IEEE P802.11  
Wireless LANs

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| Minutes for REVme Telecons January 5 and 8, 2024 | | | | |
| Date: 2024-01-08 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Stephen McCann | Huawei Technologies Co., Ltd | Southampton, UK |  | stephen.mccann@ieee.org |

Abstract

Minutes for the TGme (REVme) Teleconferences on January 5th and 8th, 2024

1. **TGme (REVme) Telecon –Wednesday, January 5, 2024, at 10:00-12:00 ET**
   1. **Called to order** 10:02am ET by the TG Chair, Michael MONTEMURRO (Huawei).
   2. **Introductions of other Officers present:**
      1. Vice Chair - Mark HAMILTON (Ruckus/CommScope)
      2. Vice Chair - Mark RISON (Samsung)
      3. Editor - Emily QI (Intel)
      4. Editor - Edward AU (Huawei)
      5. Secretary pro-tem – Stephen MCCANN (Huawei)
   3. **Telecon Attendance:**
      1. IMAT Reported**:**

|  |  |  |
| --- | --- | --- |
|  | **Name** | **Affiliation** |
| 1 | McCann, Stephen | Huawei Technologies Co., Ltd |
| 2 | Yan, Peng | Wi-Fi Alliance |
| 3 | Huang, Po-Kai | Intel |
| 4 | Malinen, Jouni | Qualcomm Technologies, Inc |
| 5 | Patwardhan, Gaurav | Hewlett Packard Enterprise |
| 6 | Levy, Joseph | InterDigital, Inc. |
| 7 | RISON, Mark | Samsung Cambridge Solution Centre |
| 8 | Harkins, Daniel | Aruba Networks, Inc. |
| 9 | Halasz, David | Morse Micro |
| 10 | Lungu, Alexandru | Samsung |
| 11 | Thakur, Sidharth | Apple Inc. |
| 12 | Montemurro, Michael | Huawei Technologies Co., Ltd |
| 13 | Thakore, Darshak | Cable Television Laboratories Inc. (CableLabs) |
| 14 | Smith, Graham | SR Technologies |
| 15 | Orr, Stephen | Cisco Systems, Inc. |
| 16 | Smith, Luther | Cable Technology Laboratories, Inc. |
| 17 | Kim, Youhan | Qualcomm Technologies, Inc. |
| 18 | Stacey, Robert | Intel |
| 19 | Rosdahl, Jon | Qualcomm Technologies, Inc. |
| 20 | Hamilton, Mark | Ruckus/CommScope |
| 21 | Qi, Emily | Intel |
| 22 | Krebs, Alexander | Apple Inc. |
| 23 | Sherlock, Ian | Texas Instruments Inc. |
| 24 | Hedayat, Ahmadreza | Apple Inc. |
| 25 | Gupta, Binita | Cisco Systems, Inc. |
| 26 | Coffey, John | Realtek Semiconductor Corp. |
| 27 | Wei, Dong | NXP Semiconductors |
| 28 | Campiglio, Ugo | Cisco Systems, Inc. |

* 1. **Review Patent Policy and Copyright policy and Participation Policies.**
     1. No issues noted.
  2. **Review Agenda:**
  3. <https://mentor.ieee.org/802.11/dcn/23/11-23-2103-05-000m-november-january-teleconference-agenda.docx>
     1. Proposed Agenda:

**The draft agenda for the teleconferences is below:**

1.       Call to order, attendance (<https://imat.ieee.org/attendance> ), and patent and copyright 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. **Copyright Policy:**

i. By participating in this activity, you agree to comply with the IEEE Code of Ethics, all applicable laws, and all IEEE policies and procedures including, but not limited to, the IEEE SA Copyright Policy.

c.**Participation and policy related (including Patent and Copyright) slides: See slides 9-20 in** <https://mentor.ieee.org/802.11/dcn/22/11-22-2139-00-0000-2nd-vice-chair-report-january-2023.pptx>

d.**Agenda Approval**

2.       **Editor report** – Emily QI/Edward AU

3.       **Comment Resolution**

* + 1. CID 6087 and 6088 (SEC) – doc 11-23/1856 and doc 11-23/1857 – Malinen (Qualcomm)
    2. Related to CID 6087 and 6088 – doc 11-23/2192 – Rison (Samsung)
    3. CID 6040 and 6590 (SEC) – doc 11-21/772 – Montemurro (Huawei)
    4. CID 6181 (ED1) – doc 11-24/20 – Levy (InterDigital)
    5. CID 6058 (MAC) – doc 11-23/1735 – McCann (Huawei)
    6. CID 6213 (MAC) – Rison (Samsung)
    7. CID 6277 (MAC) – Rison (Samsung)
    8. CIDs 6116, 6117, 6123 (PHY) – doc 11-23/2091 – Levy (InterDigital)

4.       **AOB**

5. **Adjourn**

* + 1. No objection to approving the agenda.
  1. **Editor report** – Emily QI/Edward AU
     1. Draft 4.2 is undergoing a final review at the moment, so it should be ready early next week. It includes 11bb. 11bc will be rolled in, at a later point in the year.
  2. **Review doc 11-23/1865r5** – Jouni Malinen (Qualcomm)
     1. <https://mentor.ieee.org/802.11/dcn/23/11-23-1856-05-000m-assortment-of-sa-ballot-comment.docx>
     2. <https://mentor.ieee.org/802.11/dcn/23/11-23-1857-04-000m-rsn-overriding.docx>
     3. CID 6087 (MAC)
        1. Review comment by referring to both submissions.
        2. Q: The format of the IE seems to be the same as the RSNE and RSNXE. So, is this future compatible?
        3. A: Yes, note that these changes can be made as software changes to the supplicant.
        4. Q: Regarding downgrade attack protection, in the original scheme, the selected AKM in message 3 was verified to prevent the downgrade attack.
        5. A: Yes, it’s the same as in the 4 way handshake. However, extra items in message 3 may result in legacy STAs from not operating correctly.
        6. Q: Has 802.11 done something incorrectly, or is it legacy STAs that do not parse messages correctly.
        7. A: The protocol is fine. It is mainly an implementation issue, which is beyond IEEE 802.11.
        8. Q: So, having multiple AKMs in an RSNE messages should work.
        9. A: Yes, that is correct.
        10. Q: In the future, will there just be this RSN override option?
        11. A: No. I don’t think having only the RSN override option is useful. You would use the RSNXE element.
        12. Q: Do you want a straw poll today?
        13. A: Yes, as this comment needs to move forward today.
        14. C: I think people have worked on this and I’m not sure about this implementation. It does solve some issues, but not all of them.
        15. Q: Are there any restrictions with the RSNXE extension?
        16. A: Yes, there are limitations, as started on 12.14.2.
        17. Q: Why is RSNXE not used in the 6 GHz band?
        18. A: It is not at the moment, but it could be used for 6 GHz.
        19. C: I think this text direction looks good.
        20. **Straw Poll**
        21. **Do you support adding the feature along the lines described in 11-23/1857r4?**
        22. Yes: 10, No: 12, Abstain: 1, no answer: 7
        23. Let’s discuss this at the January face to face meeting
        24. More work required. Bring back at Jan interim
     4. CID 6088 (SEC)
        1. Review Comment
        2. C: I have conflicting opinions about this, as some of this has been presented to the IETF. I’m therefore concerned that there will be 2 solutions in IEEE 802.11 and the IETF which could diverge in the future.
        3. C: I have filed a comment to the IETF regarding an error in this protocol. Therefore, I think 802.11 can take ownership of OWE for 802.11.
        4. C: RFCs are not updated. Therefore the IETF could produce an errata document.
        5. C: I like the direction of this document.
        6. Chair: Do we know if there are any copyright/license issues here?
        7. A: I think it’s ok.
        8. Chair: Perhaps we could ask the IEEE/IETF liaison group to check.
        9. C: I would like this to move forward within the IEEE.
        10. C: IEEE owns the original submission, so the legal people in the IETF and IEEE need to check the copyright status.
        11. Action: Chair to send an email to Dorothy Stanley and Christy Bahn to request what the next steps are for OWE IEEE/IETF copyright issues.
        12. More work required. Bring back at Jan interim

* 1. **Review doc 11-23-2192r1** – Mark RISON (Samsung)
     1. <https://mentor.ieee.org/802.11/dcn/23/11-23-2192-01-000m-generation-elements.pptx>
        1. Review submission.
        2. C: On slide #6, I thought you were embedding generation numbers in a new IE.
        3. A: Yes, sort of. It’s explained in the small figure right hand corner.
        4. C: So, this will generate some beacon bloat.
        5. C: It could be just 1 octet extra within the beacon. However, it is just for new IEs that do not parse correctly with legacy STAs.
        6. C: I think this is a good approach to the same problem from the previous submission. However, I think the problem is the test plan from an industry body, as opposed to the 802.11 standard itself. Therefore it should be the industry body that changes it’s test plan to align more with the 802.11 standard.
        7. C: Yes, although it’s very hard to request the industry body to implement forward compatibility testing. Therefore it is better to have an alternative solution, here in 802.11
        8. C: I would prefer that you use a new extended capability bit.
        9. C: I think this generation number is decided by the industry body, so this seems to be a conflict of interest.
        10. C: The number would either be vendor specific or assigned by 802.11 ANA. This allows another industry body to insert their own number.
        11. Q: So could 11bn (UHR) insert their own number?
        12. A: Yes
        13. **Straw Poll**
        14. **Generation elements should be developed as a generic mechanism for solving forward-compatibility issues with legacy implementations**
        15. Yes: 9, No: 8, Abstain: 7, no answer: 5
        16. Chair: It looks as though this needs more work.
  2. **Review doc 11-23-0772r5** – Mike Montemurro (Huawei)
     1. <https://mentor.ieee.org/802.11/dcn/21/11-21-0772-05-000m-eapol-key-notation-cid-548.docx>
     2. CIDs 6040 (SEC) and 6590 (SEC)
        1. Review Comment.
        2. Q: Regarding the order, can they be in any order?
        3. A: Yes
        4. Revised: Incorporate the changes in <https://mentor.ieee.org/802.11/dcn/21/11-21-0772-05-000m-eapol-key-notation-cid-548.docx>.
        5. No objection – Mark Ready for Motion
  3. **Review doc 11-23-2420r0** – Joseph LEVY (InterDigital)
     1. <https://mentor.ieee.org/802.11/dcn/24/11-24-0020-00-000m-proposed-resolution-of-tgme-cids-6181.docx>
     2. CIDs 6181 (ED1)
        1. Review Comment.
        2. C: Perhaps this submission can be reviewed before the January meeting.
        3. C: I would like to look at the details offline,
        4. Chair: Can we mark it ready for motion and then do an offline review?
        5. Revised: Incorporate the changes in <https://mentor.ieee.org/802.11/dcn/24/11-24-0020-00-000m-proposed-resolution-of-tgme-cids-6181.docx>.
        6. No objection – Mark Ready for Motion
  4. **Review doc 11-23-1735r3** – Stephen MCCANN (Huawei)
     1. <https://mentor.ieee.org/802.11/dcn/23/11-23-1735-03-000m-gas-query-request-fragmentation.docx>
     2. CIDs 6058 (MAC)
        1. Review Comment.
        2. Q: Figure 9-852 - is there a parsing issue?
        3. A: No, the duples are fixed length and will parse out.
        4. Q: Is there a duplication of material from Clause 9?
        5. A: Yes, but we could remove that change for Request and response, as they are duplicates.
        6. Submission edited and uploaded as 1735r4
        7. Revised: Incorporate the changes in <https://mentor.ieee.org/802.11/dcn/23/11-23-1735-04-000m-gas-query-request-fragmentation.docx>.
        8. No objection – Mark Ready for Motion
  5. **Review doc 11-23-2090r1** – Joseph LEVY (InterDigital)
     1. CIDs 6116, 6117, 6123 (PHY)
        1. The submission is not ready at the moment.
        2. More work required. Bring back at Jan interim
  6. **Review doc 11-23-1750r4** – Mark RISON (Samsung)
     1. <https://mentor.ieee.org/802.11/dcn/23/11-23-1750-04-000m-resolutions-for-some-comments-on-11me-d4-0-initial-sa-ballot.docx>
     2. CIDs 6213 (MAC)
        1. Review Comment.
        2. Change the cited text to “The A1 field is a  
           SID field and the A2 field is either a SID field or contains a MAC address,  
           depending on the PV1 Control frame subtype (see 9.8.4 (PV1 Control frames)).”.
        3. No objection – Mark Ready for Motion
     3. CIDs 6277 (MAC)
        1. Review Comment.
        2. In 10.3.2.12 move “The Scrambler Initialization value shall be obtained from the PHY-TXEND.confirm parameter SCRAMBLER\_OR\_CRC.” to the start of the next para (to be followed by “The values of the BlockAck ID and Starting Sequence Number fields(#4200) are obtained after decoding the NDP BlockAck frame as described in 10.56 (Bitmap protection for NDP BlockAck frames).”), change “shall be” to “is” and prepend “NOTE—”.  
             
           In 10.25.6.7.1 prepend “NOTE—” to “The Scrambler Initialization value is obtained from the PHY-TXEND.confirm parameter SCRAMBLER\_OR\_CRC. The values of the BlockAck ID and Starting Sequence Number fields are obtained after decoding the NDP BlockAck frame as described in 10.56 (Bitmap protection for NDP BlockAck frames).” and move it to after the para it is currently in.
        3. No objection – Mark Ready for Motion
  7. **AoB**
     1. The next meeting will be on January 8th, 2024.
  8. **Adjourned at 11:52am ET.**

1. **TGme (REVme) Telecon –Monday, January 8, 2024, at 10:00-12:00 ET**
   1. **Called to order** 10:03am ET by the TG Chair, Michael MONTEMURRO (Huawei).
   2. **Introductions of other Officers present:**
      1. Vice Chair - Mark HAMILTON (Ruckus/CommScope)
      2. Vice Chair - Mark RISON (Samsung)
      3. Editor - Emily QI (Intel)
      4. Editor - Edward AU (Huawei)
      5. Secretary pro-tem – Stephen MCCANN (Huawei)
   3. **Telecon Attendance:**
      1. IMAT Reported**:**

|  |  |  |
| --- | --- | --- |
|  | **Name** | **Affiliation** |
| 1 | Malinen, Jouni | Qualcomm Technologies, Inc |
| 2 | Wei, Dong | NXP Semiconductors |
| 3 | Zhou, Lei | H3C Technologies Co., Limited |
| 4 | Hamilton, Mark | Ruckus/CommScope |
| 5 | Patwardhan, Gaurav | Hewlett Packard Enterprise |
| 6 | Montemurro, Michael | Huawei Technologies Co., Ltd |
| 7 | Halasz, David | Morse Micro |
| 8 | Smith, Graham | SR Technologies |
| 9 | McCann, Stephen | Huawei Technologies Co., Ltd |
| 10 | Qi, Emily | Intel |
| 11 | Petrick, Albert | Jones-Petrick and Associates, LLC. |
| 12 | Asterjadhi, Alfred | Qualcomm Technologies, Inc |
| 13 | Levy, Joseph | InterDigital, Inc. |
| 14 | Smith, Luther | Cable Technology Laboratories, Inc. |
| 15 | Thakore, Darshak | Cable Television Laboratories Inc. (CableLabs) |
| 16 | Coffey, John | Realtek Semiconductor Corp. |
| 17 | Kim, Youhan | Qualcomm Technologies, Inc. |
| 18 | Rosdahl, Jon | Qualcomm Technologies, Inc. |

* 1. **Review Patent Policy and Copyright policy and Participation Policies.**
     1. No issues noted.
  2. **Review Agenda:**
  3. <https://mentor.ieee.org/802.11/dcn/23/11-23-2103-06-000m-november-january-teleconference-agenda.docx>
     1. Proposed Agenda:

**The draft agenda for the teleconferences is below:**

1.       Call to order, attendance (<https://imat.ieee.org/attendance> ), and patent and copyright 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
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d.**Agenda Approval**

2.       **Editor report** – Emily QI/Edward AU

3.       **Comment Resolution**

* + 1. ED2 Review CIDs
    2. MAC Review CIDs
    3. CIDs 6081-6083 – doc 11-23/2144 – Hart (Cisco)
    4. CID 6599-6603 – doc 11-23/2155 – Asterjadhi (Qualcomm)

4.       **AOB**

5. **Adjourn**

* + 1. No objection to approving the agenda.
  1. **Editor report** – Emily QI/Edward AU
     1. Draft 4.2 is now ready and will be in the members’ area soon.
     2. CID 6076 is causing some confusion. It is requested that Brian Hart review the editorial changes in D4.2, as some corrections may be required.
     3. CID 6268, there are more locations of the same problem in the recent 802.11bd roll in, which were not mentioned in the original comment. Again these changes may be incorporated into the next release.
     4. CID 6064, also requires some more discussion.
  2. **MAC comments** – Mark Hamilton (Ruckus-Commscope)
     1. Review comments by referring directly to the comment database.
     2. CID 6097 (MAC)
        1. Review comment.
        2. C: I think deleting the text is the best option.
        3. C: The length of the subfields are known, so the frame can be parsed. However, I’m ok to delete the note.
        4. Accepted.
        5. No objection – Mark Ready for Motion
     3. CID 6098 (MAC)
        1. Review comment.
        2. This is the same as CID 6097
        3. Accepted.
        4. No objection – Mark Ready for Motion
     4. CID 6105 (MAC)
        1. Review comment.
        2. C: I’m not sure what “the next TWT information” means? Is this the next in time?
        3. A: This is set up at the association time. It’s received in the next TWT frame response.
        4. Q: Perhaps we can just clarify what the word “next” means. Is it referring to the target wait time?
        5. A: Yes
        6. Revised: Replace "receives the next TWT information" with "receives the information for the next target wake time for any of the explicit TWT agreements to which the STA is a member",
        7. No objection – Mark Ready for Motion
     5. CID 6592 (MAC)
        1. Review comment.
        2. Accepted.
        3. No objection – Mark Ready for Motion
     6. CID 6027 (MAC)
        1. Review comment.
        2. C: I agree with this comment. I don’t think 0 needs to be a special case. Therefore using “should” would work.
        3. C: Perhaps looking at CID 6 may help.
        4. More work required. Assigned to Emily Qi. Bring back later in January.
     7. CID 6168 (MAC)
        1. Review comment.
        2. C: I think this should be in the RXVECTOR.
        3. **Straw Poll**
        4. **Do you support changes adding the mechanism in RXVECTOR along the lines proposed in the comment?**
        5. Yes: 4, No: 8, Abstain: 3, no answer: 3
        6. No objections to rejecting this comment.
        7. Chair: Can someone craft a reject reason please.
        8. ACTION: Mark Hamilton to compose a rejection reason.
        9. Ready for motion. Run as separate motion.
     8. CID 6196 (MAC)
        1. Review comment.
        2. C: The current text is confusing. Perhaps the word “future” could be used.
        3. Chair: I think this requires further work.
        4. More work required. Assigned to Alfred Asterjahdi. Bring back later in January.
     9. CID 6207 (MAC)
        1. Review comment.
        2. C: The current text is confusing. Perhaps the word “future” could be used.
        3. Chair: I think this requires further work.
        4. More work required. Assigned to Stephen McCann. Bring back later in January.
     10. CID 6015 (MAC)
         1. Review comment.
         2. C: Perhaps the RFC reference can be moved from Clause 2 to the Bibliography (Annex A).
         3. Revised: Move reference to RFC 343490 from clause 2 to the bibliography (Annex A), including adding the bibliographic reference to the note.
         4. No objection – Mark Ready for Motion
     11. CID 6103 (MAC)
         1. Review comment.
         2. Accepted.
         3. No objection – Mark Ready for Motion
     12. CID 6006 (MAC)
         1. Review comment.
         2. More work required. Assigned to Youhan Kim. Bring back later in January.
     13. CID 6509 (MAC)
         1. Review comment.
         2. C: This has been reviewed a few times before.
         3. Rejected:  The text already says (as quoted): "If a TSPEC element is not present, then the TCLAS element is not present." which covers the commented situation. That is (as quoted), "If a TSPEC element is not present, then the TCLAS element is not present." implies that if a TCLAS element is present a TSPEC element is present.   
            This in turn implies that if more than one TCLAS element is present a TSPEC element is present.
         4. No objection – Mark Ready for Motion
  3. **ED2 comments** – Mark Hamilton (Ruckus-Commscope)
     1. Review comments by referring directly to the comment database.
     2. The technical editors were not available for this section of the meeting.
     3. CID 6025 (ED2)
        1. Review comment.
        2. It was agreed that the comment is reasonable.
        3. Revised: Make the following changes:

P1266.16: Change "must be" to "is"

P1874.25.  Replace the last sentence to a note. Change “The MSDU in the MA-UNITDATA.request.primitive must start with the octets specified in the LLC Header Copy field.”

To “NOTE – To operate correctly, the MSDU in the MA-UNITDATA.request.primitive needs to start with the octets specified in the LLC Header Copy field.” And renumber notes as necessary.

P2357.20, Change "must" to "needs to"

P2518.11, Change "must" to "needs to"

P4995.6, Change "must" to "shall"

P5308.2, Change "must" to "shall"

* + - 1. No objection – Mark Ready for Motion
    1. CID 6154 (ED2)
       1. Review comment.
       2. More work required. Assigned to Mark Rison. Bring back later in January.
    2. CID 6238 (ED2)
       1. Review comment.
       2. More work required. Assigned to Mark Rison. Bring back later in January.
    3. CID 6293 (ED2)
       1. Review comment.
       2. Accepted. Note to Editor: the locations are 2854.50, and 12 locations (6 pairs of changes and 12 changes overall)in clause 9 at 1522.44, 1522.48, 1563.10, 1563.13, 1564.2, 1564.5, 1566.7, 1566.11, 1566.48, 1566.52, 1567.61, and 1567.65 .
       3. No objection – Mark Ready for Motion
    4. CID 6296 (ED2)
       1. Review comment.
       2. Reached the end of the session. Will be reviewed with the remaining CIDs.
  1. **AoB**
     1. The next meeting will be during the IEEE 802.11 January interim.
  2. **Adjourned at 12:00pm ET.**

**References:**

* 1. <https://mentor.ieee.org/802.11/dcn/23/11-23-2103-05-000m-november-january-teleconference-agenda.docx>
  2. <https://mentor.ieee.org/802.11/dcn/23/11-23-1856-05-000m-assortment-of-sa-ballot-comment.docx>
  3. <https://mentor.ieee.org/802.11/dcn/23/11-23-1857-04-000m-rsn-overriding.docx>
  4. <https://mentor.ieee.org/802.11/dcn/23/11-23-2192-01-000m-generation-elements.pptx>
  5. <https://mentor.ieee.org/802.11/dcn/21/11-21-0772-05-000m-eapol-key-notation-cid-548.docx>
  6. <https://mentor.ieee.org/802.11/dcn/24/11-24-0020-00-000m-proposed-resolution-of-tgme-cids-6181.docx>
  7. <https://mentor.ieee.org/802.11/dcn/23/11-23-1750-04-000m-resolutions-for-some-comments-on-11me-d4-0-initial-sa-ballot.docx>