IEEE P802.11  
Wireless LANs

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| Telecon Minutes for REVmd CRC- April 8 2020 | | | | |
| Date: 2020-04-08 | | | | |
| Author(s): | | | | |
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Abstract

802.11md REVmd CRC teleconferences for April 8, 2020

1. **IEEE 802.11md REVmd CRC Telecon Wednesday April 01, 2020 16:00-18:00 ET**
   1. **Called to order at 4:03pm** by the TG Chair Dorothy STANLEY (HPE)
   2. **Review Patent and Participation Policy**
      1. No Issues noted.
   3. **Attendance:** -please log with IMAT:
      1. WebEx reported 14 on call
      2. IMAT Report
         1. Andersdotter, Amelia None - Self-funded
         2. Au, Kwok Shum (Edward) Huawei Technologies Co., Ltd
         3. Coffey, John Realtek Semiconductor Corp.
         4. Costa, D.Nelson Peraso Technologies Incorporated
         5. Derham, Thomas Broadcom Corporation
         6. Fischer, Matthew Broadcom Corporation
         7. Goodall, David Morse Micro
         8. Hamilton, Mark Ruckus Wireless
         9. Hansen, Christopher Peraso Technologies Incorporated
         10. Hervieu, Lili Cable Technology Laboratories, Inc.
         11. Kim, Youhan Qualcomm Incorporated
         12. Montemurro, Michael BlackBerry
         13. Qi, Emily Intel Corporation
         14. RISON, Mark Samsung Cambridge Solution Centre
         15. Rosdahl, Jon Qualcomm Technologies, Inc.
         16. Smith, Graham SR Technologies
         17. Stanley, Dorothy Hewlett Packard Enterprise
         18. Yu, Mao NXP Semiconductors
   4. **Review Agenda**: 11-20/535r1:
      1. <https://mentor.ieee.org/802.11/dcn/20/11-20-0535-01-000m-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>

c. Adhoc meeting reminders:

April 21-23 Cambridge UK – Not in person; teleconference proposal is below.

2.       Editor report – Emily QI/Edward AU

3.       Comment resolution

1. **2020-04-08 Wednesday – 4:00-6pm Eastern \*\*\*\*\*Teleconference announced with 10 day notice\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*(London is +5)**
   1. Youhan KIM – PHY CIDs - <https://mentor.ieee.org/802.11/dcn/20/11-20-0536-00-000m-d3-0-phy-cr.docx>
   2. Christopher HANSEN <https://mentor.ieee.org/802.11/dcn/20/11-20-0225-03-000m-cid-4076-draft-text.docx>
   3. Mathew FISCHER –
      1. <https://mentor.ieee.org/802.11/dcn/19/11-19-1564-01-000m-originator-block-ack-state.docx>,
      2. <https://mentor.ieee.org/802.11/dcn/19/11-19-1562-01-000m-all-sta-crs-mcs-negotiation.docx> ,
      3. CID 4157 <https://mentor.ieee.org/802.11/dcn/19/11-19-1778-04-000m-india-ch-167-169-173.pptx>

5. Adjourn

* + 1. No objection to the planned agenda:
  1. **Editor Report:** Emily QI (INTEL)
     1. About 385 comments have been approved and implemented (including 46 recently approved) but waiting for another group of CIDs before releasing D3.3.
     2. Doc 2156r6 has been uploaded with all the current status of the Comments.
     3. We will make more motions on the 17th and those will be included in the D3.3.
  2. **Review doc 11-20/536r1** - Youhan KIM (Qualcomm)
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-0536-01-000m-d3-0-phy-cr.docx>
     2. CID 4344 (PHY)
        1. Review comment
        2. Review locations for proposed deletion of Notes.
        3. Proposed Resolution: Rejected; TX center frequency leakage is mostly a function of the RF circuit implementation and is mostly agnostic to the PPDU type being transmitted such as non-HT, HT or VHT. Note that Clause 21 (VHT) have more stringent requirement for TX center frequency leakage than Clause 17 or 19. Furthermore, VHT devices could transmit a 20 MHz PPDU (including non-HT or HT) in an 80 or 160 MHz channel, where the TX center frequency leakage would be outside of the 20 MHz spectrum actively modulated by the PPDU. And Clause 17 and 19 do not clearly specify the TX center frequency requirement for those cases. Hence, if a VHT capable device is transmitting a non-HT or HT PPDU, IEEE 802.11 is requiring that the TX center frequency leakage requirement be that defined in Clause 21. Hence, the information the commenter is proposing to delete is essential to the standard and should not be deleted.
        4. Discussion on the requirements from Clause 17 or 19 and 21.
        5. Discussion on the proposal of adding new Notes to address HT devices.
        6. Discussion on if the Notes should be changed to Normative text rather than Notes.
        7. An update to the Resolution will be made: REVISED (PHY: 2020-04-08 20:18:52Z) -– changing the Notes to Normative text. And Mark Ready for Motion.
        8. Post meeting update: Revised

Note to Commenter: Proposed resolution makes the NOTE to be a ‘regular’ (non-NOTE) text.

Instruction to Editor:

At D3.2 P2940L63, change “NOTE 2 – For rules” to “For rules”.

At D3.2 P3044L58, delete “NOTE 3 – For rules” to “For rules”.

* + - 1. Mark Ready for Motion
    1. CID 4429 (PHY)
       1. Review comment
       2. Review submission discussion
       3. Discussion on the detail of the PPDU formats.
       4. Discussion lead to accept was the correct resolution.
       5. Proposed Resolution: ACCEPTED (PHY: 2020-04-08 20:27:16Z)
       6. No objection – Mark Ready for Motion
    2. CID 4171, 4172, 4173 (PHY)
       1. Review Comments
       2. Review submission discussion:
       3. Proposed Resolution CID 4172 and CID 4173: Revised.

Note to Commenter: The relevant sentences were introduced in REVmd D1.0 (CID 75) but had error. Proposed resolution fixes this error, after which the ‘may’ in the sentence referenced by the commenter is the correct wording.

Instruction to Editor:

At D3.2 P3029L32, change “Smoothing bit should be set to 1” to “Smoothing bit should be set to 0”.

At D3.2 P3029L33, change “It may be set to 0 otherwise” to “It may be set to 1 otherwise”.

* + - 1. Proposed Resolution: **CID 4171 (PHY)**

REVISED (PHY: 2020-04-08 20:43:30Z) -

Instruction to Editor:

At D3.2 P3029L32, change “Smoothing bit should be set to 1. It may be set to 0 otherwise” to “Smoothing bit should be set to 0.”

Note to commenter: The relevant sentences were introduced in REVmd D1.0 (CID 75) but had error. Proposed resolution fixes this error, after which the ‘may’ in the sentence referenced by the commenter is the correct wording.

* + - 1. Proposed Resolution for **CID 4172 and 4173**: REVISED (PHY: 2020-04-08 20:43:30Z) - Instruction to Editor:

At D3.2 P3029L32, change “Smoothing bit should be set to 1. It may be set to 0 otherwise” to “Smoothing bit should be set to 0.”

Note to commenter: The relevant sentences were introduced in REVmd D1.0 (CID 75) but had error. Proposed resolution fixes this error, after which the ‘may’ in the sentence referenced by the commenter is the correct wording.

* + - 1. Discussion on what values can be set.
      2. Discussion on 4 options for the sentences
      3. Mark all 3 CIDs Ready for motion
    1. CID 4535 (PHY)
       1. Review comment
       2. Review proposed changes
       3. Proposed resolution: REVISED (PHY: 2020-04-08 20:46:47Z) - The “Long” and “Short” refer to long slot time and short slot time, respectively. Proposed resolution makes this clearer, in both clause 18 and 19.

Instruction to Editor: In D3.2,

Change “Long = 20 us” to “Long slot time = 20 us” at P2969L13, P2969L18, P3067L16, P3067L17.

Change “Short = 9 us” to “Short slot time = 9 us” at P2969L14, P2969L20, P3067L22, P3067L23.

* + - 1. No objection – Mark Ready for Motion
    1. CID 4450 (PHY)
       1. Review Comment
       2. Review proposed changes
       3. Proposed Resolution: ACCEPTED (PHY: 2020-04-08 20:47:41Z)
       4. No objection – Mark Ready for Motion
    2. CID 4332 (PHY)
       1. Review comment
       2. Review proposed changes
       3. Proposed Resolution: REVISED (PHY: 2020-04-08 20:49:36Z) - Instruction to Editor:

At D3.2 P3133L21, P3265L51 and P3319L35, change “1 to numberOfOctets(dot11TxPowerLevelExtended)/2” to “1 to N/2, where N is the number of octets in dot11TxPowerLevelExtended”.

Note to Commenter: Proposed resolution updates the text to avoid using the undefined function numberOfOctets().

* + - 1. No objection – Mark Ready for Motion
    1. CID 4604 (PHY)
       1. Review Comment
       2. Review submission discussion
       3. Proposed Resolution: REJECTED (PHY: 2020-04-08 20:50:45Z) - In VHT MU, each user can have different number of data bits per symbol, thus N\_DBPS,u with the subscript “u” is appropriate. And N\_DBPS,u is used in D3.2 P3243L28.
       4. No objection – Mark Ready for Motion.
    2. CID 4022 (PHY)
       1. Review Comment
       2. Review submission discussion.
       3. Proposed Resolution: REVISED (PHY: 2020-04-08 20:53:46Z) - Instruction to Editor:

At D3.2 P3173L15 Equation (21-20), change “N\_SR” to “26”, and “k = -N\_SR” to “k = -26”.

At D3.2 P3353L46 Equation (23-14), change “N\_SR” to “26”, and “k = -N\_SR” to “k = -26”.

Note to Commenter: Commenter is correct about the issue. Note that L-SIG and VHT-SIG-A avoids similar issue by not use the variable N\_SR, but rather using “26” in Equations (21-25) and (21-28), respectively. Hence changing N\_SR to 26 in Equation (21-20) is more appropriate. Similar change should also be made for S1G in Equation (23-14).

* + - 1. Discussion on if the resolution was clear to the editor.
      2. After some discussion, it was noted that the submission is recorded in the database for the editor to review.
      3. More work needed as we not sure where one of the terms came from.
    1. CID 4023 (PHY)
       1. Review comment
       2. Proposed Resolution: Revised.

Note to Commenter: Commenter is correct about the issue. Note that L-SIG and VHT-SIG-A avoids similar issue by not use the variable N\_SR, but rather using “26” in Equations (21-25) and (21-28), respectively. Hence changing N\_SR to 26 in Equation (21-23) is more appropriate.

Instruction to Editor:

At D3.2 P3173L62 Equation (21-23), change “N\_SR” to “26”, and “k = -N\_SR” to “k = -26”.

* + - 1. More work needed to determine what LTFk
    1. CID 4544 (PHY)
       1. Review comment
       2. Proposed Resolution: REJECTED (PHY: 2020-04-08 21:04:10Z) -

LTF\_left and LTF\_right are intermediate variables used to define VHT-LTF. The usage of LTF\_left and LTF\_right is clear in the standard (e.g. see Equation (21-36)), and thus there is no technical issue with the terms.

* + - 1. No objection – Mark Ready for Motion
    1. CID 4368 (PHY)
       1. Review Comment
       2. Proposed Resolution: ACCEPTED (PHY: 2020-04-08 21:05:11Z)
       3. No objection – Mark Ready for Motion
  1. **Review doc 11-20/225r3** – Chris HANSEN (Peraso)
     1. <https://mentor.ieee.org/802.11/dcn/20/11-20-0225-03-000m-cid-4076-draft-text.docx>
     2. CID 4076 (PHY)
        1. Review comment
        2. Review history of submission and the comments that had been worked offline.
        3. Discussion on if we use “8-PSK” or “8 PSK”.
        4. Discussion on terms that may be used differently in this submission from the current draft usage vs TGay usage.
        5. Discussion on Table 20-13 – The format of the submission matches the existing table.
        6. The pie over two and 8-PSK issues are deferred to the editor to resolve.
        7. Proposed Resolution: REVISED (PHY: 2020-04-08 21:19:14Z) - Incorporate the changes given in 11-20/225r3: <<https://mentor.ieee.org/802.11/dcn/20/11-20-0225-03-000m-cid-4076-draft-text.docx>>, adding text changes to add optional 8 PSK MCS 10 and 11 to DMG SC PHY.
        8. A separate motion will be prepared for this CID for the 17th April Telecon.
        9. CID was assigned to comment group "Motion CID 4076"
        10. Mark CID ready for Motion
  2. **Review doc 11-19/1778r4** – Matthew FISCHER (Broadcom)
     1. <https://mentor.ieee.org/802.11/dcn/19/11-19-1778-04-000m-india-ch-167-169-173.pptx>
     2. CID 4157 (GEN)
        1. Review Comment
        2. Review question on slide 6 “Should there be more changes?”
           1. Compatibility bit presented.
        3. Discussion on alternative of Create new operating classes for each new set of channels I.e. instead of adding to an existing operating class and providing a capability bit for the set of new channels
        4. Discussion on how supported channels as a subset of operating channels, may need to check with Peter E. offline.
        5. Annex E does not automatically get updated when locations add channels, so we need to update at revision timeframe.
        6. Table E-4 is supposed to be a superset, and we may be just need to add a channel number to the table without any extended capability.
        7. Discussion on the value of Annex E.
        8. Association of Operating Class and actual supported elements in the table.
        9. We have some support for Option 1, and a recommendation to talk with Peter E. Will get more feedback and bring back later.
  3. **Review Doc 11-19/1564r1** Matthew FISCHER (Broadcom)
     1. <https://mentor.ieee.org/802.11/dcn/19/11-19-1564-01-000m-originator-block-ack-state.docx>
     2. CID 4155 (MAC)
        1. Review comment
        2. Review proposed changes
        3. Discussion on when the state at the originator side is established.
        4. Discussion on the placement of articles.
        5. Proposed resolution: CID 4155 (MAC): - Make the changes as shown in 11-19/1564r2 (https://mentor.ieee.org/802.11/dcn/19/11-19-1564-02-000m-originator-block-ack-state.docx). This clarifies the text for block ack state processing, as requested.
        6. No objection to the direction, but some wordsmithing may need to be done.
  4. **Review doc 11-19/1562r2** Matthew FISCHER (Broadcom)
     1. <https://mentor.ieee.org/802.11/dcn/19/11-19-1562-02-000m-all-sta-crs-mcs-negotiation.docx>
     2. Abstract: Proposed language to expand use of Control Response MCS Negotiation from S1G to all STA types
     3. CID 4156 (MAC)
        1. Review comment
        2. Review submission discussion.
        3. Review proposed changes
        4. Discussion on some features not used.
        5. More work will be done, and when we review again.
  5. **Adjourned 6:00 pm ET**.

**References:**

April 8th, 2020:

1. <https://mentor.ieee.org/802.11/dcn/20/11-20-0535-01-000m-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/20/11-20-0536-01-000m-d3-0-phy-cr.docx>
4. <https://mentor.ieee.org/802.11/dcn/20/11-20-0225-03-000m-cid-4076-draft-text.docx>
5. <https://mentor.ieee.org/802.11/dcn/19/11-19-1778-04-000m-india-ch-167-169-173.pptx>
6. <https://mentor.ieee.org/802.11/dcn/19/11-19-1564-01-000m-originator-block-ack-state.docx>
7. <https://mentor.ieee.org/802.11/dcn/19/11-19-1562-02-000m-all-sta-crs-mcs-negotiation.docx>