IEEE P802.11  
Wireless LANs

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| IEEE 802.11  TGax CRC Teleconferences Minutes October 2020 | | | | |
| Date: 2020-10-27 | | | | |
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Abstract

This document contains the minutes from the TGax teleconferences during October 2020.

Revision History:

* R0: Initial version.
  + Minutes of TGax CRC call on October 1st and 6th, 2020.
* R1: Minutes from TGax CRC teleconference on October 8th, 2020 are included.
* R2: Minutes from TGac CRC teleconference on October 13th, 2020 are included.
* R3: Minutes from TGax CRC teleconferences on October 15th and 16th, 2020 are included.
* R4: Minutes from TGax CRC teleconferences on October 20th, 22nd, 23rd, 2020 are included.

**Thursday, October 1st, 2020, TGax CRC Teleconference (19:00 - 21:00 ET)**

1. **The meeting called to order at 19:02 (ET) by Osama Aboul-Magd (Huawei Technologies), the chairperson of 802.11 TGax.**
   1. Introduction of TGax chairperson and secretary.
   2. The agenda document doc.11-20/1552r1 (<https://mentor.ieee.org/802.11/dcn/20/11-20-1552-01-00ax-tgax-crc-teleconference-agendas-october-november-december-2020.pptx>) is the working document.
2. **Attendees**
   1. Aboul-Magd, Osama (Huawei Technologies)
   2. Adachi, Tomoko (Toshiba)
   3. An, Song-Haur (Independent)
   4. Asterjadhi, Alfred (Qualcomm)
   5. Bims, Harry (Bims Laboratories, Inc.)
   6. Chu, Liwen (NXP Semiconductor)
   7. Coffey, Sean (RealTek)
   8. Derham, Thomas (Broadcom)
   9. Duan, Ruchen (Samsung)
   10. Haasz, Jodi (IEEE-SA)
   11. Hamilton, Mark (CommScope)
   12. Hunag, Po-Kai (Intel)
   13. Inoue, Yasuhiko (NTT)
   14. Kandala, Srinivas (Samsung)
   15. Kim Youhan (Qualcomm)
   16. Kwon, Young Hoon (NXP Semiconductor)
   17. Lee, Wookbong (Samsung)
   18. Nandagopalan, Sai Shankar (Cypress)
   19. Petrick, Albert (InterDigital)
   20. Rison, Mark (Samsung)
   21. Rosdahl, Jon (Qualcomm)
   22. Schelstraete, Sigurd (Quantenna/ON)
   23. Sosac, Robert (Qualcomm)
   24. Stacey, Robert (Intel)
   25. Sun, Bo (ZTE)
   26. Zhang, Yan (NXP Semiconductor)
3. **Agenda Setting**
   1. Proposed agenda for the TGax CRC teleconference on October 1st, 2020.
      1. Call meeting to order
      2. IEEE-SA IPR policy and Procedure
      3. Attendance – Please record your attendance on IMAT (imat.ieee.org)
      4. Comment Resolution and Motion
         1. Cascading discussion
         2. <https://mentor.ieee.org/802.11/dcn/20/11-20-1530-02-00ax-sa2-clause-10-comment-resolution.docx> - Osama Aboul-Magd
         3. <https://mentor.ieee.org/802.11/dcn/20/11-20-1559-02-00ax-capability-indication-for-he-sm-power-save.docx> - Po-Kai Huang
         4. <https://mentor.ieee.org/802.11/dcn/20/11-20-1541-00-00ax-mac-cr-miscellaneous-cids-for-sa2.docx> - Alfred Asterjadhi
         5. <https://mentor.ieee.org/802.11/dcn/20/11-20-1531-01-00ax-cr-for-miscellaneous-cids-in-sa2.docx> - Po-Kai Huang
      5. AoB
      6. Adjourn
   2. Chair asked if there is any objection to proceed with this agenda.
      1. Discussion – No discussion
      2. **The agenda for TGax CRC teleconference on October 1st, 2020 is approved.**
4. **IEEE 802 and 802.11 IPR policy and procedure**
   1. Patent Policy:
   2. Participants have a duty to inform the IEEE - done.
      * Participants shall inform the IEEE (or cause the IEEE to be informed) of the identity of each holder of any potential Essential Patent Claims of which they are personally aware if the claims are owned or controlled by the participant or the entity the participant is from, employed by, or otherwise represents
      * Participants should inform the IEEE (or cause the IEEE to be informed) of the identity of any other holders of potential Essential Patent Claims
   3. Ways to inform IEEE: - done
      * Cause an LOA to be submitted to the IEEE-SA (patcom@ieee.org); or
      * Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible; or
      * Speak up now and respond to this Call for Potentially Essential Patents
      * If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance, please respond at this time by providing relevant information to the WG Chair
      1. Chair asked if anyone in this meeting is aware of any potentially essential patents.
         1. **No potentially essential patent reported.**
   4. Other guidelines for IEEE WG meetings – done
      * All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.
        + Don’t discuss the interpretation, validity, or essentiality of patents/patent claims.
        + Don’t discuss specific license rates, terms, or conditions.
          - Relative costs of different technical approaches that include relative costs of patent licensing terms January be discussed in standards development meetings.

Technical considerations remain the primary focus

* + - * Don’t discuss or engage in the fixing of product prices, allocation of customers, or division of sales markets.
      * Don’t discuss the status or substance of ongoing or threatened litigation.
      * Don’t be silent if inappropriate topics are discussed … do formally object.
  1. Patent-related information – done
     + The patent policy and the procedures used to execute that policy are documented in the:
     + *IEEE-SA Standards Board Bylaws* (http://standards.ieee.org/develop/policies/bylaws/sect6-7.html#6)
     + *IEEE-SA Standards Board Operations Manual* (http://standards.ieee.org/develop/policies/opman/sect6.html#6.3)
     + Material about the patent policy is available at
     + [*http://standards.ieee.org/about/sasb/patcom/materials.html*](http://standards.ieee.org/about/sasb/patcom/materials.html)
  2. Participant behavior in IEEE-SA activities is guided by the IEEE Codes of Ethics & Conduct - done
  3. Participants in the IEEE-SA “individual process” shall act independently of others, including employers - done
  4. IEEE-SA standards activities shall allow the fair & equitable consideration of all viewpoints - done

1. **Attendance**
   1. <https://imat.ieee.org/>
      1. Please indicate the voter status by adding [V] or [NV] before your name on WebEx.
2. **Comment Resolution and Motion**
   1. **Cascading discussion (based on the email exchanges)**
      1. Summary
         1. The TGax chairperson summarized the email discussion on cascading as in slide 14 of the agenda file (https://mentor.ieee.org/802.11/dcn/20/11-20-1552-01-00ax-tgax-crc-teleconference-agendas-october-november-december-2020.pptx).
      2. Discussion
         1. People expressed their preference. Some members think no change is needed.
      3. **Straw Poll: Which option do you prefer?**

* **Option 1: change the first sentence in 26.5.3 MU cascading sequence to “An MU cascading sequence is a frame exchange sequence between an AP and one or more non-AP STAs in which the AP, within a single PPDU, acknowledges one or more frames from a STA, and triggers the STA for a further UL transmission.",**

**-      add a sentence, “The MU cascading sequence may include one or more QoS Data frames with ack policy HTPE Ack and/or Management frame soliciting acknowledgement together with a triggering frame.”, at the beginning of the paragraph that starts with “The MU cascading sequence may have a different set of transmitters in HE TB PPDUs …” in 26.5.3, and**

**-      delete “The A-MPDU may contain other MPDUs, subject to the rules in 26.6 (A-MPDU operation in an HE PPDU).” in 26.5.3.  ß I am open with this.**

* **Option 2: change the first sentence in 26.5.3 MU cascading sequence to “An MU cascading sequence is a frame exchange sequence between an AP and one or more non-AP STAs in which the AP, within a single PPDU, acknowledges one or more frames from a STA, and triggers the STA for a further UL transmission.",**

**-      add “NOTE—An A-MPDU sent by an AP in an MU cascading sequence typically includes, in addition to the acknowledgement and triggering frames, one or more QoS Data frames with ack policy HETP Ack and/or a Management frame soliciting acknowledgement, subject to the rules in 26.6.” (probably between the last 3rd and 2ndparagraph) in 26.5.3, and -8**

**-      delete “The A-MPDU may contain other MPDUs, subject to the rules in 26.6 (A-MPDU operation in an HE PPDU).” in 26.5.3.**

* **Option 3: no change**
  + - 1. **Result: Option 1/Option 2/Option 3 = 1/8/3, the option 2 will be the way to go.**
    1. **CR Motion #1108: Move to approve “Revised” as the resolution to CID 25005. TGax Editor please make the changes:**

**change the first sentence in 26.5.3 MU cascading sequence to “An MU cascading sequence is a frame exchange sequence between an AP and one or more non-AP STAs in which the AP, within a single PPDU, acknowledges one or more frames from a STA, and triggers the STA for a further UL transmission.",**

**-      add “NOTE—An A-MPDU sent by an AP in an MU cascading sequence typically includes, in addition to the acknowledgement and triggering frames, one or more QoS Data frames with ack policy HETP Ack and/or a Management frame soliciting acknowledgement, subject to the rules in 26.6.” between the last 3rd and 2ndparagraph in 26.5.3, and**

**-      delete “The A-MPDU may contain other MPDUs, subject to the rules in 26.6 (A-MPDU operation in an HE PPDU).” in 26.5.3.**

* + - 1. **Mover: Mark Rison, Second: Tomoko Adachi**
      2. **Discussion – no discussion**
      3. **Result: Y/N/A = 10/1/1, motion passes.**
  1. **Osama Aboul-Magd (Huawei Technologies) presented “SA2 Clause 10 Comment Resolution,” based on the submission doc.11-20-1530-02.**
     1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1530-02-00ax-sa2-clause-10-comment-resolution.docx>
     2. Summary
        1. Osama gave updates from the previous version.
     3. Discussion
        1. CID 25044: A member asked for more time to think about the resolution. 🡪 This CID will be discussed in the next call.
        2. CID 25118: A participant commented to make sure the wording is okay for everybody.
     4. **CR Motion #1109: Move to approve resolutions to CIDs 25043, 25044, 25118 in doc.** [**https://mentor.ieee.org/802.11/dcn/20/11-20-1530-02-00ax-sa2-clause-10-comment-resolution.docx**](https://mentor.ieee.org/802.11/dcn/20/11-20-1530-02-00ax-sa2-clause-10-comment-resolution.docx)
        1. **Moved by Po-Kai Huang, Second: Liwen Chu**
        2. **Discussion – no discussion.**
        3. **Result: Approved with unanimous consent.**
  2. **Po-Kai Huang (Intel) presented “11ax D7.0 Capability Indication for HE SM Power save,” based on the submission doc.11-20-1559-02.**
     1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1559-02-00ax-capability-indication-for-he-sm-power-save.docx>
     2. Summary
        1. A fix for HE Capability Indication is proposed. This is not related to any CID.
     3. Discussion
        1. The group discussed how to proceed with this proposal since we are in the SA recirculation phase. The chairperson mentioned that it was good to correct an error if there is. Of course, it’s much better if there’s a CID that could be related.
     4. Next Step
        1. There will be a motion to approve the proposed changes in the next call.
  3. **Alfred Asterjadhi (Qualcomm) presented “Comment resolutions for miscellaneous CIDs for SA2,” based on the submission doc.11-20-1541-01.**
     1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1541-01-00ax-mac-cr-miscellaneous-cids-for-sa2.docx>
     2. Summary
        1. Resolutions for the miscellaneous comments received for the IEEE 802.11ax D7.0 with following CIDs are proposed.
           1. CIDs: 25015, 25018, 25035, 25046, 25049, 25063, 25066, 25094, 25121, 25126, 25127, 25128, 25129, 25130, 25131
     3. Discussion
        1. CID 25035: A participant commented that he agreed with the resolution (REJECTED), however, he also agreed with the comment.
        2. CID 25049: The group discussed the expression of the related text and consistency with other part of the draft.
        3. CID 25121: A member commented that the resolution does not address the issue. 🡪 Alfred to work with Mark Rison.
        4. CID 25126: The changes related to this CID can affect other text in the draft using the same expression.
        5. CID 25130: The commenter will provide detailed information on this CID. A member agreed with the resolution to reject this comment, however, he also agreed with the commenter.
        6. CID 25131: A member recommended just to accept the comment. Another member discussed related MIB variable.
     4. Next Step
        1. Some CIDs need more work. To be discussed on Tuesday again.
  4. **Po-Kai Huang (Intel) presented “11ax D7.0 CR for Miscellaneous CIDs in SA2,” based on the submission doc.11-20-1531-04.**
     1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1531-04-00ax-cr-for-miscellaneous-cids-in-sa2.docx>
     2. Summary
        1. Po-Kai gave updates from the previous version of this document.
     3. Discussion – no discussion
     4. **CR Motion #1110: Move to approve resolutions to CIDs 25045, 25048, 25065, 25070, 25093 in doc.** [**https://mentor.ieee.org/802.11/dcn/20/11-20-1531-04-00ax-cr-for-miscellaneous-cids-in-sa2.docx**](https://mentor.ieee.org/802.11/dcn/20/11-20-1531-04-00ax-cr-for-miscellaneous-cids-in-sa2.docx)
        1. **Moved by Po-Kai Huang, Second: Liwen Chu**
        2. **Discussion – no discussion.**
        3. **Result: Approved with unanimous consent.**

1. **AoB -** No other business.
2. **Adjournment**
   1. TGax CRC teleconference on October 1st, 2020 has adjourned @ 20:51 (ET).

**Tuesday, October 6th, 2020, TGax CRC Teleconference (10:00 - 12:00 ET)**

1. **The meeting called to order at 10:02 (ET) by Osama Aboul-Magd (Huawei Technologies), the chairperson of 802.11 TGax.**
   1. Introduction of TGax chairperson and secretary.
   2. The agenda document doc.11-20/1552r3 (<https://mentor.ieee.org/802.11/dcn/20/11-20-1552-03-00ax-tgax-crc-teleconference-agendas-october-november-december-2020.pptx>) is the working document (r2 is on the server).
2. **Attendees**
   1. Aboul-Magd, Osama (Huawei Technologies)
   2. An, Song-Haur (Independent)
   3. Chu, Liwen (NXP Semicondctor)
   4. Duan, Ruchen (Samsung)
   5. Huang, Po-Kai (Intel)
   6. Inoue, Yasuhiko (NTT)
   7. Kim, Jeongki (LG Electronics)
   8. Kneckt, Jarrko (Apple)
   9. Petrick, Albert (InterDigital)
   10. Rison, Mark (Samsung)
   11. Rosdahl, Jon (Qualcomm)
   12. Sosac, Robert (Qualcomm)
   13. Stacey, Robert (Intel)
   14. Wentink, Menzo (Qualcomm)
   15. Yang, Rui (InterDigital)
3. **Agenda Setting**
   1. Proposed agenda for the TGax CRC teleconference on October 6th, 2020.
      1. Call meeting to order
      2. IEEE-SA IPR policy and Procedure
      3. Attendance Reminder – Please record your attendance on IMAT (imat.ieee.org)
      4. Comment Resolution and Motions
         1. [https://mentor.ieee.org/802.11/dcn/20/11-20-1523-01-00ax-11ax-sa2-draft-7-0-comment-resolutions.docx](https://mentor.ieee.org/802.11/dcn/20/11-20-1523-00-00ax-11ax-sa2-draft-7-0-comment-resolutions.docx) - Menzo Wentink
         2. <https://mentor.ieee.org/802.11/dcn/20/11-20-1530-02-00ax-sa2-clause-10-comment-resolution.docx> - Osama Aboul-Magd
         3. <https://mentor.ieee.org/802.11/dcn/20/11-20-1541-00-00ax-mac-cr-miscellaneous-cids-for-sa2.docx> - Alfred Asterjadhi
         4. <https://mentor.ieee.org/802.11/dcn/20/11-20-1571-00-00ax-sa2-comment-resolution-25076-25077.docx> - Liwen Chu
      5. AoB
      6. Adjourn
   2. Chair asked if there is any objection to proceed with this agenda.
      1. Discussion – No discussion
      2. **The agenda for TGax CRC teleconference on October 6th, 2020 is approved.**
4. **IEEE 802 and 802.11 IPR policy and procedure**
   1. Patent Policy:
   2. Participants have a duty to inform the IEEE - done.
      * Participants shall inform the IEEE (or cause the IEEE to be informed) of the identity of each holder of any potential Essential Patent Claims of which they are personally aware if the claims are owned or controlled by the participant or the entity the participant is from, employed by, or otherwise represents
      * Participants should inform the IEEE (or cause the IEEE to be informed) of the identity of any other holders of potential Essential Patent Claims
   3. Ways to inform IEEE: - done
      * Cause an LOA to be submitted to the IEEE-SA (patcom@ieee.org); or
      * Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible; or
      * Speak up now and respond to this Call for Potentially Essential Patents
      * If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance, please respond at this time by providing relevant information to the WG Chair
      1. Chair asked if anyone in this meeting is aware of any potentially essential patents.
         1. **No potentially essential patent reported.**
   4. Other guidelines for IEEE WG meetings – done
      * All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.
        + Don’t discuss the interpretation, validity, or essentiality of patents/patent claims.
        + Don’t discuss specific license rates, terms, or conditions.
          - Relative costs of different technical approaches that include relative costs of patent licensing terms January be discussed in standards development meetings.

Technical considerations remain the primary focus

* + - * Don’t discuss or engage in the fixing of product prices, allocation of customers, or division of sales markets.
      * Don’t discuss the status or substance of ongoing or threatened litigation.
      * Don’t be silent if inappropriate topics are discussed … do formally object.
  1. Patent-related information – done
     + The patent policy and the procedures used to execute that policy are documented in the:
     + *IEEE-SA Standards Board Bylaws* (http://standards.ieee.org/develop/policies/bylaws/sect6-7.html#6)
     + *IEEE-SA Standards Board Operations Manual* (http://standards.ieee.org/develop/policies/opman/sect6.html#6.3)
     + Material about the patent policy is available at
     + [*http://standards.ieee.org/about/sasb/patcom/materials.html*](http://standards.ieee.org/about/sasb/patcom/materials.html)
  2. Participant behavior in IEEE-SA activities is guided by the IEEE Codes of Ethics & Conduct - done
  3. Participants in the IEEE-SA “individual process” shall act independently of others, including employers - done
  4. IEEE-SA standards activities shall allow the fair & equitable consideration of all viewpoints - done

1. **Attendance**
   1. <https://imat.ieee.org/>
      1. Please indicate the voter status by adding [V] or [NV] before your name on WebEx.
2. **Comment Resolution and Motions**
   1. **Menzo Wentink (Qualcomm) presented “11ax SA2 draft 7.0 comment resolutions,” based on the submission doc.11-20-1523-01.**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1523-01-00ax-11ax-sa2-draft-7-0-comment-resolutions.docx>
      2. Summary
         1. Resolutions to the comments received for the IEEE 802.11ax D7.0 with following CIDs are proposed.
            1. CIDs: 25038, a, 25044
      3. Discussion
         1. CID a: The related baseline text had been changed by TGmd. The group agreed that we should align with the IEEE 802.11REVmd D5.0. A note was added for the editor.
         2. CID 25044: A member commented that this CID was in doc.11-20-1530-02 (<https://mentor.ieee.org/802.11/dcn/20/11-20-1530-02-00ax-sa2-clause-10-comment-resolution.docx>). The chairperson mentioned that comment was discussed when he presented doc.11-20-1530-02, however, it was not resolved at that time. He is happy with the resolution in this document.
      4. **CR Motion #1111: Move to approve resolutions to CIDs 25038 and 25044 and the text change related to CID a in doc.** [**https://mentor.ieee.org/802.11/dcn/20/11-20-1523-02-00ax-11ax-sa2-draft-7-0-comment-resolutions.docx**](https://mentor.ieee.org/802.11/dcn/20/11-20-1523-02-00ax-11ax-sa2-draft-7-0-comment-resolutions.docx)
         1. **Mover: Menzo Wentink, Second: Yasuhiko Inoue.**
         2. **Discussion: no discussion.**
         3. **Result: Approved with unanimous consent.**
   2. **Liwen Chu (NXP Semiconductor) presented “11ax D6.0 comment resolution of CID 25076, 25077,” based on the submission doc.11-20-1571-00**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1571-00-00ax-sa2-comment-resolution-25076-25077.docx>
      2. Summary
         1. Resolution for the comments with CID 25076 and 25077 received for the IEEE 802.11ax D7.0 are proposed.
      3. Discussion
         1. CID 25076: A member commented that the proposed text (new paragraph) could produce more comments. Another member mentioned that the text for MSDU selection is not complete. The chairperson mentioned that people need more time to think about this issue.
      4. Next Step
         1. There will be a motion to approve the proposed resolutions possibly in the next call.
3. **AoB**
   1. No other business.
4. **Adjournment**
   1. TGax CRC teleconference on October 6th, 2020 has adjourned @ 11:01 AM (ET).

**Thursday, October 8th, 2020, TGax CRC Teleconference (10:00 - 12:00 ET)**

1. **The meeting called to order at 10:02 (ET) by Osama Aboul-Magd (Huawei Technologies), the chairperson of 802.11 TGax.**
   1. Introduction of TGax chairperson and secretary.
   2. The agenda document doc.11-20/1552r5 (<https://mentor.ieee.org/802.11/dcn/20/11-20-1552-05-00ax-tgax-crc-teleconference-agendas-october-november-december-2020.pptx>) is the working document (r4 is on the server).
2. **Attendees**
   1. Aboul-Magd, Osama (Huawei Technologies)
   2. Asterjadhi, Alfred (Qualcomm)
   3. Cariou, Laurent (Intel)
   4. Chu, Liwen (NXP Semicondctor)
   5. Duan, Ruchen (Samsung)
   6. Inoue, Yasuhiko (NTT)
   7. Kim, Youhan (Qualcomm)
   8. Kneckt, Jarrko (Apple)
   9. Petrick, Albert (InterDigital)
   10. Rison, Mark (Samsung)
   11. Rosdahl, Jon (Qualcomm)
   12. Sosac, Robert (Qualcomm)
   13. Sun, Bo (ZTE)
   14. Wentink, Menzo (Qualcomm)
   15. Yang, Rui (InterDigital)
   16. Yi, Yongjiangjohn (Futurewai Technologies)
   17. Zhang, Yan (NXP Semiconductor)
3. **Agenda Setting**
   1. Proposed agenda for the TGax CRC teleconference on October 8th, 2020.
      1. Call meeting to order
      2. IEEE-SA IPR policy and Procedure
      3. Attendance Reminder – Please record your attendance on IMAT (imat.ieee.org)
      4. Comment Resolution and Motions
         1. <https://mentor.ieee.org/802.11/dcn/20/11-20-1541-00-00ax-mac-cr-miscellaneous-cids-for-sa2.docx> - Alfred Asterjadhi - update
         2. <https://mentor.ieee.org/802.11/dcn/20/11-20-1571-00-00ax-sa2-comment-resolution-25076-25077.docx> - Liwen Chu - update
         3. <https://mentor.ieee.org/802.11/dcn/20/11-20-1585-00-00ax-mac-misc-cr-for-sa2.docx> - Laurent Cariou
         4. <https://mentor.ieee.org/802.11/dcn/20/11-20-1589-01-00ax-sa2-misc-phy-cids.docx> - Youhan Kim
         5. <https://mentor.ieee.org/802.11/dcn/20/11-20-1543-01-00ax-cr-d7-0-he-phy-txvector-rxvector-parameters.docx> - Bo Sun
      5. AoB
      6. Adjourn
   2. Chair asked if there is any objection to proceed with this agenda.
      1. Discussion – No discussion
      2. **The agenda for TGax CRC teleconference on October 8th, 2020 is approved.**
4. **IEEE 802 and 802.11 IPR policy and procedure**
   1. Patent Policy:
   2. Participants have a duty to inform the IEEE - done.
      * Participants shall inform the IEEE (or cause the IEEE to be informed) of the identity of each holder of any potential Essential Patent Claims of which they are personally aware if the claims are owned or controlled by the participant or the entity the participant is from, employed by, or otherwise represents
      * Participants should inform the IEEE (or cause the IEEE to be informed) of the identity of any other holders of potential Essential Patent Claims
   3. Ways to inform IEEE: - done
      * Cause an LOA to be submitted to the IEEE-SA (patcom@ieee.org); or
      * Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible; or
      * Speak up now and respond to this Call for Potentially Essential Patents
      * If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance, please respond at this time by providing relevant information to the WG Chair
      1. Chair asked if anyone in this meeting is aware of any potentially essential patents.
         1. **No potentially essential patent reported.**
   4. Other guidelines for IEEE WG meetings – done
      * All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.
        + Don’t discuss the interpretation, validity, or essentiality of patents/patent claims.
        + Don’t discuss specific license rates, terms, or conditions.
          - Relative costs of different technical approaches that include relative costs of patent licensing terms January be discussed in standards development meetings.

Technical considerations remain the primary focus

* + - * Don’t discuss or engage in the fixing of product prices, allocation of customers, or division of sales markets.
      * Don’t discuss the status or substance of ongoing or threatened litigation.
      * Don’t be silent if inappropriate topics are discussed … do formally object.
  1. Patent-related information – done
     + The patent policy and the procedures used to execute that policy are documented in the:
     + *IEEE-SA Standards Board Bylaws* (http://standards.ieee.org/develop/policies/bylaws/sect6-7.html#6)
     + *IEEE-SA Standards Board Operations Manual* (http://standards.ieee.org/develop/policies/opman/sect6.html#6.3)
     + Material about the patent policy is available at
     + [*http://standards.ieee.org/about/sasb/patcom/materials.html*](http://standards.ieee.org/about/sasb/patcom/materials.html)
  2. Participant behavior in IEEE-SA activities is guided by the IEEE Codes of Ethics & Conduct - done
  3. Participants in the IEEE-SA “individual process” shall act independently of others, including employers - done
  4. IEEE-SA standards activities shall allow the fair & equitable consideration of all viewpoints - done

1. **Attendance**
   1. <https://imat.ieee.org/>
      1. Please indicate the voter status by adding [V] or [NV] before your name on WebEx.
2. **Comment Resolution and Motions**
   1. **Alfred Asterjadhi (Qualcomm) presented “Comment resolutions for miscellaneous CIDs for SA2,” based on the submission doc.11-20-1541-02.**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1541-02-00ax-mac-cr-miscellaneous-cids-for-sa2.docx>
      2. Summary
         1. Resolutions to the remaining comments were presented.
            1. CIDs: 25121, 25126, 25129
      3. Discussion
      4. **CR Motion #1112: Move to approve resolutions to CIDs 25015, 25018, 25035, 25046, 25049, 25063, 25066, 25094, 25121, 25127, 25128,, 25130, 25131, 25088 in doc** [**https://mentor.ieee.org/802.11/dcn/20/11-20-1541-02-00ax-mac-cr-miscellaneous-cids-for-sa2.docx**](https://mentor.ieee.org/802.11/dcn/20/11-20-1541-02-00ax-mac-cr-miscellaneous-cids-for-sa2.docx)
         1. **Mover: Alfred Asterjadhi, Second: Menzo Wentink.**
         2. **Discussion: no discussion.**
         3. **Result: Approved with unanimous consent.**
   2. **Laurent Cariou (Intel) presented “MAC Misc CIDs for SA2,” based on the submission doc.11-20-1585-01**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1585-01-00ax-mac-misc-cr-for-sa2.docx>
      2. Summary
         1. Resolution for the comments received for the IEEE 802.11ax D7.0 with following CIDs are proposed.
            1. CIDs: 25030, 25031, 25032, 25080, 25124, and 25125
      3. Discussion
      4. **CR Motion #1113: Move to approve resolutions to CIDs 25030, 25031, 25032, 25080, 25124, and 25125 in doc** [**https://mentor.ieee.org/802.11/dcn/20/11-20-1585-02-00ax-mac-misc-cr-for-sa2.docx**](https://mentor.ieee.org/802.11/dcn/20/11-20-1585-02-00ax-mac-misc-cr-for-sa2.docx)
         1. **Mover: Laurent Cariou, Second: Mark Rison.**
         2. **Discussion: no discussion.**
         3. **Result: Approved with unanimous consent.**
   3. **Youhan Kim (Qualcomm) presented “SA2 Misc PHY CIDs,” based on the submission doc.11-20-1589-01**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1589-01-00ax-sa2-misc-phy-cids.docx>
      2. Summary
         1. Resolution for the comments received for the IEEE 802.11ax D7.0 with following CIDs are proposed.
            1. CIDs: 25104, 25117, 25101, 25073, 25105
      3. Discussion
         1. CID 25104:
            1. **Straw Poll: Which option do you prefer as the resolution to CID 25104?**

**Option #1: Rejected**

**Option #2: Accepted**

**Result: Option #1/Option #2 = 5/6.**

* + - 1. CID 25101: Deferred.
    1. **CR Motion #1114: Move to approve resolutions to CIDs 25104, 25117, 25073, 25105 in doc** [**https://mentor.ieee.org/802.11/dcn/20/11-20-1589-02-00ax-sa2-misc-phy-cids.docx**](https://mentor.ieee.org/802.11/dcn/20/11-20-1589-02-00ax-sa2-misc-phy-cids.docx)
       1. **Mover: Youhan Kim, Second: Menzo Wintink.**
       2. **Discussion: no discussion.**
       3. **Result: Approved with unanimous consent.**
  1. **Bo Sun (ZTE) presented “Comment Resolutions for 11ax D7.0 HE PHY TXVECTOR RXVECTOR parameters,” based on the submission doc.11-20-1543-01**
     1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1543-01-00ax-cr-d7-0-he-phy-txvector-rxvector-parameters.docx>
     2. Summary
        1. Resolution for the comments received for the IEEE 802.11ax D7.0 with following CIDs are proposed.
           1. CIDs: 25051, 25052, 25059 and 25132
     3. Discussion
     4. **CR Motion #1115: Move to approve resolutions to CIDs 25051, 25052, 25059 in doc** [**https://mentor.ieee.org/802.11/dcn/20/11-20-1543-02-00ax-cr-d7-0-he-phy-txvector-rxvector-parameters.docx**](https://mentor.ieee.org/802.11/dcn/20/11-20-1543-02-00ax-cr-d7-0-he-phy-txvector-rxvector-parameters.docx)
        1. **Mover: Bo Sun, Second: Youhan Kim.**
        2. **Discussion: no discussion.**
        3. **Result: Approved with unanimous consent.**

1. **AoB -** No other business.
2. **Adjournment**
   1. TGax CRC teleconference on October 8th, 2020 has adjourned @ 11:01 AM (ET).

**Tuesday, October 13th, 2020, TGax CRC Teleconference (17:00 - 19:00 ET)**

1. **The meeting called to order at 10:03 (ET) by Osama Aboul-Magd (Huawei Technologies), the chairperson of 802.11 TGax.**
   1. Introduction of TGax chairperson and secretary.
   2. The agenda document doc.11-20/1552r7 (<https://mentor.ieee.org/802.11/dcn/20/11-20-1552-07-00ax-tgax-crc-teleconference-agendas-october-november-december-2020.pptx>) is the working document (r6 is on the server).
2. **Attendees**
   1. Aboul-Magd, Osama (Huawei Technologies)
   2. An, Song-Haur (Independent)
   3. Asterjadhi, Alfred (Qualcomm)
   4. Chu, Liwen (NXP Semicondctor)
   5. Duan, Ruchen (Samsung)
   6. Huang, Po-Kai (Intel)
   7. Inoue, Yasuhiko (NTT)
   8. Jones, Vince Knowles IV (Qualcomm)
   9. Kandala, Srinivas (Samsung)
   10. Kim, Youhan (Qualcomm)
   11. Kneckt, Jarrko (Apple)
   12. Patil, Abhishek (Qualcomm)
   13. Petrick, Albert (InterDigital)
   14. Rison, Mark (Samsung)
   15. Rosdahl, Jon (Qualcomm)
   16. Stacey, Robert (Intel)
   17. Yang, Rui (InterDigital)
3. **Agenda Setting**
   1. Proposed agenda for the TGax CRC teleconference on October 13th, 2020.
      1. Call meeting to order
      2. IEEE-SA IPR policy and Procedure
      3. Attendance Reminder – Please record your attendance on IMAT (imat.ieee.org)
      4. Comment Resolution and Motions
         1. <https://mentor.ieee.org/802.11/dcn/20/11-20-1541-00-00ax-mac-cr-miscellaneous-cids-for-sa2.docx> - Alfred Asterjadhi - update
         2. <https://mentor.ieee.org/802.11/dcn/20/11-20-1571-00-00ax-sa2-comment-resolution-25076-25077.docx> - Liwen Chu - update
         3. <https://mentor.ieee.org/802.11/dcn/20/11-20-1589-01-00ax-sa2-misc-phy-cids.docx> - Youhan Kim - CID 25101
         4. <https://mentor.ieee.org/802.11/dcn/20/11-20-1543-01-00ax-cr-d7-0-he-phy-txvector-rxvector-parameters.docx> - Bo Sun - update
      5. AoB
      6. Adjourn
   2. Chair asked if there is any objection to proceed with this agenda.
      1. Discussion – No discussion
      2. **The agenda for TGax CRC teleconference on October 13th, 2020 is approved.**
4. **IEEE 802 and 802.11 IPR policy and procedure**
   1. Patent Policy:
   2. Participants have a duty to inform the IEEE - done.
      * Participants shall inform the IEEE (or cause the IEEE to be informed) of the identity of each holder of any potential Essential Patent Claims of which they are personally aware if the claims are owned or controlled by the participant or the entity the participant is from, employed by, or otherwise represents
      * Participants should inform the IEEE (or cause the IEEE to be informed) of the identity of any other holders of potential Essential Patent Claims
   3. Ways to inform IEEE: - done
      * Cause an LOA to be submitted to the IEEE-SA (patcom@ieee.org); or
      * Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible; or
      * Speak up now and respond to this Call for Potentially Essential Patents
      * If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance, please respond at this time by providing relevant information to the WG Chair
      1. Chair asked if anyone in this meeting is aware of any potentially essential patents.
         1. **No potentially essential patent reported.**
   4. Other guidelines for IEEE WG meetings – done
      * All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.
        + Don’t discuss the interpretation, validity, or essentiality of patents/patent claims.
        + Don’t discuss specific license rates, terms, or conditions.
          - Relative costs of different technical approaches that include relative costs of patent licensing terms January be discussed in standards development meetings.

Technical considerations remain the primary focus

* + - * Don’t discuss or engage in the fixing of product prices, allocation of customers, or division of sales markets.
      * Don’t discuss the status or substance of ongoing or threatened litigation.
      * Don’t be silent if inappropriate topics are discussed … do formally object.
  1. Patent-related information – done
     + The patent policy and the procedures used to execute that policy are documented in the:
     + *IEEE-SA Standards Board Bylaws* (http://standards.ieee.org/develop/policies/bylaws/sect6-7.html#6)
     + *IEEE-SA Standards Board Operations Manual* (http://standards.ieee.org/develop/policies/opman/sect6.html#6.3)
     + Material about the patent policy is available at
     + [*http://standards.ieee.org/about/sasb/patcom/materials.html*](http://standards.ieee.org/about/sasb/patcom/materials.html)
  2. Participant behavior in IEEE-SA activities is guided by the IEEE Codes of Ethics & Conduct - done
  3. Participants in the IEEE-SA “individual process” shall act independently of others, including employers - done
  4. IEEE-SA standards activities shall allow the fair & equitable consideration of all viewpoints - done

1. **Attendance**
   1. <https://imat.ieee.org/>
      1. Please indicate the voter status by adding [V] or [NV] before your name on WebEx.
2. **Comment Resolution and Motions**
   1. **Abhishek Patil (Qualcomm) presented “Resolution for CIDs assigned to Abhi,” based on the submission doc.11-20-1591-01.**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1591-01-00ax-sa2-misc-mac-crs-assigned-to-abhi.docx>
      2. Summary
         1. Resolutions to the comments received for the IEEE 802.11ax D7.0 with following CIDs are proposed.
            1. CIDs: 25012, 25017, 25034, 25079, 25084, 25099
      3. Discussion
         1. CID 25012: A member commented that the resolution should be revised. 🡪 the document becomes r2.
         2. CID 25034: The text in the resolution column is updated based on the comment from a member.
         3. CID 25099: Abhi worked with a participant and the current resolution is good.
         4. Bug fix part: There were some editorial comments.
      4. Next Step
         1. There will be a motion to approve the proposed resolutions in the next teleconference.
   2. **Youhan Kim (Qualcomm) presented “Comment Resolutions for 11ax D7.0 HE PHY TXVECTOR RXVECTOR parameters,” based on the submission doc.11-20-1543-03.**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1543-03-00ax-cr-d7-0-he-phy-txvector-rxvector-parameters.docx>
      2. Summary
         1. Resolution for the remaining comment with CID 25132 is proposed.
      3. Discussion
         1. CID 25132: A participant suggested a cross reference to a related subclause. 🡪 Youhan will take care of it. Also there was a change to delete inappropriate text.
      4. Next Step
         1. There will be a motion to approve the proposed resolutions possibly in the next call.
   3. **Robert Stacey (Intel) presented “D7.0 Editorial CR,” based on the submission doc.11-20-1598-01.**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1598-01-00ax-d7-0-editorial-cr.docx>
      2. Summary
         1. Resolutions for the editorial comments received for the IEEE 802.11ax D7.0 are proposed.
            1. CIDs: 25004, 25010, 25011, 25014, 25019, 25033, 25023, 25028, 25041, 25098, 25103, 25062, 25082, 25061, 25068
      3. Discussion
         1. CID 25010: A member identified similar issue in TGmd and suggested an update.
         2. CID 25019: The field name of “EOF” had been changed to “EOF/Tag” during the last round of comment resolution.
         3. Presentation of Robert was stopped due to his time constraint.
      4. Next Step
         1. Robert to continue his presentation on remaining CIDs.
   4. **Edward Au (Huawei Technologies) presented “Comment resolution on CIDs 25053 and 25054,” based on the submission doc.11-20-1532-00.**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1532-00-00ax-comment-resolution-on-cids-25053-and-25054.docx>
      2. Summary
         1. Resolutions for the comments with CID 25053 and 25054 received for the IEEE 802.11ax D7.0 are proposed.
            1. In the r0 of this submission, the resolution for the CID 25053 is proposed.
      3. Discussion
         1. No discussion
      4. Next Step
         1. Chairperson suggested a motion for both CIDs during the subsequent teleconference.
3. **AoB**
   1. There was a discussion on the reassignment of the comments. 🡪 The chairperson would like to see if the initial assignees can help.
4. **Adjournment**
   1. TGax CRC teleconference on October 13th, 2020 has adjourned @ 18:44 (ET).

**Thursday, October 15th, 2020, TGax CRC Teleconference (19:00 - 21:00 ET)**

1. **The meeting called to order at 19:03 (ET) by Osama Aboul-Magd (Huawei Technologies), the chairperson of 802.11 TGax.**
   1. Introduction of TGax chairperson and secretary.
   2. The agenda document doc.11-20/1552r8 (<https://mentor.ieee.org/802.11/dcn/20/11-20-1552-08-00ax-tgax-crc-teleconference-agendas-october-november-december-2020.pptx>) is the working document (r7 is on the server).
2. **Attendees**
   1. Aboul-Magd, Osama (Huawei Technologies)
   2. Adachi, Tomoko (Toshiba)
   3. Asterjadhi, Alfred (Qualcomm)
   4. Chen, Xiaogang (Intel)
   5. Chu, Liwen (NXP Semicondctor)
   6. Coffey, Sean (RealTek)
   7. Derham, Thomas (Broadcom)
   8. Haasz, Jadi (IEEE-SA)
   9. Hamilton, Mark (Ruckus/CommScope)
   10. Inoue, Yasuhiko (NTT)
   11. Kandala, Srinivas (Samsung)
   12. Kim, Youhan (Qualcomm)
   13. Kneckt, Jarrko (Apple)
   14. Patil, Abhishek (Qualcomm)
   15. Petrick, Albert (InterDigital)
   16. Rison, Mark (Samsung)
   17. Rosdahl, Jon (Qualcomm)
   18. Schelstraete, Sigurd (ON Communications)
   19. Sun, Bo (ZTE)
   20. Yu, Jian Ross (Huawei Technologies)
3. **Agenda Setting**
   1. Proposed agenda for the TGax CRC teleconference on October 15th, 2020.
      1. Call meeting to order
      2. IEEE-SA IPR policy and Procedure
      3. Attendance Reminder – Please record your attendance on IMAT (imat.ieee.org)
      4. Comment Resolution and Motions
         1. <https://mentor.ieee.org/802.11/dcn/20/11-20-1541-00-00ax-mac-cr-miscellaneous-cids-for-sa2.docx> - Alfred Asterjadhi - update
         2. <https://mentor.ieee.org/802.11/dcn/20/11-20-1571-00-00ax-sa2-comment-resolution-25076-25077.docx> - Liwen Chu - update
         3. <https://mentor.ieee.org/802.11/dcn/20/11-20-1589-01-00ax-sa2-misc-phy-cids.docx> - Youhan Kim - CID 25101
         4. [https://mentor.ieee.org/802.11/dcn/20/11-20-1543-03-00ax-cr-d7-0-he-phy-txvector-rxvector-parameters.docx](https://mentor.ieee.org/802.11/dcn/20/11-20-1543-01-00ax-cr-d7-0-he-phy-txvector-rxvector-parameters.docx) - Bo Sun - update
         5. <https://mentor.ieee.org/802.11/dcn/20/11-20-1591-03-00ax-sa2-misc-mac-crs-assigned-to-abhi.docx> - Abhishek Patil
         6. Revisit CID 25064 and CR Motion # 1009.
      5. Submission
         1. <https://mentor.ieee.org/802.11/dcn/20/11-20-1532-00-00ax-comment-resolution-on-cids-25053-and-25054.docx> -Edward Au
         2. <https://mentor.ieee.org/802.11/dcn/20/11-20-1528-00-00ax-sig-b-cr-on-d7-0.doc> - Ross Jian Yu
         3. <https://mentor.ieee.org/802.11/dcn/20/11-20-1598-00-00ax-d7-0-editorial-cr.docx> - Robert Stacey
         4. <https://mentor.ieee.org/802.11/dcn/20/11-20-1658-00-00ax-comment-resolutions-for-tomi.docx> - Jarkko Kneckt
         5. <https://mentor.ieee.org/802.11/dcn/20/11-20-1664-00-00ax-phy-cids-on-dcm-for-d7-0.docx> - Jianhan Liu
      6. AoB
      7. Adjourn
   2. Chair asked if there is any objection to proceed with this agenda.
      1. Discussion – No discussion
      2. **The agenda for TGax CRC teleconference on October 15th, 2020 is approved.**
4. **IEEE 802 and 802.11 IPR policy and procedure**
   1. Patent Policy:
   2. Participants have a duty to inform the IEEE - done.
      * Participants shall inform the IEEE (or cause the IEEE to be informed) of the identity of each holder of any potential Essential Patent Claims of which they are personally aware if the claims are owned or controlled by the participant or the entity the participant is from, employed by, or otherwise represents
      * Participants should inform the IEEE (or cause the IEEE to be informed) of the identity of any other holders of potential Essential Patent Claims
   3. Ways to inform IEEE: - done
      * Cause an LOA to be submitted to the IEEE-SA (patcom@ieee.org); or
      * Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible; or
      * Speak up now and respond to this Call for Potentially Essential Patents
      * If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance, please respond at this time by providing relevant information to the WG Chair
      1. Chair asked if anyone in this meeting is aware of any potentially essential patents.
         1. **No potentially essential patent reported.**
   4. Other guidelines for IEEE WG meetings – done
      * All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.
        + Don’t discuss the interpretation, validity, or essentiality of patents/patent claims.
        + Don’t discuss specific license rates, terms, or conditions.
          - Relative costs of different technical approaches that include relative costs of patent licensing terms January be discussed in standards development meetings.

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      * Don’t discuss the status or substance of ongoing or threatened litigation.
      * Don’t be silent if inappropriate topics are discussed … do formally object.
  1. Patent-related information – done
     + The patent policy and the procedures used to execute that policy are documented in the:
     + *IEEE-SA Standards Board Bylaws* (http://standards.ieee.org/develop/policies/bylaws/sect6-7.html#6)
     + *IEEE-SA Standards Board Operations Manual* (http://standards.ieee.org/develop/policies/opman/sect6.html#6.3)
     + Material about the patent policy is available at
     + [*http://standards.ieee.org/about/sasb/patcom/materials.html*](http://standards.ieee.org/about/sasb/patcom/materials.html)
  2. Participant behavior in IEEE-SA activities is guided by the IEEE Codes of Ethics & Conduct - done
  3. Participants in the IEEE-SA “individual process” shall act independently of others, including employers - done
  4. IEEE-SA standards activities shall allow the fair & equitable consideration of all viewpoints - done

1. **Attendance**
   1. <https://imat.ieee.org/>
      1. Please indicate the voter status by adding [V] or [NV] before your name on WebEx.
2. **Comment Resolution and Motions**
   1. **Doc.11-20-1543r3 “Comment Resolutions for 11ax D7.0 HE PHY TXVECTOR RXVECTOR parameters,” by Bo Sun (ZTE).**
      1. URL of the document:<https://mentor.ieee.org/802.11/dcn/20/11-20-1543-03-00ax-cr-d7-0-he-phy-txvector-rxvector-parameters.docx>
      2. Summary
         1. Resolutions to the remaining comment in this document is considered.
            1. CID: 25132
         2. This document was discussed in a previous teleconference.
      3. Discussion – no discussion
      4. **CR Motion #1116: Move to approve resolution to CID 25132 in doc** [**https://mentor.ieee.org/802.11/dcn/20/11-20-1543-03-00ax-cr-d7-0-he-phy-txvector-rxvector-parameters.docx**](https://mentor.ieee.org/802.11/dcn/20/11-20-1543-03-00ax-cr-d7-0-he-phy-txvector-rxvector-parameters.docx)
         1. **Mover: Bo Sun, Second: Youhan Kim**
         2. **Discussion – no discussion**
         3. **Result: Approved with unanimous consent.**
   2. **Doc.11-20-1571r1, “11ax D6.0 comment resolution of CID 25076, 25077,” by Liwen Chu (NXP Semiconductor).**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1571-01-00ax-sa2-comment-resolution-25076-25077.docx>
      2. Summary
         1. Resolution for the comments with CID 25076 and 25077 are considered.
      3. Discussion
         1. CID 25076: The group discussed the exception of frame selection rule for the HE TB PPDU case. People also discussed the PSMP and RD protocol cases related to this comment.
         2. There was a comment that CID 25078 should also be resolved.
      4. Next Step
         1. There will be a motion to approve the proposed resolutions possibly in the next call.
   3. **Doc.11-20-1591r3, “Resolution for CIDs assigned to Abhi,” by Abhishek Patil (Qualcomm).**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1591-03-00ax-sa2-misc-mac-crs-assigned-to-abhi.docx>
      2. Summary
         1. Resolutions for the remaining comment with CID 25012 in doc.11-20-1591 was considered.
      3. Discussion
         1. A member asked if someone confirmed the resolution for CID 25099. 🡪 Seems to be okay.
      4. **CR Motion #1117: Move to approve resolutions to CIDs 25012, 25017, 25034, 25079, 25084, 25099 in doc** [**https://mentor.ieee.org/802.11/dcn/20/11-20-1591-03-00ax-sa2-misc-mac-crs-assigned-to-abhi.docx**](https://mentor.ieee.org/802.11/dcn/20/11-20-1591-03-00ax-sa2-misc-mac-crs-assigned-to-abhi.docx)
         1. **Mover: Abhishek Patil, Second:**
         2. **Discussion – no discussion**
         3. **Result: Approved with unanimous consent.**
   4. **Revision: CID 25064 and CR Motion #1009.**
      1. Summary
         1. CID 25044 approved by CR Motion #1009 should have been CID 25064. The CID 25044 was resolved in other document (doc.11-20-1523-02 by Menzo Wentink) and the resolution was approved by the CR Motion #1111.
      2. Discussion
         1. A participant asked if we have to do anything for the CID 25044. The answer was no.
      3. **CR Motion #1118: Move to approve resolution to CID 25064 in doc** [**https://mentor.ieee.org/802.11/dcn/20/11-20-1530-02-00ax-sa2-clause-10-comment-resolution.docx**](https://mentor.ieee.org/802.11/dcn/20/11-20-1530-02-00ax-sa2-clause-10-comment-resolution.docx)
         1. **Mover: Ross Jian Yu, Second: Yasuhiko Inoue.**
         2. **Discussion – no discussion.**
         3. **Result: Approved with unanimous consent.**
3. **Submission**
   1. **Ross Jian Yu (Huawei Technologies) presented “SIG-B CR on D7.0,” based on the submission doc.11-20-1528-01.**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1528-01-00ax-sig-b-cr-on-d7-0.doc>
      2. Summary
         1. Resolutions for the comments with following CIDs related to HE-SIG-B specification defined in the IEEE 802.11ax D7.0 are proposed.
            1. CIDs: 25009, 25056, 25074, 25119
      3. Discussion
         1. CID 25009: A participant requested (i) to correct the heading of the document, (ii) to use the correct terminology, i.e. “20 MHz frequency segment” is not correct, (iii) to clarify the place where NSB is used, and (iv) the text highlighted in green should have been incorporated in D7.0. The group discussed whether to delete NSB. 🡪 Ross removed it.
         2. CID 25119: A member asked for a clarification of the restriction for the full BW MU-MIMO.
      4. **CR Motion # 1119: Move to approve resolutions to CIDs 25009, 25056, 25074, 25119 in doc** [**https://mentor.ieee.org/802.11/dcn/20/11-20-1528-02-00ax-sig-b-cr-on-d7-0.doc**](https://mentor.ieee.org/802.11/dcn/20/11-20-1528-02-00ax-sig-b-cr-on-d7-0.doc)
         1. **Mover: Ross Jian Yu, Second: Youhan Kim**
         2. **Discussion – no discussion**
         3. **Result: Approved with unanimous consent**
   2. **Jarkko Kneckt (Apple) presented “Comment resolutions for TOMI,” based on the submission doc.11-20-1658-00.**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1658-01-00ax-comment-resolutions-for-tomi.docx>
      2. Summary
         1. Resolutions for the comments with following CIDs related to TOMI defined in the IEEE 802.11ax D7.0 are proposed.
            1. CIDs: 25071, 25095, and 25096
      3. Discussion
         1. CID 25071: A member asked for clarification that Tx NSTS is applied only to non-AP STAs. The answer was Tx NSTS is only for TB PPDUs. 🡪 The member would like to double check it. The group continued related discussion.
         2. CID 25095: The resolution was changed from ACCEPTED to Revised since some people commented that the original text is more appropriate.
         3. CID 25096: A member suggested editorial fixes.
      4. Next Step
         1. There will be a motion to approve the proposed resolutions in the next week.
4. **AoB**
   1. No other business.
5. **Adjournment**
   1. TGax CRC teleconference on October 15th, 2020 has adjourned @ 20:22 (ET).

**Friday, October 16th, 2020, TGax CRC Teleconference (10:00 AM - 12:00 ET)**

1. **The meeting called to order at 10:03 (ET) by Osama Aboul-Magd (Huawei Technologies), the chairperson of 802.11 TGax.**
   1. Introduction of TGax chairperson and secretary.
   2. The agenda document doc.11-20/1552r9 (<https://mentor.ieee.org/802.11/dcn/20/11-20-1552-09-00ax-tgax-crc-teleconference-agendas-october-november-december-2020.pptx>) is the working document (r8 is on the server).
2. **Attendees**
   1. Aboul-Magd, Osama (Huawei Technologies)
   2. Asterjadhi, Alfred (Qualcomm)
   3. Chu, Liwen (NXP Semicondctor)
   4. Inoue, Yasuhiko (NTT)
   5. Kim, Youhan (Qualcomm)
   6. Petrick, Albert (InterDigital)
   7. Rison, Mark (Samsung)
   8. Rosdahl, Jon (Qualcomm)
   9. Stacey, Robert (Intel)
3. **Agenda Setting**
   1. Proposed agenda for the TGax CRC teleconference on October 16th, 2020.
      1. Call meeting to order
      2. IEEE-SA IPR policy and Procedure
      3. Attendance Reminder – Please record your attendance on IMAT (imat.ieee.org)
      4. Comment Resolution and Motions
         1. <https://mentor.ieee.org/802.11/dcn/20/11-20-1541-00-00ax-mac-cr-miscellaneous-cids-for-sa2.docx> - Alfred Asterjadhi - update
         2. <https://mentor.ieee.org/802.11/dcn/20/11-20-1571-00-00ax-sa2-comment-resolution-25076-25077.docx> - Liwen Chu - update
         3. <https://mentor.ieee.org/802.11/dcn/20/11-20-1589-01-00ax-sa2-misc-phy-cids.docx> - Youhan Kim - CID 25101
      5. Submission
         1. <https://mentor.ieee.org/802.11/dcn/20/11-20-1532-00-00ax-comment-resolution-on-cids-25053-and-25054.docx> -Edward Au
         2. <https://mentor.ieee.org/802.11/dcn/20/11-20-1598-00-00ax-d7-0-editorial-cr.docx> - Robert Stacey
      6. AoB
      7. Adjourn
   2. Chair asked if there is any objection to proceed with this agenda.
      1. Discussion – No discussion
      2. **The agenda for TGax CRC teleconference on October 16th, 2020 is approved.**
4. **IEEE 802 and 802.11 IPR policy and procedure**
   1. Patent Policy:
   2. Participants have a duty to inform the IEEE - done.
      * Participants shall inform the IEEE (or cause the IEEE to be informed) of the identity of each holder of any potential Essential Patent Claims of which they are personally aware if the claims are owned or controlled by the participant or the entity the participant is from, employed by, or otherwise represents
      * Participants should inform the IEEE (or cause the IEEE to be informed) of the identity of any other holders of potential Essential Patent Claims
   3. Ways to inform IEEE: - done
      * Cause an LOA to be submitted to the IEEE-SA (patcom@ieee.org); or
      * Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible; or
      * Speak up now and respond to this Call for Potentially Essential Patents
      * If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance, please respond at this time by providing relevant information to the WG Chair
      1. Chair asked if anyone in this meeting is aware of any potentially essential patents.
         1. **No potentially essential patent reported.**
   4. Other guidelines for IEEE WG meetings – done
      * All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.
        + Don’t discuss the interpretation, validity, or essentiality of patents/patent claims.
        + Don’t discuss specific license rates, terms, or conditions.
          - Relative costs of different technical approaches that include relative costs of patent licensing terms January be discussed in standards development meetings.

Technical considerations remain the primary focus

* + - * Don’t discuss or engage in the fixing of product prices, allocation of customers, or division of sales markets.
      * Don’t discuss the status or substance of ongoing or threatened litigation.
      * Don’t be silent if inappropriate topics are discussed … do formally object.
  1. Patent-related information – done
     + The patent policy and the procedures used to execute that policy are documented in the:
     + *IEEE-SA Standards Board Bylaws* (http://standards.ieee.org/develop/policies/bylaws/sect6-7.html#6)
     + *IEEE-SA Standards Board Operations Manual* (http://standards.ieee.org/develop/policies/opman/sect6.html#6.3)
     + Material about the patent policy is available at
     + [*http://standards.ieee.org/about/sasb/patcom/materials.html*](http://standards.ieee.org/about/sasb/patcom/materials.html)
  2. Participant behavior in IEEE-SA activities is guided by the IEEE Codes of Ethics & Conduct - done
  3. Participants in the IEEE-SA “individual process” shall act independently of others, including employers - done
  4. IEEE-SA standards activities shall allow the fair & equitable consideration of all viewpoints - done

1. **Attendance**
   1. <https://imat.ieee.org/>
      1. Please indicate the voter status by adding [V] or [NV] before your name on WebEx.
2. **Submission**
   1. **Doc.11-20-1543r3 “D7.0 Editorial CR,” by Robert Stacey (Intel).**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1598-02-00ax-d7-0-editorial-cr.docx>
      2. Summary
         1. Robert continued his presentation of doc.11-20-1598.
      3. Discussion
         1. CID 25098: The resolution was changed from ACCEPTED to REVISED since there are some other parts using the same expression, i.e. “+HTC-HE Support is 1,” have to be changed to “the +HTC-HE Support subfield is 1” as well.
         2. CID 25068: The group discussed the expression of “Trigger frame or frame containing a TRS.” There is another volunteer working on the related CID and this CID was transferred to that volunteer.
      4. **CR Motion #1120: Move to approve resolutions to CIDs 25004, 25011, 25014, 25019, 25033, 25023, 25025, 25028, 25041, 25098, 25103, 25062, 25082, 25061 in doc** [**https://mentor.ieee.org/802.11/dcn/20/11-20-1598-02-00ax-d7-0-editorial-cr.docx**](https://mentor.ieee.org/802.11/dcn/20/11-20-1598-02-00ax-d7-0-editorial-cr.docx)
         1. **Mover: Robert Stacey, Second: Mark Rison**
         2. **Discussion – no discussion**
         3. **Result: Approved with unanimous consent.**
3. **AoB**
   1. A member asked for the need to reassign the comments.
   2. Current status: There are 6 CIDs that the assignees have not respond to chair’s email. However, resolutions for the other remaining CIDs are prepared. We can finish this round of CR by the end of this month.
4. **Adjournment**
   1. TGax CRC teleconference on October 16th, 2020 has adjourned @ 10:41 AM (ET).

**Tuesday, October 20th, 2020, TGax CRC Teleconference (10:00 - 12:00 ET)**

1. **The meeting called to order at 10:03 (ET) by Osama Aboul-Magd (Huawei Technologies), the chairperson of 802.11 TGax.**
   1. Introduction of TGax chairperson and secretary.
   2. The agenda document doc.11-20/1552r11 (<https://mentor.ieee.org/802.11/dcn/20/11-20-1552-11-00ax-tgax-crc-teleconference-agendas-october-november-december-2020.pptx>) is the working document (r10 is on the server).
2. **Attendees**
   1. Aboul-Magd, Osama (Huawei Technologies)
   2. Asterjadhi, Alfred (Qualcomm)
   3. Chu, Liwen (NXP Semicondctor)
   4. Coffey, John (RealTek)
   5. Gu, Xiangxin (Unisoc)
   6. Inoue, Yasuhiko (NTT)
   7. Kim, Youhan (Qualcomm)
   8. Liu, Jianhan (MediaTek)
   9. Petrick, Albert (InterDigital)
   10. Rison, Mark (Samsung)
   11. Rosdahl, Jon (Qualcomm)
   12. Stacey, Robert (Intel)
   13. Sosack, Robert (Molex)
   14. Stanley, Dorothy (HPE)
   15. Wintink, Menzo (Qualcomm)
3. **Agenda Setting**
   1. Proposed agenda for the TGax CRC teleconference on October 20th, 2020.
      1. Call meeting to order
      2. IEEE-SA IPR policy and Procedure
      3. Attendance Reminder – Please record your attendance on IMAT (imat.ieee.org)
      4. Comment Resolution and Motions
         1. <https://mentor.ieee.org/802.11/dcn/20/11-20-1541-00-00ax-mac-cr-miscellaneous-cids-for-sa2.docx> - Alfred Asterjadhi - update
         2. <https://mentor.ieee.org/802.11/dcn/20/11-20-1571-00-00ax-sa2-comment-resolution-25076-25077.docx> - Liwen Chu - update
         3. <https://mentor.ieee.org/802.11/dcn/20/11-20-1598-00-00ax-d7-0-editorial-cr.docx> - Robert Stacey - CID 25010
         4. <https://mentor.ieee.org/802.11/dcn/20/11-20-1658-00-00ax-comment-resolutions-for-tomi.docx> - Jarkko Kneckt
      5. Submission
         1. <https://mentor.ieee.org/802.11/dcn/20/11-20-1532-00-00ax-comment-resolution-on-cids-25053-and-25054.docx> -Edward Au
         2. <https://mentor.ieee.org/802.11/dcn/20/11-20-1664-00-00ax-phy-cids-on-dcm-for-d7-0.docx> - Jianhan Liu
         3. <https://mentor.ieee.org/802.11/dcn/20/11-20-1646-01-00ax-mac-cr-on-mu-cascading-for-draft-7-0.doc> - Ming Gan
         4. <https://mentor.ieee.org/802.11/dcn/20/11-20-1647-01-00ax-mac-cr-on-fragmentation-for-draft-7-0.doc> – Ming Gan
         5. <https://mentor.ieee.org/802.11/dcn/20/11-20-1673-00-00ax-sa2-comment-resolution-miscellaneous-comments.docx> - Osama Aboul-Magd
      6. AoB
      7. Adjourn
   2. Chair asked if there is any objection to proceed with this agenda.
      1. Discussion – No discussion
      2. **The agenda for TGax CRC teleconference on October 20th, 2020 is approved.**
   3. Discussion
      1. A member identified misalignment between 802.11ax D7.0 and 802.11REVmd D5.0. 🡪 The chairperson suggested an email discussion on the reflector.
4. **IEEE 802 and 802.11 IPR policy and procedure**
   1. Patent Policy:
   2. Participants have a duty to inform the IEEE - done.
      * Participants shall inform the IEEE (or cause the IEEE to be informed) of the identity of each holder of any potential Essential Patent Claims of which they are personally aware if the claims are owned or controlled by the participant or the entity the participant is from, employed by, or otherwise represents
      * Participants should inform the IEEE (or cause the IEEE to be informed) of the identity of any other holders of potential Essential Patent Claims
   3. Ways to inform IEEE: - done
      * Cause an LOA to be submitted to the IEEE-SA (patcom@ieee.org); or
      * Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible; or
      * Speak up now and respond to this Call for Potentially Essential Patents
      * If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance, please respond at this time by providing relevant information to the WG Chair
      1. Chair asked if anyone in this meeting is aware of any potentially essential patents.
         1. **No potentially essential patent reported.**
   4. Other guidelines for IEEE WG meetings – done
      * All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.
        + Don’t discuss the interpretation, validity, or essentiality of patents/patent claims.
        + Don’t discuss specific license rates, terms, or conditions.
          - Relative costs of different technical approaches that include relative costs of patent licensing terms January be discussed in standards development meetings.

Technical considerations remain the primary focus

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      * Don’t discuss the status or substance of ongoing or threatened litigation.
      * Don’t be silent if inappropriate topics are discussed … do formally object.
  1. Patent-related information – done
     + The patent policy and the procedures used to execute that policy are documented in the:
     + *IEEE-SA Standards Board Bylaws* (http://standards.ieee.org/develop/policies/bylaws/sect6-7.html#6)
     + *IEEE-SA Standards Board Operations Manual* (http://standards.ieee.org/develop/policies/opman/sect6.html#6.3)
     + Material about the patent policy is available at
     + [*http://standards.ieee.org/about/sasb/patcom/materials.html*](http://standards.ieee.org/about/sasb/patcom/materials.html)
  2. Participant behavior in IEEE-SA activities is guided by the IEEE Codes of Ethics & Conduct - done
  3. Participants in the IEEE-SA “individual process” shall act independently of others, including employers - done
  4. IEEE-SA standards activities shall allow the fair & equitable consideration of all viewpoints - done

1. **Attendance -** <https://imat.ieee.org/>
   1. Please indicate the voter status by adding [V] or [NV] before your name on WebEx.
2. **Comment Resolution and Motion**
   1. **Doc.11-20-1541-04 “Comment resolutions for miscellaneous CIDs for SA2,” by Alfred Asterjadhi (Qualcomm)**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1541-04-00ax-mac-cr-miscellaneous-cids-for-sa2.docx>
      2. Summary
         1. Alfred presented the resolutions for additional comments with CIDs 25089, 25090, 25126, 25129 and 25068.
      3. Discussion
         1. CID 25089: A member asked for a time for review.
         2. CID 25126: Group discussed the expression of “a Trigger frame or frame carrying TRS Control field.” There is a similar comment (CID 25068). We can wait for additional information from the commenter.
         3. CID 25129: A member commented TGax D1.0 should not appear in the resolution. 🡪 It just explains the background of the discussion and the resolution is not really referring the contents of D1.0.
         4. CID 25068: The same issue with the CID 25126.
      4. Next Step
         1. There will be a motion to approve the resolutions on Thursday.
   2. **Doc.11-20-1589-02, “SA2 Misc PHY CIDs,” by Youhan Kim (Qualcomm)**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1589-01-00ax-sa2-misc-phy-cids.docx>
      2. Summary – no update since the last presentation.
      3. **CR Motoin #1121: Move to approve resolution to CID 25101 in doc** [**https://mentor.ieee.org/802.11/dcn/20/11-20-1589-02-00ax-sa2-misc-phy-cids.docx**](https://mentor.ieee.org/802.11/dcn/20/11-20-1589-02-00ax-sa2-misc-phy-cids.docx)
         1. **Mover: Youhan Kim, Second: Alfred Asterjadhi**
         2. **Discussion – no discussion**
         3. **Result: Approved with unanimous consent.**
3. **Submission**
   1. **Ming Gan (Huawei Technologies) presented “MAC CR Fragmentation,” based on the submission doc.11-20-1647-01.**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1647-01-00ax-mac-cr-on-fragmentation-for-draft-7-0.doc>
      2. Summary
         1. Resolutions for the comments related to fragmentation defined in the IEEE 802.11ax D7.0 with following CIDs are proposed.
            1. 25107, 25108, 25109, 25110, 25111, 25112, 25113, 25114, 25115, 25116.
      3. Discussion
         1. CID 25108: A member disagreed with the comment. The group discussed how to improve the current text. Based on the discussion, the proposed text was updated.
         2. CID 25109: The group discussed the relation between the dynamic fragmentation and BlockAck procedure.
         3. CID 25110 & 25111: Those comments are the same but, the proposed changes are different. The group discussed how to deal with these comments. A participant mentioned that the suggested wording of CID 25110 was better.
         4. CID 25115: A member is concerned by the proposed resolution. The group discussed security issue related to this CID. It would be good to consult with a security expert.
      4. Next Step
         1. There will be a motion to approve the proposed resolutions on Thursday.
   2. **Ming Gan (Huawei Technologies) presented “MAC CR MU cascading,” based on the submission doc.11-20-1646-01.**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1646-01-00ax-mac-cr-on-mu-cascading-for-draft-7-0.doc>
      2. Summary
         1. Resolution for the comments related to MU cascading defined in the IEEE 802.11ax D7.0 with following CIDs are proposed.
            1. CIDs: 25058, 25060, 25075.
      3. Discussion
         1. CID 25058: A member asked for the consistency with the discussion on the MU cascading on the TGax reflector.
4. **AoB**
   1. Time is up. No other business to conduct.
5. **Adjournment**
   1. TGax CRC teleconference on October 20th, 2020 has adjourned @ 12:02 (ET).

**Thursday, October 22nd, 2020, TGax CRC Teleconference (10:00 - 13:00 ET)**

1. **The meeting called to order at 10:02 (ET) by Osama Aboul-Magd (Huawei Technologies), the chairperson of 802.11 TGax.**
   1. Introduction of TGax chairperson and secretary.
   2. The agenda document doc.11-20/1552r12 (<https://mentor.ieee.org/802.11/dcn/20/11-20-1552-12-00ax-tgax-crc-teleconference-agendas-october-november-december-2020.pptx>) is the working document (r10 is on the server).
2. **Attendees**
   1. Aboul-Magd, Osama (Huawei Technologies)
   2. Ansley, Carol (self)
   3. Asterjadhi, Alfred (Qualcomm)
   4. Chen, Xiaogang (Intel)
   5. Chu, Liwen (NXP Semicondctor)
   6. Coffey, John (RealTek)
   7. Fischer, Matthew (Broadcom)
   8. Gu, Xiangxin (Unisoc)
   9. Inoue, Yasuhiko (NTT)
   10. Kim, Youhan (Qualcomm)
   11. Kneckt, Jarkko (Apple)
   12. Liu, Jianhan (MediaTek)
   13. Petrick, Albert (InterDigital)
   14. Rison, Mark (Samsung)
   15. Rosdahl, Jon (Qualcomm)
   16. Stacey, Robert (Intel)
   17. Sosack, Robert (Molex)
   18. Stanley, Dorothy (HPE)
   19. Sun, Bo (ZTE)
   20. Wintink, Menzo (Qualcomm)
   21. Yi, Yongjiangjohn (Futurewei)
3. **Agenda Setting**
   1. Proposed agenda for the TGax CRC teleconference on October 22nd, 2020.
      1. Call meeting to order
      2. IEEE-SA IPR policy and Procedure
      3. Attendance Reminder – Please record your attendance on IMAT (imat.ieee.org)
      4. Comment Resolution and Motions
         1. <https://mentor.ieee.org/802.11/dcn/20/11-20-1541-00-00ax-mac-cr-miscellaneous-cids-for-sa2.docx> - Alfred Asterjadhi - update
         2. <https://mentor.ieee.org/802.11/dcn/20/11-20-1571-00-00ax-sa2-comment-resolution-25076-25077.docx> - Liwen Chu - update
         3. <https://mentor.ieee.org/802.11/dcn/20/11-20-1598-00-00ax-d7-0-editorial-cr.docx> - Robert Stacey - CID 25010
         4. <https://mentor.ieee.org/802.11/dcn/20/11-20-1658-00-00ax-comment-resolutions-for-tomi.docx> - Jarkko Kneckt
      5. Submission
         1. <https://mentor.ieee.org/802.11/dcn/20/11-20-1532-00-00ax-comment-resolution-on-cids-25053-and-25054.docx> -Edward Au
         2. <https://mentor.ieee.org/802.11/dcn/20/11-20-1664-00-00ax-phy-cids-on-dcm-for-d7-0.docx> - Jianhan Liu
         3. <https://mentor.ieee.org/802.11/dcn/20/11-20-1646-01-00ax-mac-cr-on-mu-cascading-for-draft-7-0.doc> - Ming Gan
         4. <https://mentor.ieee.org/802.11/dcn/20/11-20-1647-01-00ax-mac-cr-on-fragmentation-for-draft-7-0.doc> – Ming Gan
         5. <https://mentor.ieee.org/802.11/dcn/20/11-20-1673-00-00ax-sa2-comment-resolution-miscellaneous-comments.docx> - Osama Aboul-Magd
      6. AoB
      7. Adjourn
   2. Chair asked if there is any objection to proceed with this agenda.
      1. Discussion – No discussion
      2. **The agenda for TGax CRC teleconference on October 22nd, 2020 is approved.**
4. **IEEE 802 and 802.11 IPR policy and procedure**
   1. Patent Policy:
   2. Participants have a duty to inform the IEEE - done.
      * Participants shall inform the IEEE (or cause the IEEE to be informed) of the identity of each holder of any potential Essential Patent Claims of which they are personally aware if the claims are owned or controlled by the participant or the entity the participant is from, employed by, or otherwise represents
      * Participants should inform the IEEE (or cause the IEEE to be informed) of the identity of any other holders of potential Essential Patent Claims
   3. Ways to inform IEEE: - done
      * Cause an LOA to be submitted to the IEEE-SA (patcom@ieee.org); or
      * Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible; or
      * Speak up now and respond to this Call for Potentially Essential Patents
      * If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance, please respond at this time by providing relevant information to the WG Chair
      1. Chair asked if anyone in this meeting is aware of any potentially essential patents.
         1. **No potentially essential patent reported.**
   4. Other guidelines for IEEE WG meetings – done
      * All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.
        + Don’t discuss the interpretation, validity, or essentiality of patents/patent claims.
        + Don’t discuss specific license rates, terms, or conditions.
          - Relative costs of different technical approaches that include relative costs of patent licensing terms January be discussed in standards development meetings.

Technical considerations remain the primary focus

* + - * Don’t discuss or engage in the fixing of product prices, allocation of customers, or division of sales markets.
      * Don’t discuss the status or substance of ongoing or threatened litigation.
      * Don’t be silent if inappropriate topics are discussed … do formally object.
  1. Patent-related information – done
     + The patent policy and the procedures used to execute that policy are documented in the:
     + *IEEE-SA Standards Board Bylaws* (http://standards.ieee.org/develop/policies/bylaws/sect6-7.html#6)
     + *IEEE-SA Standards Board Operations Manual* (http://standards.ieee.org/develop/policies/opman/sect6.html#6.3)
     + Material about the patent policy is available at
     + [*http://standards.ieee.org/about/sasb/patcom/materials.html*](http://standards.ieee.org/about/sasb/patcom/materials.html)
  2. Participant behavior in IEEE-SA activities is guided by the IEEE Codes of Ethics & Conduct - done
  3. Participants in the IEEE-SA “individual process” shall act independently of others, including employers - done
  4. IEEE-SA standards activities shall allow the fair & equitable consideration of all viewpoints - done

1. **Attendance -** <https://imat.ieee.org/>
   1. Please indicate the voter status by adding [V] or [NV] before your name on WebEx.
2. **Submission**
   1. **Jianhan Liu (MediaTek) presented “PHY CIDs on DCM for D7.0,” based on the submission doc.11-20-1664-01.**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1664-01-00ax-phy-cids-on-dcm-for-d7-0.docx>
      2. Summary
         1. Resolutions for the comments with CIDs 25006, 25007 and 25008 related to DCM defined in the IEEE 802.11ax D7.0 are proposed.
      3. Discussion
         1. CID 25006: The group discussed how to improve the current text. The group evaluated current text in D7.0. Table 27-13, 27-14 should be revised as well as related equation.
         2. CID 25008: A member requested a time to review the proposed resolution for this CID.
      4. Next Step
         1. There will be a motion to approve the proposed resolutions
   2. **Liwen Chu (NXP Semiconductor) presented “11ax D6.0 comment resolution of CID 25076, 25077,” based on the submission doc.11-20-1571-03.**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1571-03-00ax-sa2-comment-resolution-25076-25077.docx>
      2. Summary
         1. Resolutions for the comments with CIDs 25076, 25077 and 25078 related to frame selection rule are proposed.
      3. Discussion
         1. People asked for more time to review the resolutions.
         2. Some people suggested restructuring of current rules in 10.23.2.7 (Sharing an EDCA TXOP).
      4. Next Step
         1. Liwen to updated the resolutions based on the discussion.
   3. **Jarkko Kneckt (Apple) presented “Comment resolutions for TOMI,” based on the submission doc.11-20-1658-03.**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1658-03-00ax-comment-resolutions-for-tomi.docx>
      2. Summary
         1. Jarkko presented the updates from the previous version.
            1. CIDs: 25071, 25095, 25096.
      3. Discussion
         1. CID 25071: A member has sent comments on the TGax reflector and those comments should be considered.
      4. Next Step
         1. Jarkko to check the email and to make further updates.
   4. **Matthew Fischer (Broadcom) presented “CR CID 25120 25050 UL SR field,” based on the submission doc.11-20-1665-02.**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1665-02-00ax-cr-cid-25120-25050-ul-sr-field.docx>
      2. Summary
         1. Resolutions for the comments with CID 25050, 25120 related to UL SR field defined in the IEEE 802.11ax D7.0 are proposed.
      3. Discussion
         1. CID 25120: The group discussed the details of 160 MHz PPDU case.
      4. Next Step
         1. There will be a motion to approve the revised resolution.
   5. **Osama Aboul-Magd (Huawei Technologies) presented “SA2 Comment Resolution – Miscellaneous Comments,” based on the submission doc.11-20-1673-00.**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1673-00-00ax-sa2-comment-resolution-miscellaneous-comments.docx>
      2. Summary
         1. Resolutions for the miscellaneous comments with CIDs 25027, 25029, 25039, 25040, 25050, and 25120 related to the IEEE 802.11ax D7.0 are proposed.
      3. Discussion
         1. CID 25027: A member proposed a reason to reject this comment. The commenter is referring to FCC spectrum allocation (U-NII). Note that FCC allows signals to straddle multiple U-NII bands – see KDB 789033 (https://apps.fcc.gov/oetcf/kdb/forms/FTSSearchResultPage.cfm?id=52935&switch=P). Hence, there is no need to avoid channels straddling multiple U-NII bands.
         2. CID 25039: This CID was transferred to another volunteer.
         3. CID 25040: This CID was transferred to another volunteer as well.
      4. Next Step
         1. Osama to update the document and to have a motion to approve the proposed resolutions.
3. **AoB**
   1. No other business to conduct.
4. **Adjournment**
   1. TGax CRC teleconference on October 22nd, 2020 has adjourned @ 12:32 (ET).

**Friday, October 23rd, 2020, TGax CRC Teleconference (10:00 AM - 12:00 ET)**

1. **The meeting called to order at 10:03 AM (ET) by Osama Aboul-Magd (Huawei Technologies), the chairperson of 802.11 TGax.**
   1. Introduction of TGax chairperson and secretary.
   2. The agenda document doc.11-20/1552r13 (<https://mentor.ieee.org/802.11/dcn/20/11-20-1552-13-00ax-tgax-crc-teleconference-agendas-october-november-december-2020.pptx>) is the working document (r10 is on the server).
2. **Attendees**
   1. Aboul-Magd, Osama (Huawei Technologies)
   2. Ansley, Carol (self)
   3. Asterjadhi, Alfred (Qualcomm)
   4. Chen, Xiaogang (Intel)
   5. Chu, Liwen (NXP Semicondctor)
   6. Coffey, John (RealTek)
   7. Fischer, Matthew (Broadcom)
   8. Gu, Xiangxin (Unisoc)
   9. Inoue, Yasuhiko (NTT)
   10. Kim, Youhan (Qualcomm)
   11. Kneckt, Jarkko (Apple)
   12. Liu, Jianhan (MediaTek)
   13. Patil, Abhishek (Qualcomm)
   14. Petrick, Albert (InterDigital)
   15. Rison, Mark (Samsung)
   16. Rosdahl, Jon (Qualcomm)
   17. Stacey, Robert (Intel)
   18. Sosack, Robert (Molex)
   19. Stanley, Dorothy (HPE)
   20. Sun, Bo (ZTE)
   21. Wintink, Menzo (Qualcomm)
   22. Yi, Yongjiangjohn (Futurewei)
3. **Agenda Setting**
   1. Proposed agenda for the TGax CRC teleconference on October 23rd, 2020.
      1. Call meeting to order
      2. IEEE-SA IPR policy and Procedure
      3. Attendance Reminder – Please record your attendance on IMAT (imat.ieee.org)
      4. Comment Resolution and Motions
         1. <https://mentor.ieee.org/802.11/dcn/20/11-20-1541-00-00ax-mac-cr-miscellaneous-cids-for-sa2.docx> - Alfred Asterjadhi - update
         2. <https://mentor.ieee.org/802.11/dcn/20/11-20-1571-00-00ax-sa2-comment-resolution-25076-25077.docx> - Liwen Chu - update
         3. <https://mentor.ieee.org/802.11/dcn/20/11-20-1658-00-00ax-comment-resolutions-for-tomi.docx> - Jarkko Kneckt
         4. <https://mentor.ieee.org/802.11/dcn/20/11-20-1664-00-00ax-phy-cids-on-dcm-for-d7-0.docx> - Jianhan Liu
         5. <https://mentor.ieee.org/802.11/dcn/20/11-20-1646-01-00ax-mac-cr-on-mu-cascading-for-draft-7-0.doc> - Ming Gan
         6. <https://mentor.ieee.org/802.11/dcn/20/11-20-1673-00-00ax-sa2-comment-resolution-miscellaneous-comments.docx> - Osama Aboul-Mag
      5. Submission
         1. <https://mentor.ieee.org/802.11/dcn/20/11-20-1532-00-00ax-comment-resolution-on-cids-25053-and-25054.docx> -Edward Au
         2. <https://mentor.ieee.org/802.11/dcn/20/11-20-1647-01-00ax-mac-cr-on-fragmentation-for-draft-7-0.doc> – Ming Gan
         3. <https://mentor.ieee.org/802.11/dcn/20/11-20-1665-02-00ax-cr-cid-25120-25050-ul-sr-field.docx> - Matt Fischer
         4. <https://mentor.ieee.org/802.11/dcn/20/11-20-1690-00-00ax-d7-0-editorial-cr-part-2.docx> - Robert Stacey
         5. <https://mentor.ieee.org/802.11/dcn/20/11-20-1588-00-00ax-cr-for-cid-25085.docx> - Po-Kai Huang
      6. AoB
      7. Adjourn
   2. Chair asked if there is any objection to proceed with this agenda.
      1. Discussion – No discussion
      2. **The agenda for TGax CRC teleconference on October 23rd, 2020 is approved.**
4. **IEEE 802 and 802.11 IPR policy and procedure**
   1. Patent Policy:
   2. Participants have a duty to inform the IEEE - done.
      * Participants shall inform the IEEE (or cause the IEEE to be informed) of the identity of each holder of any potential Essential Patent Claims of which they are personally aware if the claims are owned or controlled by the participant or the entity the participant is from, employed by, or otherwise represents
      * Participants should inform the IEEE (or cause the IEEE to be informed) of the identity of any other holders of potential Essential Patent Claims
   3. Ways to inform IEEE: - done
      * Cause an LOA to be submitted to the IEEE-SA (patcom@ieee.org); or
      * Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible; or
      * Speak up now and respond to this Call for Potentially Essential Patents
      * If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance, please respond at this time by providing relevant information to the WG Chair
      1. Chair asked if anyone in this meeting is aware of any potentially essential patents.
         1. **No potentially essential patent reported.**
   4. Other guidelines for IEEE WG meetings – done
      * All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.
        + Don’t discuss the interpretation, validity, or essentiality of patents/patent claims.
        + Don’t discuss specific license rates, terms, or conditions.
          - Relative costs of different technical approaches that include relative costs of patent licensing terms January be discussed in standards development meetings.

Technical considerations remain the primary focus

* + - * Don’t discuss or engage in the fixing of product prices, allocation of customers, or division of sales markets.
      * Don’t discuss the status or substance of ongoing or threatened litigation.
      * Don’t be silent if inappropriate topics are discussed … do formally object.
  1. Patent-related information – done
     + The patent policy and the procedures used to execute that policy are documented in the:
     + *IEEE-SA Standards Board Bylaws* (http://standards.ieee.org/develop/policies/bylaws/sect6-7.html#6)
     + *IEEE-SA Standards Board Operations Manual* (http://standards.ieee.org/develop/policies/opman/sect6.html#6.3)
     + Material about the patent policy is available at
     + [*http://standards.ieee.org/about/sasb/patcom/materials.html*](http://standards.ieee.org/about/sasb/patcom/materials.html)
  2. Participant behavior in IEEE-SA activities is guided by the IEEE Codes of Ethics & Conduct - done
  3. Participants in the IEEE-SA “individual process” shall act independently of others, including employers - done
  4. IEEE-SA standards activities shall allow the fair & equitable consideration of all viewpoints - done

1. **Attendance -** <https://imat.ieee.org/>
   1. Please indicate the voter status by adding [V] or [NV] before your name on WebEx.
2. **Comment Resolution and Motion**
   1. **Doc.11-20-1664-03, “PHY CIDs on DCM for D7.0,” by Jianhan Liu (MediaTek)**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1664-03-00ax-phy-cids-on-dcm-for-d7-0.docx>
      2. Summary
         1. There is no change since the last revision.
      3. Discussion – no discussion
      4. **CR Motion #1122: Move to approve resolutions to CIDs 25006, 25007 and 25008 in doc** [**https://mentor.ieee.org/802.11/dcn/20/11-20-1664-03-00ax-phy-cids-on-dcm-for-d7-0.docx**](https://mentor.ieee.org/802.11/dcn/20/11-20-1664-03-00ax-phy-cids-on-dcm-for-d7-0.docx)**.**
         1. **Mover: Jianhan Liu, Second: Youhan Kim**
         2. **Discussion – no discussion**
         3. **Result: Approved with unanimous consent**
   2. **Doc.11-20-1658-03, “,” by Jarrko Kneckt (Apple)**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1658-03-00ax-comment-resolutions-for-tomi.docx>
      2. Summary
         1. Jarkko presented the updates from the previous version.
      3. Discussion
         1. A member commented that the reference in the document is old. 🡪 Jarkko fixed the issue and the document became r4
      4. **CR Motion #1123: Move to approve resolutions to CIDs 25071, 25095, and 25096 in doc** [**https://mentor.ieee.org/802.11/dcn/20/11-20-1658-04-00ax-comment-resolutions-for-tomi.docx**](https://mentor.ieee.org/802.11/dcn/20/11-20-1658-04-00ax-comment-resolutions-for-tomi.docx)**.**
         1. **Mover: Jarkko Kneckt, Second: Alfred Asterjadhi**
         2. **Discussion – no discussion**
         3. **Result: Approved with unanimous consent.**
   3. **Doc.11-20-1646-02, “MAC CR MU cascading,” by Ming Gan (Huawei Technologies)**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1646-02-00ax-mac-cr-on-mu-cascading-for-draft-7-0.doc>
      2. Summary
         1. Ming presented the updates on the remaining CID (25075).
      3. Discussion
         1. CID 25060: A member asked why this comment was accepted (since the document contains updated text and figure related to this comment). The point is that the resolution should “REVISED” if there are updates. After discussion, the group concluded that no change is needed and the resolution to this comment was changed to “REJECTED.” The document was updated to r3.
      4. **CR Motion #1124: Move to approve resolutions to CIDs 25058, 25060, 25075 in doc** [**https://mentor.ieee.org/802.11/dcn/20/11-20-1646-03-00ax-mac-cr-on-mu-cascading-for-draft-7-0.doc**](https://mentor.ieee.org/802.11/dcn/20/11-20-1646-03-00ax-mac-cr-on-mu-cascading-for-draft-7-0.doc)**.**
         1. **Mover: Ming Gan, Second: Alfred Asterjadhi**
         2. **Discussion – no discussion**
         3. **Result: Approved with unanimous consent**
   4. **Doc.11-20-1647-02, “MAC CR Fragmentation,” by Ming Gan (Huawei Technologies)**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1647-02-00ax-mac-cr-on-fragmentation-for-draft-7-0.doc>
      2. Summary
         1. Ming presented the updates on this submission based on the doc.11-20-1647-02.
      3. Discussion
         1. CID 25108: A member identified discrepancy between the baseline and proposed text in this submission. Ming fixed the issue and the document became r3.
         2. CID 25115: A member asked for more time to discuss with a security expert on this CID. 🡪 CID 25115 was excluded from the motion for now.
      4. **CR Motion #1125: Move to approve resolutions to CIDs 25107, 25108, 25109, 25110, 25111, 25112, 25113, 25114, 25116 in doc** [**https://mentor.ieee.org/802.11/dcn/20/11-20-1647-03-00ax-mac-cr-on-fragmentation-for-draft-7-0.doc**](https://mentor.ieee.org/802.11/dcn/20/11-20-1647-03-00ax-mac-cr-on-fragmentation-for-draft-7-0.doc)**.**
         1. **Mover: Ming Gan, Second: Menzo Wentink**
         2. **Discussion – no discussion**
         3. **Result: Approved with unanimous consent**
   5. **Doc.11-20-1665-03, “CR CID 25120 25050 UL SR field,” by Matthew Fischer (Broadcom)**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1665-03-00ax-cr-cid-25120-25050-ul-sr-field.docx>
      2. Summary
         1. Matt presented the updates..
      3. Discussion
         1. The group discussed the behavior of legacy devices.
      4. **CR Motion #1126: Move to approve resolutions to CIDs 25120 and 25050 in doc** [**https://mentor.ieee.org/802.11/dcn/20/11-20-1665-03-00ax-cr-cid-25120-25050-ul-sr-field.docx**](https://mentor.ieee.org/802.11/dcn/20/11-20-1665-03-00ax-cr-cid-25120-25050-ul-sr-field.docx)**.**
         1. **Mover: Matthew Fischer, Second: Menzo Wentink**
         2. **Discussion – no discussion**
         3. **Result: Approved with unanimous consent**
   6. **Doc.11-20-1503-01, “HE ER SU PPDU for Control Frame,” by Ruchen Duan (Samsung).**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1503-01-00ax-he-er-su-ppdu-for-control-frame.pptx>
      2. Summary
         1. Currently, the HE ER SU PPDU is only applicable for control frame after association. It is proposed to make it possible to transmit ACK in HE ER SU PPDU format during the association stage.
         2. This proposal related to the CID 25129.
         3. Ruchen has a straw poll.
         4. **Straw Poll (CID 25129): Do you agree to have Rejected as the resolution to CID 25129?**
            1. **Result: Y/N = 9/6 (5 did not vote)**
      3. Next Step
         1. A member asked when is the deadline. The answer was next week.
         2. Another member commented that it would be good to craft a reason for rejection.
   7. **Doc.11-20-1541-04, “Comment resolutions for miscellaneous CIDs for SA2,” by Alfred Asterjadhi (Qualcomm)**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1541-04-00ax-mac-cr-miscellaneous-cids-for-sa2.docx>
      2. Summary
         1. Alfred presented the updates on this document.
      3. Discussion
         1. CID 25129: A member would like more time to resolve this CID.

* Alfred proposed a separate motion on this CID.
  + 1. **CR Motion #1127: Move to approve Rejected as the resolution to CID 25129 The rejection reason is in doc** [**https://mentor.ieee.org/802.11/dcn/20/11-20-1541-04-00ax-mac-cr-miscellaneous-cids-for-sa2.docx**](https://mentor.ieee.org/802.11/dcn/20/11-20-1541-04-00ax-mac-cr-miscellaneous-cids-for-sa2.docx)**.**
       1. **Mover: Alfred Asterjadhi, Second: Menzo Wentink**
       2. **Discussion – there was a request for the vote count.**
       3. **Result: Y/N/A = 11/4/1, motion fails.**
    2. Further Discussion on CR Motion #1127:
       1. A member on the winning side of the CR Motion #1127 mentioned that he would like to change his vote.
       2. **The group discussed how to deal with this issue. The next revision project (REVme) will be the right place to discuss this issue.**
       3. A motion to reconsider CR Motion #1127 was proposed.
    3. **Motion to reconsider CR Motion #1127**
       1. **Mover: Srinivas Kandala, Second: Jon Rosdahl**
       2. **Discussion – no discussion**
       3. **Result: Approved with unanimous consent.**
    4. **CR Motion #1127: Move to approve Rejected as the resolution to CID 25129 The rejection reason is in doc** [**https://mentor.ieee.org/802.11/dcn/20/11-20-1541-04-00ax-mac-cr-miscellaneous-cids-for-sa2.docx**](https://mentor.ieee.org/802.11/dcn/20/11-20-1541-04-00ax-mac-cr-miscellaneous-cids-for-sa2.docx)**.**
       1. **Mover: Alfred Asterjadhi, Second: Menzo Wentink**
       2. **Discussion – no discussion**
       3. **Result: Approved with unanimous consent.**
    5. **CR Motion #1128: Move to approve resolutions to CIDs 25089, 25090, 25126 25068 in doc** [**https://mentor.ieee.org/802.11/dcn/20/11-20-1541-04-00ax-mac-cr-miscellaneous-cids-for-sa2.docx**](https://mentor.ieee.org/802.11/dcn/20/11-20-1541-04-00ax-mac-cr-miscellaneous-cids-for-sa2.docx)**.**
       1. **Mover: Alfred Asterjadhi, Second: Youhan Kim**
       2. **Discussion – no discussion**
       3. **Result: Approved with unanimous consent.**

1. **Submission**
   1. **Po-Kai Huang (Intel) presented “11ax D7.0 CR for CID 25085 in SA2,” based on the submission doc.11-20-1588-00**
      1. URL of the document: <https://mentor.ieee.org/802.11/dcn/20/11-20-1588-00-00ax-cr-for-cid-25085.docx>
      2. Summary
         1. A resolution for the comment with CID 25085 related to HE SMPS feature defined in the IEEE 802.11ax D7.0 was proposed..
      3. Discussion
         1. CID 25085: It was confirmed that the commenter was okay with the proposed resolution.
      4. **CR Motion #1129: Move to approve resolution to CID 25085 in doc** [**https://mentor.ieee.org/802.11/dcn/20/11-20-1588-00-00ax-cr-for-cid-25085.docx**](https://mentor.ieee.org/802.11/dcn/20/11-20-1588-00-00ax-cr-for-cid-25085.docx)**.**
         1. **Mover: Po-Kai Huang, Second: Robert Stacey**
         2. **Discussion – no discussion**
         3. **Result: Approved with unanimous consent.**
2. **AoB**
   1. Time is up.
3. **Adjournment**
   1. TGax CRC teleconference on October 23rd, 2020 has adjourned @ 12:00 (ET).