IEEE P802.11  
Wireless LANs

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| Telecon Minutes for REVmd CRC- June 24 -30 2020 | | | | |
| Date: 2020-06-29 | | | | |
| 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 |
|  |  |  |  |  |

Abstract

Minutes for the 802.11md REVmd CRC Telecons for June 24 through June 30, 2020.

R0: Minutes for June 24, 2020

R1: Minutes for June 26, 2020 added.

R2: Minutes for June 29, 2020 added.

1.0 **IEEE 802.11md REVmd CRC Telecon Wednesday June 17, 2020 16:00-18:00 ET**

* 1. **Called to order at 4:03pm** 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 14 attendees reported by WebEx

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | TGmd | 6/24 | Au, Kwok Shum | Huawei Technologies Co., Ltd |
|  | TGmd | 6/24 | Coffey, John | Realtek Semiconductor Corp. |
|  | TGmd | 6/24 | Derham, Thomas | Broadcom Corporation |
|  | TGmd | 6/24 | Fischer, Matthew | Broadcom Corporation |
|  | TGmd | 6/24 | Goodall, David | Morse Micro |
|  | TGmd | 6/24 | Hamilton, Mark | Ruckus Wireless |
|  | TGmd | 6/24 | Kim, Youhan | Qualcomm Incorporated |
|  | TGmd | 6/24 | Levy, Joseph | InterDigital, Inc. |
|  | TGmd | 6/24 | Montemurro, Michael | BlackBerry |
|  | TGmd | 6/24 | Qi, Emily | Intel Corporation |
|  | TGmd | 6/24 | RISON, Mark | Samsung Cambridge Solution Centre |
|  | TGmd | 6/24 | Rosdahl, Jon | Qualcomm Technologies, Inc. |
|  | TGmd | 6/24 | Smith, Graham | SR Technologies |
|  | TGmd | 6/24 | Stanley, Dorothy | Hewlett Packard Enterprise |

* + 1. Missing from IMAT: None reported
  1. **Review Agenda**: 11-20/535r26:
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-0535-26-000m-2020-april-july-teleconference-agendas.docx>
     2. **The draft agenda for the teleconferences is below:**

1.       Call to order, 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 slides: See slides 5-12 in <https://mentor.ieee.org/802.11/dcn/20/11-20-0308-00-000m-2020-march-tgmd-agenda.pptx>

2.  Editor report – Emily QI/Edward AU

3.  Comment resolution:

* + 1. **Wednesday 4-6pm Eastern 2 hours**

1. Youhan KIM – CIDs 4538, 4296,

<https://mentor.ieee.org/802.11/dcn/20/11-20-0891-01-000m-d3-0-phy-cr-part-2.docx>

1. Youhan KIM – CID 4513 –

<https://mentor.ieee.org/802.11/dcn/20/11-20-0892-01-000m-mcs32-deprecation.docx>

1. Mark Rison CIDs: 4178, 4575 and 4576

<https://mentor.ieee.org/802.11/dcn/20/11-20-0435-04-000m-resolutions-for-some-comments-on-11md-d3-0-sb1.docx>

1. Matthew FISCHER – CIDs 4416, 4613, 4614 on PV1 security,

<https://mentor.ieee.org/802.11/dcn/20/11-20-0877-00-000m-cr-pv1-security.docx>

1. CIDs pulled from June Motions

a.      PHY: 4445, 4178, 4137

b.      MAC: 4723, 4155, 4159

4.       AOB

5. Adjourn

* + 1. Discussion of Agenda
       1. Question on Presentation that did not get motioned last week on SAE issues. Scheduled for next Motion Telecon July 24th.
    2. No objection to updated Agenda see R27
  1. **Editor Report** – Emily QI (Intel)
     1. **Review current status**:

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Tab Name | | | Number of comments | | | |  | | | | | |
|  | | |  | | | |  | | | | | |
| All SB comments | | | 820 | | | |  | | | | | |
| 201912 Approved | | | 1 | | | |  | | | | | |
| 202001 Approved | | | 221 | | | |  | | | | | |
| 202002 Approved | | | 116 | | | | Note that CID 4140 was approved in Feb 2020 again with the revised resolution. | | | | | |
| 202003 Approved | | | 47 | | | |  | | | | | |
| 202004 Approved | | | 46 | | | |  | | | | | |
| 202005 Approved | | | 95 | | | | Note that some resolved CIDs were approved with resivsed resolutions. | | | | | |
| 202006 Approved | | | 64 | | | |  | | | | | |
|  | | |  | | | |  | | | | | |
| Comment Resolution Status | | | |  |  | |  |  |  |  |
| **Owning Ad-hoc** | **Assigned** | | **Discuss** | **Review** | **Resolution Drafted** | | **Ready for Motion** | **Approved** | **Duplicate** | **Grand Total** |
| EDITOR | 20 | |  |  |  | |  | 584 |  | 604 |
| GEN | 42 | | 9 |  |  | |  |  |  | 51 |
| MAC | 74 | |  | 1 | 6 | | 4 |  |  | 85 |
| EDITOR2 | 2 | |  |  |  | |  |  |  | 2 |
| PHY | 59 | |  |  |  | | 2 |  | 17 | 78 |
| **Grand Total** | **197** | | **9** | **1** | **6** | | **6** | **584** | **17** | **820** |

* + 1. Discussion on the details presented.
    2. The editors will produce a D3.4 will be available in about 3 weeks.
  1. **Review doc 11-20/891r1** - CIDs 4538, 4296 - Youhan KIM (Qualcomm)
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-0891-01-000m-d3-0-phy-cr-part-2.docx>
     2. CID 4538 (PHY)
        1. Review comment
        2. Review submission “Background”
        3. Proposed resolution: CID 4538 (PHY): Revised

Note to Commenter:

There are 22 instances of “data part” in REVmd D3.3. These are modified to appropriate terms in the instruction below.

Instruction to Editor:

Change “DATA part” to “DATA field” at D3.3 P2921L42, and P2922L55.

Change “DATA part” to “Data field” at D3.3 P2993L43.

Change “data part” to “Data field” at D3.3 P3083L45, P3083L49, P3101L26, P3101L34, P3124L51, P3124L56, P3464L33, P3464L35, P3475L21, P3475L29, P3484L46, P3484L51, P3492L37, P3494L55, P3494L59, P3512L11, P3512L17, P3551L14, P3551L18.

* + - 1. Discussion on why changing “DATA part” to “DATA field”.
      2. Discussion on the non-change of Data part in two cases but decided that all should change.
      3. Discussion on if it is a real field or not, or at least it could be described as one. There are over 400 instances of “Data field” in the spec already.
      4. Mark Ready for Motion
    1. CID 4296 (PHY)
       1. Review comment
       2. Proposed Resolution: Revised.

Note to Commenter:

There are not many places in REVmd using the terms “non-HT/HT/VHT training”. For example, “non-HT training” is used only once in REVmd D3.3. Instruction to Editor below replaces “non-HT/HT/VHT training” with other defined terminologies.

Instruction to Editor:

Implement the proposed text updates for CID 4296 in <https://mentor.ieee.org/802.11/dcn/20/11-20-0891-02-000m-d3-0-phy-cr-part-2.docx>

* + - 1. Review the proposed changes.
      2. Update to the Resolution: CID 4296 (PHY) Revised; Incorporate the changes as shown for CID 4296 in 11-20/0891r3 (<https://mentor.ieee.org/802.11/dcn/20/11-20-0891-03-000m-d3-0-phy-cr-part-2.docx> ), which replaces the cited phrases with other defined terminologies.
      3. No objection – Mark Ready for Motion
  1. **Review Doc 11-20/0892r1**– CID 4513 – Youhan KIM (Qualcomm)
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-0892-01-000m-mcs32-deprecation.docx>
     2. CID 4513 (PHY)
        1. Review comment
        2. Review proposed changes
        3. Missing place that needs to have a sentence of deprecation also added (D3.3 p3715.6).
        4. Discussion on where the deprecation sentence should be placed and how often.
        5. Proposed resolution: CID 4513 (PHY): Revised

Note to Commenter:

HT MCS 32 is an optional feature and is not widely adopted by WLAN products. Since two WLAN generations (11ac/ax) have already passed since the introduction of the HT MCS 32, the use of HT MCS 32 is anticipated to only decrease even further in the future. Hence, HT MCS 32 is proposed to be deprecated.

Instruction to Editor:

Add the following sentence at D3.3 P3035L26:

“The use of MCS 32 format is deprecated.”

Change D3.3 P3715L6 as:

“Support for MCS with index 32” to “Support for MCS with index 32. The use of MCS with index 32 is deprecated.”

* + - 1. Discussion on making consistent style of text for the deprecation.
      2. Proceed with the proposed resolution, and Emily will check to ensure consistency on the deprecation sentences.
      3. Mark Ready for Motion
  1. **Review doc 11-20/435r4** - CIDs: 4178, 4575 and 4576 - Mark RISON (Samsung)
     1. [https://mentor.ieee.org/802.11/dcn/20/11-20-0435-04-000m-resolutions-for-some-comments-on-11md-d3-0-sb1.docx](https://mentor.ieee.org/802.11/dcn/20/11-20-0435-04-000m-resolutions-for-some-comments-on-11md-d3-0-sb1.docx )
     2. CIDs 4178 (PHY), 4575 (EDITOR), 4576 (EDITOR)
        1. Review comment
        2. Review proposed changes.
        3. On Friday, we passed a motion on 4179, which addresses the issue in a bit different path.
        4. CID 4177 and 4179 are both similar, and we motioned them.
        5. Add a note to these Resolutions to indicate the similar CIDs being edited.
        6. Discussion on how to resolve the set of CIDs.
     3. Proposed resolution for CIDs 4178 (PHY), 4575 (EDITOR), 4576 (EDITOR): Revised. Incorporate the changes in 11-20/0435r5 <<https://mentor.ieee.org/802.11/dcn/20/11-20-0435-04-000m-resolutions-for-some-comments-on-11md-d3-0-sb1.docx>> resolves the comments in the direction suggested by the commenter.
     4. No objection – Mark Ready for Motion
  2. **Review doc 11-877r0 -** CIDs 4416, 4613, 4614 on PV1 security, Matthew FISCHER (Broadcom)
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-0877-00-000m-cr-pv1-security.docx>
     2. CID 4466 (PHY)
        1. Review comment
        2. Review submission discussion.
        3. Some comments were sent to Matthew to consider in his submission.
        4. More work may need to be done, but we will review the next CID for now.
        5. CID 4466 (PHY): Will be covered along with CID 4613.
     3. CID 4613 (PHY)
        1. Review comment
        2. Discussion on the use or restrictions of PV1 Frames.
        3. Discussion on Alignment of GCMP
        4. More comments were sent to Matthew for consideration with edits suggested.
        5. More discussion on usage rules of PV1
        6. Previously CID 4388 resolution includes: "REVISED (PHY: 2020-03-09 19:53:01Z) - Add the following at 12.5.5.1 (GCMP Overview) P2614.62: “An S1G STA shall use PV0 frames when using GCMP encapsulation.”"
           1. So this proposal will need to take this into account as well.
        7. More chat window information:

See resolution to CID 4612 in 20/0435, which proposes condensing all this waffle to just

The STA MAC Address Identified By A2 subfield shall contain the Address 2 field from the MAC header for PV0 MPDUs and the MAC address identified by the A2 field in the MAC header for PV1 MPDUs.

* + - 1. Discussion on D3.0 p902.54 – that has MAC addresses are described differently.
      2. Question on what is wrong with the current text. The proposed change is trying to clean up the language in the cited location.
      3. Review the change on 12.5.3.3.4 the paragraph has two sentences proposed, and the discussion was leaning to remove the 2nd sentence.
      4. Before we proceed, request to review D3.0 780.45 which has a different format of the sentence.
      5. Discussion on the various wording variations.
      6. CID 4612 is a similar CID and is currently assigned to Mark RISON.
      7. CID 4611 is also similar but on a different page.
      8. One person should take all the resolutions: 4611, 4612, 4613, 4614 and 4466 to harmonize the resolutions.
      9. The Resolution for CID 4611, 4612, 4614 have a resolution prepared by Mark RISON – these resolutions were reviewed before.
      10. See doc 11-20/435r4
          1. <https://mentor.ieee.org/802.11/dcn/20/11-20-0435-04-000m-resolutions-for-some-comments-on-11md-d3-0-sb1.docx>
      11. Review proposed resolution for CID 4612.
      12. Discussion on the value of the Note…. suggest removing it.
      13. CID 4611 is same comment with different resolution.
      14. This also has changes proposed for CID 4614 which was covered by the document from Matthew.
      15. Discussion on adding a reference to 9.8.3.2.
      16. With the addition of the cross reference, Matthew would be ok with giving CID 4614 to Mark RISON.
      17. Doc 11-20/435r5 will be posted.
      18. Proposed resolution for CID 4611 (PHY), CID 4612 (PHY), and CID 4614 (PHY): REVISED (PHY: 2020-06-24 21:59:43Z) - Make the changes shown under “Proposed changes” for CID 4612 in 11-20/435r5 <<https://mentor.ieee.org/802.11/dcn/20/11-20-0435-05-000m-resolutions-for-some-comments-on-11md-d3-0-sb1.docx>> , which make changes in the direction suggested by the commenter.
      19. Mark CID 4611 (PHY), CID 4612 (PHY), and CID 4614 (PHY) ready for motion.
      20. ACTION ITEM: A check for CID 4466 and 4613 to be aligned with this resolution to be done by Matthew FISCHER.
      21. Review those two CIDs later.
  1. Review future Telecon agendas.
     1. See R27 of agenda
     2. <https://mentor.ieee.org/802.11/dcn/20/11-20-0535-27-000m-2020-april-july-teleconference-agendas.docx>
  2. Adjourned 6:pm

1. **IEEE 802.11md REVmd CRC Telecon Friday, June 26, 2020 10:00-12:00 ET**
   1. **Called to order at 10:03pm** 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 19 attendees reported by WebEx

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | TGmd | 6/26 | Au, Kwok Shum | Huawei Technologies Co., Ltd |
|  | TGmd | 6/26 | Coffey, John | Realtek Semiconductor Corp. |
|  | TGmd | 6/26 | Das, Subir | Perspecta Labs Inc |
|  | TGmd | 6/26 | Derham, Thomas | Broadcom Corporation |
|  | TGmd | 6/26 | Fischer, Matthew | Broadcom Corporation |
|  | TGmd | 6/26 | Hamilton, Mark | Ruckus Wireless |
|  | TGmd | 6/26 | Kim, Jeongki | LG ELECTRONICS |
|  | TGmd | 6/26 | Kwon, Young Hoon | NXP Semiconductors |
|  | TGmd | 6/26 | Levy, Joseph | InterDigital, Inc. |
|  | TGmd | 6/26 | Malinen, Jouni | Qualcomm Incorporated |
|  | TGmd | 6/26 | McCann, Stephen | BlackBerry |
|  | TGmd | 6/26 | Montemurro, Michael | BlackBerry |
|  | TGmd | 6/26 | Patil, Abhishek | Qualcomm Incorporated |
|  | TGmd | 6/26 | Qi, Emily | Intel Corporation |
|  | TGmd | 6/26 | RISON, Mark | Samsung Cambridge Solution Centre |
|  | TGmd | 6/26 | Rosdahl, Jon | Qualcomm Technologies, Inc. |
|  | TGmd | 6/26 | Smith, Graham | SR Technologies |
|  | TGmd | 6/26 | Stanley, Dorothy | Hewlett Packard Enterprise |
|  | TGmd | 6/26 | Wentink, Menzo | Qualcomm Incorporated |

* + 1. Missing from IMAT: None reported
  1. **Review Agenda**: 11-20/535r27:
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-0535-27-000m-2020-april-july-teleconference-agendas.docx>
     2. **The draft agenda for the teleconferences is below:**

1.       Call to order, 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 slides: See slides 5-12 in <https://mentor.ieee.org/802.11/dcn/20/11-20-0308-00-000m-2020-march-tgmd-agenda.pptx>

2.  Editor report – Emily QI/Edward AU

3.  Comment resolution:

1. **2020-06-26 Friday 10 am Eastern 2 hours** 
   1. Abhi PATIL – CID 4695, <https://mentor.ieee.org/802.11/dcn/20/11-20-0320-00-000m-resolution-for-cid-4695.docx>
   2. Osama ABOUL-MAGD - <https://mentor.ieee.org/802.11/dcn/20/11-20-0814-00-000m-proposed-resolutions-to-cids-4145-4146-and-4147.docx>
   3. Menzo WENTINK – including CIDs 4725, <https://mentor.ieee.org/802.11/dcn/20/11-20-0150-13-000m-assorted-crs-revmd-draft-3-0.docx>, <https://mentor.ieee.org/802.11/dcn/20/11-20-0650-02-000m-cids-4438-4439-delete-ht-delayed-block-ack.docx>
   4. Graham Smith & Menzo Wentink – CID 4444. Also see <https://mentor.ieee.org/802.11/dcn/20/11-20-0367-06-000m-resolution-of-cid-4444.docx>
   5. Matthew FISCHER – CIDs 4416, 4613 on PV1 security, <https://mentor.ieee.org/802.11/dcn/20/11-20-0877-00-000m-cr-pv1-security.docx>
   6. CIDs pulled from June Motions
      1. PHY: 4445, 4137

MAC: 4723, 4155, 4159

4.       AOB

5. Adjourn

* + 1. Discussion of Agenda
       1. Osama was not able to attend today, move to Tuesday June 30.
       2. Review the other authors on the proposed Draft agenda.
    2. No objection to updated Agenda see R28
  1. **Editor Report** – Emily QI (Intel)
     1. The editors have started to add the approved comments from June 19th.
     2. Expect middle of July for D3.4 availability.
  2. **Review doc 11-20/320r2** - CID 4695 - Abhi PATIL (Qualcomm)
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-0320-02-000m-resolution-for-cid-4695.docx>
     2. CID 4695 (MAC)
        1. Review comment
        2. Review background.
        3. Resolution proposed: Revised

Agree with the commenter. There is inconsistency between the text in clause 9.4.2.170.2 and clause 11.50 which needs to be addressed.

During offline discussions with several members affiliated with different companies, it was determined that the Filtered Neighbor AP subfield is not used by non-TVHT STAs. For example, there are no known 802.11ai or 802.11ax implementations that use this bit. In addition, TGax has defined a new bit (Same SSID subfield) which serves the same purpose as Filtered Neighbor AP subfield. The new bit defined by 11ax provides per-AP level granularity and is applicable to a more general scenario (i.e., individually addressed frames such as Probe Response as well as broadcast frames such as Beacon or broadcast Probe Response or FILS Discovery frames). Furthermore, there are implementations that are using the new bit.

Given that there are no other implementation that are using Filtered Neighbor AP bit, the resolution proposes to reserve this bit field for non-TVHT STAs. The revised text restores the meaning of this subfield as originally proposed by the TGaf.

TGm editor please make changes as shown in doc 11-20/320r2 <<https://mentor.ieee.org/802.11/dcn/20/11-20-0320-02-000m-resolution-for-cid-4695.docx>>

* + - 1. Review proposed changes.
      2. Chat window noted one extra change needed to proposal:
         1. Chat window: In r2, change "The Filtered Neighbor AP subfield is 1 bit in length. This subfield" to just "The Filtered Neighbor AP subfield".
      3. Note that a request was sent to the reflector for feedback previously.
      4. ACTION ITEM - Abhi PATIL: Another call for comment to be made to indicate an R3 has been posted and ready for Motion.
      5. Proposed Resolution: CID 4695 (MAC): REVISED (MAC: 2020-06-26 14:20:31Z): Incorporate the changes in 11-20/320r3 (<https://mentor.ieee.org/802.11/dcn/20/11-20-0320-03-000m-resolution-for-cid-4695.docx>), which reverts the Filtered Neighbor AP subfield to reserved for non-TVHT operation and clarifies the use for TVHT.
      6. No objection – Mark Ready for Motion.
  1. **Review doc 11-20/367r6 CID 4444** - Graham Smith (SR Technologies) & Menzo Wentink (Qualcomm)
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-0367-06-000m-resolution-of-cid-4444.docx>
     2. CID 4444 (MAC)
        1. Review comment
        2. Review history of CID.
        3. Review the proposed changes in the proposal.
        4. Discussion the point of where a CAP starts and the span.
        5. Discussion on the HCCA vs HCA vs HCF.
        6. Discussion on the use of CAP vs TXOP in the text.
        7. Noted that a duplicate change to the same sentence – one moving to CAP, one to TXOP. The second instance was deleted.
        8. Discussion –
           1. HCCA TXOP vs CAP still a bit of discussion.
           2. On page 6 last line, need to change TXOP to HCCA TXOP
           3. More discussion on Duration values on page 6.
           4. 9.9.2.1.2 has most of text from TGe days.
        9. Chat Window:
           1. From Mark Rison: Where are we with this one? Have we agreed what to "maintain control of the medium" means?

Are we going to have a bit to say "I'm an HC and so I will do real CAPs and I won't just use them as a trick to cheat and send DL data after PIFS"?

* + - * 1. from [V] Mark Hamilton Ruckus/CommScope to everyone:
        2. To Mark's second question, I was referencing the paragraph at P229.64. (Although that is in clause 4, so maybe not sufficiently normative?)
      1. D3.0 P229.64 - review the text in Clause 4 where the Control Channel Access is introduced.
      2. Discussion on what it means to “control the channel access”.
      3. Nearly there. Need to develop some text in Clause 4 to change the control the channel access wording.
      4. Discussion on SIFs duration and where it may occur.
      5. Discussion on the method to maintain control of the Medium. Spelling it out seemed to cause more questions than answers. More discussion on the phrase as it is not used anywhere else in the standard.
      6. Discussion on the insertion of “Data” may need to be more general.
      7. Discussion about many topics devolved into repeating statements.
      8. There may be more improvements, but what we have at this point is probably good enough for now, and if more work is wanted to be done, do as a separate submission.
      9. Proposed Resolution: CID 4444 (MAC): REVISED (MAC: 2020-06-26 15:28:29Z): Incorporate the changes in 11-20/0367r7 (https://mentor.ieee.org/802.11/dcn/20/11-20-0367-07-000m-resolution-of-cid-4444.docx), which clarifies the text defining and describing the CAP and HCCA TXOPs.
      10. Mark Ready for Motion
  1. **Request** to have a motion on July 10th, 2020 on Abhi’s CID 4695
     1. No objection
  2. **Review doc 11-20-877r1** - CIDs 4416, 4613 on PV1 security – Matthew FISCHER (Broadcom)
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-0877-01-000m-cr-pv1-security.docx>
     2. Review changes made between R0 and R1.
        1. CID 4466 (PHY), merged with CID 4613's resolution.
        2. CID 4613 (PHY): Added changes to cover GCMP.
        3. CIDs 4466 and 4613, editorial changes.
        4. CIDs 4466 and 4613 cleaned up "A2" versus "Address 2" terminology.
        5. CID 4614 (PHY) removed from the document, it is assigned to Mark RISON now.
     3. CID 4466 (PHY) and 4613 (PHY)
        1. Question on PN repeating rules.
        2. ACTION ITEM: PHY AdHoc Chair - break the "Duplicate" link between CIDs 4614 and 4613, since they're being handled distinctly.
        3. Question on if David GOODALL has confirmed or not implementations using PV0/PV1?
        4. Discussion on what 11i did with PV0 and PV1.
        5. Why is description language different in PV0 and PV1? The precise language is historic and has become a bit different to address the specific subtype usage that was added over time. The frame headers are different, so having different language may not be critical.
        6. Discussion on the specific points of difference where the type and QoS bit is set.
        7. Review clause 9.2.4.1.3 where QoS bit is still used, so you may could use that instead of the bit description.
        8. Discussion on subfield of Frame Control field.
        9. “Priority Value of the MPDU” added in additional location in 12.5.3.3.1 General (page 8).
        10. Changes were made during the discussion, so an updated R2 will be posted.
        11. Proposed Resolution: CID 4466 (PHY) and CID 4613 (PHY) incorporate the changes for CID 4466 and CID 4613 in 11-20/877r2 <<https://mentor.ieee.org/802.11/dcn/20/11-20-0877-02-000m-cr-pv1-security.docx>> which generally agree with the commenter’s suggestion but which provide exact language to be used to make the language of the two procedures as parallel as is possible, and noting that GCMP is not supported by PV1, but also modifying text to make PV0 CCMP steps more parallel to PV0 GCMP steps.
        12. Mark the CIDs ready for Motion
        13. ACITON ITEM: Check if implementation of PV1 only if they use the value 0 or the PTID subfield id value as the baseline text does not mention PTID value.
  3. **Review next Telecon schedule**
     1. Note we are meeting Monday and Tuesday next week due to holiday.
  4. **Adjourned 11:59am ET.**

1. **IEEE 802.11md REVmd CRC Telecon Wednesday June 17, 2020 15:00-17:00 ET**
   1. **Called to order at 3:05pm** 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 | 6/29 | Aboulmagd, Osama | Huawei Technologies Co. Ltd |
|  | TGmd | 6/29 | Au, Kwok Shum | Huawei Technologies Co., Ltd |
|  | TGmd | 6/29 | Bhandaru, Nehru | Broadcom Corporation |
|  | TGmd | 6/29 | Coffey, John | Realtek Semiconductor Corp. |
|  | TGmd | 6/29 | Derham, Thomas | Broadcom Corporation |
|  | TGmd | 6/29 | Hamilton, Mark | Ruckus Wireless |
|  | TGmd | 6/29 | Harkins, Daniel | Aruba Networks, Inc. |
|  | TGmd | 6/29 | Levy, Joseph | InterDigital, Inc. |
|  | TGmd | 6/29 | Montemurro, Michael | BlackBerry |
|  | TGmd | 6/29 | Qi, Emily | Intel Corporation |
|  | TGmd | 6/29 | RISON, Mark | Samsung Cambridge Solution Centre |
|  | TGmd | 6/29 | Rosdahl, Jon | Qualcomm Technologies, Inc. |
|  | TGmd | 6/29 | Wentink, Menzo | Qualcomm Incorporated |

* + 1. Missing from IMAT: None reported
  1. **Review Agenda**: 11-20/535r28:
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-0535-28-000m-2020-april-july-teleconference-agendas.docx>
     2. **The draft agenda for the teleconferences is below:**

1.       Call to order, 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 slides: See slides 5-12 in <https://mentor.ieee.org/802.11/dcn/20/11-20-0308-00-000m-2020-march-tgmd-agenda.pptx>

2.  Editor report – Emily QI/Edward AU

3.  Comment resolution:

a) 2020-06-29 Monday 3-5pm Eastern 2 hours

i. Mark HAMILTON – MAC CIDs <https://mentor.ieee.org/802.11/dcn/20/11-20-0338-09-000m-revmd-initial-sa-comments-assigned-to-hamilton.docx>

ii. Nehru Bhandaru – CID 4728,

<https://mentor.ieee.org/802.11/dcn/20/11-20-0928-01-000m-cid-4728-resolution.docx>

iii. CIDs pulled from June Motions

a. PHY: 4445, 4137

b. MAC: 4723, 4155, 4159

iv. Mark RISON CIDs

4.       AOB

5. Adjourn

* + 1. Discussion of Agenda
       1. Validate who was ready on the call and agenda.
       2. No change to the agenda
    2. No objection to updated Agenda see R29
  1. **Editor Report** – Emily QI (Intel)
     1. No Update – No Questions.
  2. **Review Doc 11-20/338r9** – MAC CIDS Mark HAMILTON (Ruckus/CommScope)
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-0338-09-000m-revmd-initial-sa-comments-assigned-to-hamilton.docx>
     2. CID 4221 (MAC)
        1. Review Comment
        2. Review history of discussion
        3. Proposed resolution: Revised; Delete “valid” at 1618.41, as requested.

Replace “no valid TSF timestamp is present” with “no timestamp is present” at both P2199.63 and P2200.2.

Replace “valid TSF timestamp” with “TSF timestamp” at P1623.41, P2193.15, P2193.19, P2193.31

Replace:

* “Accept, valid timestamp present in TIM frames” with “Accept, timestamp present in TIM frames”
* “Overridden, valid timestamp present in TIM frames” with “Overridden, timestamp present in TIM frames”

in Table 9-229, and at P1623.42, P1623.43, P2193.16, P2193.19, and P2193.28.

* + - 1. No objection – Mark Ready for Motion
    1. CID 4814 and 4780 (GEN)
       1. Review Comments
       2. Review submission discussion.
       3. Proposed resolution: Revised; At P266.48, replace “may” with “might”

At P271.6, replace “may” with “can”

At P298.17, replace “may” with “can”

Note to commenter: These three locations are the only occurrences of a normative verb in clause 4, so these corrections now complete clause 4 being scrubbed for normative language. Uses of “can” are not normative, per the 802.11 Style Guide, and the CRC deemed these appropriate in clause 4 for references to normative behaviour specified elsewhere in the standard. As for clause 4 being “quite detailed”, the CRC considered several examples of the more detailed text in clause 4, and found that while the distinction between “general description” and “detailed” is a grey line, there was consistency to what material is in, for example, subclause 4.10 versus clause 12, so no material was moved.

* + - 1. Discussion on support of leaving Clause 4.10 as is (with the proposed changes to “may”).
      2. No objection – Mark Ready for Motion
    1. CID 4323 (MAC)
       1. Review Comment
       2. Proposed Resolution: Accept
       3. No objection – Mark Ready for Motion
    2. CID 4342 (MAC)
       1. Review Comment
       2. Review submission discussion for CID.
       3. Similar to CID 1400, which changed to “HT MCS”.
       4. CID 2446 which changed to “HT-MCS”
       5. Proposed Resolution: Accept
       6. No objection – Mark Ready for Motion
    3. CID 4376 (MAC)
       1. Review Comment
       2. Proposed Resolution: Accept
       3. No Objection – Mark Ready for Motion.
    4. CID 4373 (MAC)
       1. Review Comment
       2. Proposed Resolution: Accept
       3. No Objection – Mark Ready for Motion.
    5. CID 4371 (MAC)
       1. Review Comment
       2. Proposed Resolution: Accept
       3. No Objection – Mark Ready for Motion.
    6. CID 4370 (MAC)
       1. Review Comment
       2. Proposed Resolution: Revised; Change “Fine Timing Request” to “Fine Timing Measurement Request or Fine Timing Measurement frames” at the cited location.
       3. Discussion on when “initial” is needed or not. Located at tope of page 19 a “Frame” that should be “frame” at 1557.26 (d3.0).
       4. Discussion on only the initial request and measurement has the subfield.
       5. Request to include “initial” for both frames.
       6. Discussion on the use of “frames”.
       7. Discussion on the process of the response for the status for the initial Fine Timing Request.
       8. More Discussion will be needed.
    7. CID 4410 (MAC)
       1. Review comment
       2. Proposed resolution: Accept
       3. No Objection – Mark Ready for Motion.
    8. CID 4489 and 4488 (MAC)
       1. Review comment.
       2. Same comment, but with different proposed change.
       3. Proposed Resolution CID 4488 (MAC): Revised. Change each “Remaining BI field” (singular) in the cited paragraph to “Handover Remaining BI field”. Thus, the group ended up agreeing with the Proposed Change from CID 4489, without looking at it. It’s nice when a plan comes together! 😊
       4. Proposed Resolution: CID 4489 (MAC) Accept
    9. Return to CID 4370 (MAC)
       1. Review p1358.50.
       2. The Response frame is still under discussion.
    10. Mark HAMILTON had to drop.
  1. **Review doc 11-20/928r1**– CID 4728 - Nehru Bhandaru (Broadcom)
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-0928-01-000m-cid-4728-resolution.docx>
     2. Abstract: This document provides some discussion and a proposed resolution for CID 4728. It is duplicate of CID 2551 that has a resolution of ‘Reject’ currently. The group may consider rejecting CID 4728 also with the same reason; alternatively, both the CIDs could be resolved using the proposed changes, relative to TGmd Draft 3.3 [1], in this submission.
     3. CID 4728 (PHY)
        1. Review Comment
        2. Review the history of the CIDs.
        3. Review submission discussion.
        4. Discussion on probably reason of reusing counters that should not have occurred. Discussion on why CID should be rejected.
        5. CID 2551 was rejected with “REJECTED (PHY: 2019-03-13 22:24:13Z) - KRACK was the result of people not reading the standard fully and implementing a component protocol or API. IT is not reasonable to assume future implementers will do anything different. There does not seem to be a problem with being explicit and repetitive like this. In fact, it is kind of emphatic. So, the combination of no existing problem and a problem created by accepting the proposed change means reject.”
        6. Discussion on further review of CID process.
        7. Discussion on the concern of effort to add a new key and remember all the places to add the new key information.
        8. Discussion on using the same reject reason for this CID as was used for CID 2551.
        9. Straw Poll:
           1. Do you support a reject with same reason as CID 2551?
           2. Yes/No/Abstain.
           3. Results: 6-1-3
        10. Proposed Resolution: “REJECTED (PHY: 2020-06-29 20:16:05Z)- KRACK was the result of people not reading the standard fully and implementing a component protocol or API. IT is not reasonable to assume future implementers will do anything different. There does not seem to be a problem with being explicit and repetitive like this. In fact, it is kind of emphatic. So, the combination of no existing problem and a problem created by accepting the proposed change means reject.”
        11. Mark Ready for Motion
  2. **Review CIDs pulled from June Motions:**
     1. a. PHY: 4445, 4137
     2. CID 4445 (PHY)
        1. Review why removed from motion.
        2. Discussion of the usage of “set to 0” and “value 0 indicates”.
        3. Editor indicated says that the the usage should be “the value 0 indicates”.
        4. Need to change proposed resolution at top of page 15. In 11-20/338r4.
        5. Proposed Resolution: Revised. At P1011L8

Change

“For nonmesh STAs, the Channel Switch Count field either is set to the number of TBTTs until the STA sending the Channel Switch Announcement element switches to the new channel or is set to 0. (MDR2)A 1 indicates that the switch occurs immediately before the next TBTT. A 0 indicates that the switch occurs at any time after the frame containing the element is transmitted.”

to

"For nonmesh STAs, the Channel Switch Count field is set to the number of TBTTs until the STA sending the Channel Switch Announcement element switches to the new channel. (MDR2)The value 1 indicates that the switch occurs at the next TBTT (the ensuing Beacon frame is created assuming the new channel), and the value 0 indicates that the switch occurs at any time after the frame containing the element is transmitted."

* + 1. CID 4137 (PHY)
       1. Review CID and why it was removed from motion.
       2. Discussion on change from calling out Reserved.
       3. Discussion on the email exchange from May 14th shared in the Chat Window:
          1. I think this comment can be rejected. For 802.11ah it is clear what to do when these particular bits are not set to 1, which is basically what I was looking for. The original reject reason is sufficient:

REJECTED (PHY: 2020-02-14 15:27:30Z) - To be specific, the Reserved SIG Indication is used as one of criteria in PHY receive procedure whether the PHY shall issue the error condition PHY-RXEND.indication(FormatViolation) in different amendments (e.g. 11ac, 11ah and 11ax) when its reserved bit set to 0.

With respect to the note I'll do some more research on the topic of PHY signal field bits which are reserved and set to 1, but there's no need to hold things up for that now.

* + - 1. Discussion on why it should not be called reserved.
      2. Email exchange was shared to the reflector:
         1. [STDS-802-11-TGM] Fwd: CID 4137
         2. From: M Montemurro
         3. Date: Mon, 29 Jun 2020 16:27:35 -0400 (EDT)
         4. <http://www.ieee802.org/11/email/stds-802-11-tgm/msg01942.html>
      3. Suggestion to add CID 4137 to doc 11-20.435 document and assign to Mark RISON.
      4. We need to get S1G experts to agree to the proposed changes.
      5. More work needed.
    1. b. MAC: 4723, 4155, 4159
       1. Review Comments removed from MAC Motion.
       2. CID 4723 (MAC)
          1. Review the CID
          2. CID 4723 was not discussed because Mark HAMILTON was continuing to work on it. It has to do with wrapped key.
       3. CID 4155 (MAC)
          1. Review doc 11-20/516r14 for the changes being proposed.

<https://mentor.ieee.org/802.11/dcn/20/11-20-0516-14-000m-cr-mscs-and-cid4158.docx>

* + - * 1. Chat Window:

from [V] Mark RISON Samsung to Everyone: 4:38 PM 4159: I remain concerned by the following points (I think Matt disagrees):

a) in Upon receipt of an MSCS Request frame from an associated non-AP STA or receipt from a non-AP STA of a (Re)Association Request frame containing an MSCS Descriptor element, the AP shall respond with a corresponding MSCS Response frame

the Request Type field has to be set to “Add” too, per the para two up.

b) in In the MSCS Descriptor element of a (Re)Association Response frame that does not indicate “SUCCESS” for the MSCS setup, the Request Type field is set to “Add” if no suggested set of parameters is indicated, or “Change” if the element indicates a suggested set of parameters as described above.

the bit about "Add" is confusing (you say "Add" to say you have no suggestion to make?).

* + - * 1. P1288. Line 1 – table 9-246 was reviewed.
      1. Update Proposed resolution to use new revision 11-20/516r15
      2. ACTION ITEM: The R15 will be posted by Dorothy.
  1. **Review doc 11-20/636r4** – Mark RISON (Samsung)
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-0639-04-000m-selected-rison-discussion-cids.xlsx>
     2. CID 4227 and 4260 and 4266 (PHY)
        1. Review Comment
        2. This comment will be rejected for Insufficient Detail if no proposal is given.
     3. CID 4191 (EDITOR)
        1. Motioned #175
     4. CID 4270 (EDITOR)
        1. Motion #165
     5. CID 4271 (EDITOR)
        1. Motion 174
     6. CID 4277 (PHY)
        1. On work list.
        2. Discussion on direction on the CID.
        3. BA Session (4x), Block Ack Session (17x) and BlockAck session (4x)
        4. There are three choices, and then a definition needs to be added also.
     7. CID 4286 (PHY)
        1. Review comment
        2. Request for more specific details and place in the Word Doc
     8. CID 4291 (EDITOR)
        1. Approved by Motion 186
     9. CID 4293 (PHY)
        1. Reviewed previously
        2. This comment will be rejected for Insufficient Detail if no proposal is given.
     10. CID 4298 and 4299(PHY)
         1. Mark RISON to prepare submission with details. – Noted May 13, 2020
         2. This comment will be rejected for Insufficient Detail if no proposal is given.
     11. CID 4301 (EDITOR)
         1. Resolved Motion 195
     12. CID 4314 (EDITOR)
         1. Motion 195
     13. CID 4341 (EDITOR)
         1. Motion 195
     14. CID 4363 (PHY)
         1. This one has a June 18th email posted for proposed resolution.
     15. Request for CID 4277, 4293, 4298, 4299 time for presentation.
         1. Will be added to agenda to an upcoming agenda.
  2. **Out to time**.
  3. **Next call Tuesday** 3-5pm ET.
  4. **Adjourned 5:03pm**

**References:**

**July 24th:**

1. <https://mentor.ieee.org/802.11/dcn/20/11-20-0535-26-000m-2020-april-july-teleconference-agendas.docx>
2. <https://mentor.ieee.org/802.11/dcn/20/11-20-0308-00-000m-2020-march-tgmd-agenda.pptx>
3. <https://mentor.ieee.org/802.11/dcn/20/11-20-0891-01-000m-d3-0-phy-cr-part-2.docx>
4. <https://mentor.ieee.org/802.11/dcn/20/11-20-0891-02-000m-d3-0-phy-cr-part-2.docx>
5. <https://mentor.ieee.org/802.11/dcn/20/11-20-0891-03-000m-d3-0-phy-cr-part-2.docx>
6. <https://mentor.ieee.org/802.11/dcn/20/11-20-0892-01-000m-mcs32-deprecation.docx>
   * 1. [https://mentor.ieee.org/802.11/dcn/20/11-20-0435-04-000m-resolutions-for-some-comments-on-11md-d3-0-sb1.docx](https://mentor.ieee.org/802.11/dcn/20/11-20-0435-04-000m-resolutions-for-some-comments-on-11md-d3-0-sb1.docx )
7. <https://mentor.ieee.org/802.11/dcn/20/11-20-0877-00-000m-cr-pv1-security.docx>
8. <https://mentor.ieee.org/802.11/dcn/20/11-20-0535-27-000m-2020-april-july-teleconference-agendas.docx>

**July 26th:**

1. <https://mentor.ieee.org/802.11/dcn/20/11-20-0535-27-000m-2020-april-july-teleconference-agendas.docx>
2. <https://mentor.ieee.org/802.11/dcn/20/11-20-0308-00-000m-2020-march-tgmd-agenda.pptx>
3. <https://mentor.ieee.org/802.11/dcn/20/11-20-0320-02-000m-resolution-for-cid-4695.docx>
4. <https://mentor.ieee.org/802.11/dcn/20/11-20-0320-03-000m-resolution-for-cid-4695.docx>
5. <https://mentor.ieee.org/802.11/dcn/20/11-20-0367-06-000m-resolution-of-cid-4444.docx>
6. <https://mentor.ieee.org/802.11/dcn/20/11-20-0367-07-000m-resolution-of-cid-4444.docx>
7. <https://mentor.ieee.org/802.11/dcn/20/11-20-0877-01-000m-cr-pv1-security.docx>
8. <https://mentor.ieee.org/802.11/dcn/20/11-20-0877-02-000m-cr-pv1-security.docx>

June 29th:

1. <https://mentor.ieee.org/802.11/dcn/20/11-20-0535-28-000m-2020-april-july-teleconference-agendas.docx>
2. <https://mentor.ieee.org/802.11/dcn/20/11-20-0308-00-000m-2020-march-tgmd-agenda.pptx>
3. <https://mentor.ieee.org/802.11/dcn/20/11-20-0338-09-000m-revmd-initial-sa-comments-assigned-to-hamilton.docx>
4. <https://mentor.ieee.org/802.11/dcn/20/11-20-0928-01-000m-cid-4728-resolution.docx>
5. <https://mentor.ieee.org/802.11/dcn/20/11-20-0516-14-000m-cr-mscs-and-cid4158.docx>
6. <https://mentor.ieee.org/802.11/dcn/20/11-20-0639-04-000m-selected-rison-discussion-cids.xlsx>