PHY) (was 4220)
        1. Review comment history
        2. Discussion on the proposed changes in Figure 9-952 and S1G.
        3. Discussion on Table 9-487 and S1G related changes.
        4. Proposed Resolution: REVISED (PHY: 2020-09-09 20:23:16Z) - Make the changes shown under "Proposed changes:" under CID 4220 in <https://mentor.ieee.org/802.11/dcn/20/11-20-0435-14-000m-resolutions-for-some-comments-on-11md-d3-0-sb1.docx>.
        5. No objection – Mark Ready for Motion.
     9. CID 5064 (PHY) (was 4477),
        1. Review Comment history.
        2. Proposed resolution: ACCEPTED (PHY: 2020-09-09 20:28:28Z)
        3. No objection – Mark Ready for Motion.
     10. CID 5069 (GEN) (was 4725)
         1. This is a CID assigned to Menzo, and we completed yesterday.
     11. CID 5044 (GEN) (was 4247)
         1. Review Comment and Comment history
         2. Discussion on if a variable is control or status
         3. See CID 4783 as possible direction on state of the variable.
         4. Put on Agenda for Friday to review.
         5. ACTION ITEM: Bring back on Friday. Edward AU and Mark HAMILTON to review off-line, if this is a status attribute or a control attribute.
     12. CID 5056 (GEN) (was 4602)
         1. Review Comment and comment history
         2. Proposed resolution is accepted.
         3. Proposed change: In Clause 3: Under the definition of PTK add:

NOTE—A PTK is not a temporal key. It is a set of temporal keys.

Change “session key” to “temporal key” in the definition of perfect forward secrecy (PFS), in the definition of pairwise transient key (PTK), in 4.3.21.5.4 Mesh security (2x), in 12.6.1.2 TPKSA.

Change the definition of GTK to start “A” not

* + - 1. ACTION ITEM: Bring back on Friday; Reach out to Jouni for comment/review.
    1. CID 5057 (GEN) (was 4527)
       1. Review comment and comment history
       2. Discussion on if a primitive need “an” or “the”.
       3. Proposed resolution: Accept
       4. No objection Mark Ready for Motion.
    2. CID 5058 (MAC) (was 4699)
       1. Review Comment and comment history.
       2. Discussion on the HCCA TXOP functions
       3. Discussion on the use of TX NAV with TXOP remaining duration.
       4. Proposal to not make any change discussed.
       5. From WebEx Chat window: Menzo:
          1. 9.2.5.2 Setting for single and multiple protection under enhanced distributed channel access (EDCA) In transmissions under EDCA by a STA that initiates a TXOP, there are two classes of duration settings: single protection and multiple protection. (MDR2)In single protection, the Duration/ID field of the frame can set a network allocation vector (NAV) value at receiving STAs that protects up to the end of any following Data, Management, or response frame plus any additional overhead frames as described below. In multiple protection, (MDR2) the Duration/ID field of the frame can set a NAV that protects up to the estimated end of a sequence of multiple frames.
       6. Discussion on “TXOP duration” term is not defined.
       7. After more discussion, we find we are not clear on a consensus path.
       8. Review P1833 – figure implies the definition of “TXOP duration”.
       9. Review P1838l18 “duration value set to cover the HCCA TXOP” – close to a definition.
       10. Argument that the definition is not really needed, it seems obvious.
       11. Counter Argument is that the clarifications are needed.
       12. Propose to have a resolution on the fact we are not coming to consensus, but we hope to have consensus, but if not, we will need to reject it.
       13. TX NAV is there to avoid trying to access the media if you did not receive an acknowledgement.
       14. More work to be done, will bring back later.
    3. CID 5037 (PHY) (was 4808),
       1. Review comment and comment history
       2. Proposed resolution: REVISED (PHY: 2020-09-09 21:11:34Z) - In Table 9-374—TDLS Discovery Response frame Action field(#2568) format delete the FTE row (order 10) and renumber the following ones.

In Table 9-417—Information for TDLS Teardown Action field delete “(optional)” in the FTE row.

* + - 1. No objection – Mark Ready for Motion
  1. **Review doc 11-20/1430r0** - Yujin NOH – (Newracom)
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-1430-00-000m-s1g-phy-resolution-to-cid5021.docx>
     2. CID 5021 (EDITOR2)
        1. Review Comment
        2. Review proposed changes
        3. Discussion on how the RESPONSE\_INDICATION field is set.
        4. Changes proposed “Set to indicate Long Response (see TXVECTOR parameter xxx)”.
        5. Make changes and an R1 will need to be posted.
        6. Proposed resolution: REVISED (EDITOR2: 2020-09-09 21:21:08Z) Make the changes shown under "Proposed changes:" under CID 5021 in https://mentor.ieee.org/802.11/dcn/20/11-20-1430-01-000m-s1g-phy-resolution-to-cid5021.docx
        7. No objection – Mark Ready for Motion
  2. **Review doc 11-20/1313r2** - Srini KANDALA (Samsung)– BSS Max Idle period presentation
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-1313-02-000m-bss-max-idle-period-negotiation-enhancements-for-non-s1g-phys.docx>
     2. Abstract: This document proposes to extend BSS Max Idle Period for non-S1G PHYs, adopting the elements from the mechanism that have been defined for S1G PHY
     3. This revision has the D4.0 CID – CID 5025 added to the submission.
     4. CID 5025 (PHY)
        1. Review the proposed changes and the updates since last presented.
        2. Discussion on optional vs not optional.
        3. Discussion on some of the editorial changes needed for “the” to “an” etc.
        4. Discussion on association and reassociation needs to be updated.
        5. Discussion on the changes to the MIB variable. Not indicate the number that is there, but rather advisory from STA and definitive from AP.
        6. Discussion on Associate Indication. The field should be included when it is in the frame. But this is an issue with the baseline.
        7. More discussion is needed to progress this document.
  3. **Review doc 11-20/1433r0** - David GOODALL (Morse Micro)–
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-1433-00-000m-s1g-mac-resolution-to-cid5017.docx>
     2. CID 5017 (MAC)
        1. Review comment
        2. Review background in submission.
        3. Discussion on what happens when the IDLE Indication field is 1.
        4. Refer to 9.9.2.4.3 (NDP\_2M Ack) (11ah) and 23.3.12.2.4.3 in D4.0
        5. Discussion on the proposed changes and NDP\_1M Ack
        6. Suggestion of “Ack fram when …,the…CTSframe and the …frame”
        7. Discussion on the direction of the proposed changes.
        8. Request for an R1 that includes an additional sentence for when the indication field is 1.
        9. Note that there are other locations where the value is 1 and the case of 0 is not discussed. So why do we need to do this here.
        10. Clause 9.2.5 describes what is in that field. And so we should be able to know that the clause is complete with both the 1 and 0 values.
        11. Will be on an upcoming agenda.
  4. **Ran out of time.**
     1. Add these to the agenda Friday:
        1. Review CIDs 5029, 5030, 5031, 5032 - Payam Torab
  5. **Discuss upcoming plan for Friday.**
     1. No motions on Friday.
     2. Plan to do Motions next week.
     3. Trying to be done Ideally next Thursday.
     4. We have about 50 comments left to do.
  6. **Adjourn 6:03pm**

1. **IEEE 802.11md REVmd CRC Telecon Tuesday, September 11, 2020 10:00-12:00 ET**
   1. **Called to order at 10:01** am ET by the TG Chair Dorothy STANLEY (HPE)
   2. **Review Patent and Participation Policy**
      1. No Issues noted.
   3. **Attendance:** -please log with IMAT:
      1. About 25 attendees reported by WebEx

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | TGmd | 9/11 | Asterjadhi, Alfred | Qualcomm Incorporated |
|  | TGmd | 9/11 | Au, Kwok Shum | Huawei Technologies Co., Ltd |
|  | TGmd | 9/11 | Chen, Cheng | Intel Corporation |
|  | TGmd | 9/11 | Coffey, John | Realtek Semiconductor Corp. |
|  | TGmd | 9/11 | Derham, Thomas | Broadcom Corporation |
|  | TGmd | 9/11 | Ghosh, Chittabrata | Nokia |
|  | TGmd | 9/11 | Hamilton, Mark | Ruckus Wireless |
|  | TGmd | 9/11 | Hart, Brian | Cisco Systems, Inc. |
|  | TGmd | 9/11 | Kakani, Naveen | Qualcomm Incorporated |
|  | TGmd | 9/11 | Kandala, Srinivas | SAMSUNG |
|  | TGmd | 9/11 | Kim, Youhan | Qualcomm Incorporated |
|  | TGmd | 9/11 | Kwon, Young Hoon | NXP Semiconductors |
|  | TGmd | 9/11 | Malinen, Jouni | Qualcomm Incorporated |
|  | TGmd | 9/11 | Montemurro, Michael | Self |
|  | TGmd | 9/11 | NANDAGOPALAN, SAI SHANKAR | Cypress Semiconductor Corporation |
|  | TGmd | 9/11 | Patwardhan, Gaurav | Hewlett Packard Enterprise |
|  | TGmd | 9/11 | Qi, Emily | Intel Corporation |
|  | TGmd | 9/11 | RISON, Mark | Samsung Cambridge Solution Centre |
|  | TGmd | 9/11 | Rosdahl, Jon | Qualcomm Technologies, Inc. |
|  | TGmd | 9/11 | Smith, Graham | SR Technologies |
|  | TGmd | 9/11 | Stanley, Dorothy | Hewlett Packard Enterprise |
|  | TGmd | 9/11 | Torab Jahromi, Payam | Facebook |
|  | TGmd | 9/11 | Wentink, Menzo | Qualcomm Incorporated |
|  |  |  |  |  |
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* + 1. Missing from IMAT: None reported
  1. **Review Agenda** 11-20/1211r9:
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-1211-09-000m-2020-august-sept-agendas.docx>
     2. **The draft agenda for the teleconferences is below:**

1.       Call to order, attendance (<https://imat.ieee.org/attendance> ), and patent policy

a.       **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

b.      Patent, Participation and policy related slides: See slides 4-19 in <https://mentor.ieee.org/802.11/dcn/20/11-20-0323-00-0000-2nd-vice-chair-report-july-2020.pptx>

2.       Editor report – Emily QI/Edward AU – see <https://mentor.ieee.org/802.11/dcn/17/11-17-0920-28-000m-802-11revmd-editor-s-report.ppt> and <https://mentor.ieee.org/802.11/dcn/19/11-19-2156> .

3.       Comment resolution and motions

1. **2020-09-11 Friday 10 am Eastern 2 hours** 
   1. **Payam TORAB – CIDs 5029, 5030, 5031, 5032**
   2. **Emily QI – CIDs 5002, 5007, 5033, 5020** [**https://mentor.ieee.org/802.11/dcn/20/11-20-1413-00-000m-sa2-proposed-resolutions-for-editor-adhoc-and-others.doc**](https://mentor.ieee.org/802.11/dcn/20/11-20-1413-00-000m-sa2-proposed-resolutions-for-editor-adhoc-and-others.doc)
   3. **Mark Rison https://mentor.ieee.org/802.11/dcn/20/11-20-0435** 
      1. **Discussed in TGmd, direction agreed, pending additional review: CIDs 5044 (was 4247), 5056 (was 4602), 5058 (was 4699)**
      2. **Additional SA ballot GEN CIDs: 5039 &5040 & 5041 (was 4204-4206)**
   4. **Menzo WENTINK – CIDs 5034,5035, 5036, 5014 https://mentor.ieee.org/802.11/dcn/20/11-20-1405-00-000m-comment-resolutions-on-revmd-draft-4-0.docx**
   5. **Chitta GHOSH –CID 5008 https://mentor.ieee.org/802.11/dcn/20/11-20-1104-01-000m-proposed-changes-in-scs-10-23-2-2-and-10-23-2-9.docx**
   6. **Srini KANDALA– CID 5025 - BSS Max Idle period presentation** [**https://mentor.ieee.org/802.11/dcn/20/11-20-1313**](https://mentor.ieee.org/802.11/dcn/20/11-20-1313)
   7. **Jon ROSDAHL – CIDs 5081, 5079, 5022, 5007 in 11-20/1438r0 – tab = “Initial Review Group”**
2. **Announce next set of teleconferences**

4.       AOB

5. Adjourn

* + 1. Discussion on updates to revisions of documents on the agenda
    2. No objection to the displayed Agenda, see Agenda r10
  1. **Editor Report** Emily QI (Intel)
     1. Nothing to report today.
     2. No questions
  2. **Review CIDs 5029, 5030, 5031, 5032, 5033 - Payam Torab (Facebook)**
     1. CID 5029 (PHY)
        1. Review comment
        2. Review context
        3. Proposed Resolution: Accept
        4. No objection – Mark Ready for Motion
     2. CID 5030 (PHY)
        1. Review Comment
        2. Proposed Resolution: Accept
        3. Question on adding the wording “Change the title of Table 20-3 and Table 24-3 to "Receiver minimum input level sensitivity".”
        4. No objection – Mark Ready for Motion
     3. CID 5031 (PHY)
        1. Review comment
        2. Review proposed change: “Change title of sections 20.4.4.2.2, 20.5.4.2.2, and 24.5.4.2.2 to "CCA sensitivity".”
        3. Proposed Resolution: Accept
        4. No objection – Mark Ready for Motion
     4. CID 5032 (MAC)
        1. Review Comment
        2. Review context
        3. Proposed Resolution: ACCEPTED (MAC: 2020-09-11 14:22:15Z)
        4. There are also 300 “individual MAC address” that may need to be changed, but that would be another comment for another day. There is not confusion, but more of a polish change that could be done later.
        5. No objection – Mark Ready for Motion
     5. CID 5033 (MAC)
        1. Review comment
        2. Change of MACAddress” and various derivative with “MAC address”
        3. Question on listing all the instances to be changed with most but not all exact locations. The scope of the comment is just Clause 6, so it is not a global change.
        4. Editor indicated it was clear.
        5. Proposed Resolution: Accept
        6. No objection – Mark Ready for Motion
  3. **Review doc 11-20/1413r2** – Emily QI (Intel)
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-1413-02-000m-sa2-proposed-resolutions-for-editor-adhoc-and-others.doc>
     2. CID 5002 (EDITOR)
        1. Review comment
        2. Review history of discussion – describing changes since last discussed.
        3. Discussion on the reference to Clause 18 which does not have a TX description, but uses Clause 17 in general with minor exception.
        4. There needs to be more discussion on the changes. In particular the changes in the figure and the sentence with the Clause 18 reference.
     3. CID 5020 (EDITOR)
        1. Review Comment
        2. Discussion on the need for individually address bufferable unit vs bufferable unit. There is also there is a group addressed bufferable unit as well.
        3. Proposed Resolution: Accept
        4. No objection – Mark Ready for Motion
  4. **Review doc 11-20/435r14 - Mark RISON (Samsung)**
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-0435-14-000m-resolutions-for-some-comments-on-11md-d3-0-sb1.docx>
     2. Discussed in TGmd, direction agreed, pending additional review: CIDs 5044 (was 4247), 5056 (was 4602), 5058 (was 4699)
     3. Additional SA ballot GEN CIDs: 5039 &5040 & 5041 (was 4204-4206)
     4. CID 5044 (GEN) (was 4247)
        1. Review comment
        2. Offline discussion found no issues.
        3. Proposed Resolution: REVISED (GEN: 2020-09-11 14:51:14Z) incorporate the changes in 11-20/435r14 (https://mentor.ieee.org/802.11/dcn/20/11-20-0435-14-000m-resolutions-for-some-comments-on-11md-d3-0-sb1.docx) which shows the proposed change in better formatting for the editor.
        4. No objection – Mark ready for motion
     5. CID 5058 (MAC):
        1. More work to do.
        2. ACTION ITEM: Mark R and Mark H to work off-line
     6. CID 5039 (PHY)
        1. Review comment
        2. Review Table 9-151 – row 2, 6 and 12.
        3. Discussion on the changes that were discussed offline, and these changes are to complete other work that was done, but these did not get cleaned up.
        4. Proposed Resolution: Accept
        5. No objection – Mark Ready for Motion
     7. CID 5041 (PHY)
        1. Review comment.
        2. Review proposed changes.
        3. Discussion on the direction of adding “Non-FT” before authentication in general.
        4. Concern that row 3 has the option that row 5 may be a subset.
        5. The concern needs to be evaluated in whole and not just on the once cell.
        6. No consensus to make the change.
        7. Straw Poll:
           1. Make the changes as suggested in CID 5041
           2. Yes/No/Abstain
           3. Results: 2/11/4
        8. Proposed Resolution: REJECTED (PHY: 2020-09-11 14:58:02Z) The BRC could not reach consensus on accepting the proposed resolution. The following straw poll was conducted:

Straw Poll: Make the changes as suggested in CID 5041.

Result: 2 - Yes; 11 - No; 4 - Abstain.

The issue is whether an AKM suite selector that uses a non-FT AKM could be distinguished from a suite selector that uses an FT AKM (for example, suite selectors :3 and :5).

* + - 1. Mark Ready for Motion
    1. CID 5040 (PHY)
       1. will be carried over to next agenda.
  1. **Review doc 11-20/1405r3** – Menzo WENTINK (Qualcomm)
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-1405-03-000m-comment-resolutions-on-revmd-draft-4-0.docx>
     2. CIDs 5034, 5035, 5036, 5014 (GEN)
        1. Review history of the comments in the submission.
        2. External requests were made to review proposed changes.
        3. Review proposed changes to be made.
        4. An R4 will be posted that has a minor editorial change, but it is not on any of the proposed changes.
        5. Lack of time for review has caused a request to review, but the motion won’t be until next week, so there is time to review between now and then.
        6. Make the Resolution to be the same for all 4 CIDs to be revised with incorporate the changes.
        7. There is still an open issue with following up with Peter E and Brian HART, however the issue is in the discussion text and not in the proposed change text.
        8. No MultiBSSID greater than 255 but need to complete the definition.
        9. Proposed resolution: Revised, incorporate the changes in doc 11-20/1405r4 <<https://mentor.ieee.org/802.11/dcn/20/11-20-1405-04-000m-comment-resolutions-on-revmd-draft-4-0.docx>> which makes the changes in the direction suggested by the commenter.
        10. Mark Ready for Motion
  2. **Review doc 11-20/1104r2** - Chitta GHOSH (Intel)
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-1104-02-000m-proposed-changes-in-scs-10-23-2-2-and-10-23-2-9.docx>
  3. CID 5008 (MAC)
     1. Review comment

Rules in SC 10.23.2.9 (TXOP limits) need to be strict to disallow TXOP bursting with multiple PPDUs within a TXOP in the case when TXOP limit is set to 0.  In addition, rules in SC 10.23.2.9 (TXOP limits) need to be strict for when the TXOP limit can be exceeded for the case when TXOP limit is non-zero   
  
Minor changes might need to be made in SC 10.23.2.2 (EDCA backoff procedure) while describing the transmission of an MPDU in final PPDU within a TXOP.

* + 1. Review submission 11-20/1076r1

       2. [https://mentor.ieee.org/802.11/dcn/20/11-20-1076-01-000m-non-ap-sta-txop-frame-bursting.pptx](https://mentor.ieee.org/802.11/dcn/20/11-20-1076-01-000m-non-ap-sta-txop-frame-bursting.pptx )
       3. Abstract: When the AP broadcasts the EDCA Parameter Set, associated non-AP STAs shall use these values, otherwise they shall use the default values. We measured the behavior of six different client devices when the AP broadcasts different TXOP limits in the EDCA Parameter Set for Best Effort and Video traffic access categories. Furthermore, with TXOP Limit = 0, the STAs shall only transmit a single PPDU in the TXOP. We also measured the behavior of client devices when the AP specifically broadcasted TXOP Limit = 0. All but **one client device violated the TXOP Limit broadcasted by the AP.**
    2. Discussion on when backoff should start and when it should end.
    3. Concern on the changes being proposed.
    4. Discussion on when it is possible to have a case where the LSIG length and the TXNAV timer can be out of sync.
    5. The TXNAV is set to the end of the expected response frame, and so the change would allow the backoff to be reset, and the existing text is doing exactly as it was designed and is clear.
    6. In general, the final PPDU is sent by the TXOP responder, but the TXOP limit is a responsibility of the TXOP initiator
    7. Discussion on the result of the change may make things worse.
    8. The LSIG is a red-herring and should not be considered in the argument for or against.
    9. More Discussion on the reason for not making the proposed changes.
    10. Review of other changes since R1.
    11. Discussion on the remaining changes:
        1. There is no definition of aggregation in this context, so the NOTE would not be beneficial.
        2. There may be a better interpretation that could be made to change the NOTE.
        3. The current text is clear on what should and should not be done, so no changes should be done.
        4. The changes since R1 do not seem to help.
        5. Discussion on how there are two cases that cannot be violated, but that other cases could as long as the first two were not.
    12. The Co-Authors would like to ask for tighter requirements to avoid the conditions that were identified in 11-20/1076r1.
    13. Discussion on if there were any subset of changes that we may be able to agree to or not.
    14. Strawpoll 2: Make the changes as proposed in 11-20/1104r2?
        1. Yes/No/Abstain?
        2. Results Straw poll 2: 6/14/2
    15. Strawpoll 3: support the direction of changes in 10.23.2.9 in 11-1104r2?
        1. Yes/No/Abstain?
        2. Results Straw poll 3: 7/10/5
    16. ACTION ITEM: Chitta to talk offline and bring another proposal next week. If there is nothing with more consensus, we will reject CID 5008 for lack of Consensus.
  1. **Review doc 11-20/1313r4– CID 5025 - BSS Max Idle period presentation - Srini KANDALA (Samsung)**
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-1313-04-000m-bss-max-idle-period-negotiation-enhancements-for-non-s1g-phys.docx>
     2. CID 5025 (PHY)
        1. Review changes since last presented.
        2. Discussion on reusing the capability bits. Need to recheck the bits being used.
        3. IF the bits are not available in capability field, then you will need to use the extended capability field instead.
        4. Request to just use the extended capability element.
        5. Discussion on why we need the capability bit in the first place.
        6. ACTION ITEM: Srini to follow-up offline to get the extended capability element, and then more discussion on the violations that may occur.
        7. More polish to get the changes right is necessary.
  2. Next Telecons during the Electronic Interim
     1. Tuesday, Wednesday and Thursday.
     2. Jon ROSDAHL to move to start of next telecon.
  3. Announcement of new Telecons
     1. Just in case, the Chair will announce Telecons for the week following the Interim.
     2. If we don’t need them, they can be cancelled.
  4. Adjourned 12:00 pm

**References:**

**September 8:**

1. <https://mentor.ieee.org/802.11/dcn/20/11-20-1211-07-000m-2020-august-sept-agendas.docx>
2. <https://mentor.ieee.org/802.11/dcn/20/11-20-0323-00-0000-2nd-vice-chair-report-july-2020.pptx>
3. <https://mentor.ieee.org/802.11/dcn/17/11-17-0920-28-000m-802-11revmd-editor-s-report.ppt>
4. <https://mentor.ieee.org/802.11/dcn/19/11-19-2156-20-000m-revmd-sponsor-ballot-comments.xlsx>
5. <https://mentor.ieee.org/802.11/dcn/20/11-20-1412-00-000m-revmd-sa2-comments-for-editor-ad-hoc.xlsx>
6. <https://mentor.ieee.org/802.11/dcn/20/11-20-1413-00-000m-sa2-proposed-resolutions-for-editor-adhoc-and-others.doc>
7. <https://mentor.ieee.org/802.11/dcn/20/11-20-1414-01-000m-resolutions-for-some-recirculation-sa-ballot-comments.docx>
8. <https://mentor.ieee.org/802.11/dcn/20/11-20-1405-01-000m-comment-resolutions-on-revmd-draft-4-0.docx>

**September 8:**

1. <https://mentor.ieee.org/802.11/dcn/20/11-20-1211-08-000m-2020-august-sept-agendas.docx>
2. <https://mentor.ieee.org/802.11/dcn/20/11-20-0323-00-0000-2nd-vice-chair-report-july-2020.pptx>
3. <https://mentor.ieee.org/802.11/dcn/20/11-20-0435-14-000m-resolutions-for-some-comments-on-11md-d3-0-sb1.docx>
4. <https://mentor.ieee.org/802.11/dcn/20/11-20-1430-00-000m-s1g-phy-resolution-to-cid5021.docx>
5. <https://mentor.ieee.org/802.11/dcn/20/11-20-1313-02-000m-bss-max-idle-period-negotiation-enhancements-for-non-s1g-phys.docx>
6. <https://mentor.ieee.org/802.11/dcn/20/11-20-1433-00-000m-s1g-mac-resolution-to-cid5017.docx>

**September 11:**

1. <https://mentor.ieee.org/802.11/dcn/20/11-20-1211-09-000m-2020-august-sept-agendas.docx>
2. <https://mentor.ieee.org/802.11/dcn/20/11-20-0323-00-0000-2nd-vice-chair-report-july-2020.pptx>
3. <https://mentor.ieee.org/802.11/dcn/19/11-19-2156>
4. <https://mentor.ieee.org/802.11/dcn/20/11-20-1413-02-000m-sa2-proposed-resolutions-for-editor-adhoc-and-others.doc>
5. <https://mentor.ieee.org/802.11/dcn/20/11-20-0435-14-000m-resolutions-for-some-comments-on-11md-d3-0-sb1.docx>
6. <https://mentor.ieee.org/802.11/dcn/20/11-20-1405-03-000m-comment-resolutions-on-revmd-draft-4-0.docx>
7. <https://mentor.ieee.org/802.11/dcn/20/11-20-1405-04-000m-comment-resolutions-on-revmd-draft-4-0.docx>
8. <https://mentor.ieee.org/802.11/dcn/20/11-20-1104-02-000m-proposed-changes-in-scs-10-23-2-2-and-10-23-2-9.docx>
9. <https://mentor.ieee.org/802.11/dcn/20/11-20-1076-01-000m-non-ap-sta-txop-frame-bursting.pptx>
10. <https://mentor.ieee.org/802.11/dcn/20/11-20-1313-04-000m-bss-max-idle-period-negotiation-enhancements-for-non-s1g-phys.docx>