IEEE P802.11  
Wireless LANs

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| REVmc BRC May 6 and 9 Telecon Minutes | | | | |
| Date: 2016-05-06 | | | | |
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Abstract

Minutes for REVmc BRC Telecon May 6 and 9, 2016

R0: Telecon minutes for May 6

1. **REVmc BRC Telecon, 6 May 2016, 10:00 ET**
   1. **Called to order** at 10:02am ET by the chair, Dorothy STANLEY (HPE)
   2. **Attendance**:

Dorothy STANLEY (HPE); Graham SMITH (SR Technologies); Mark RISON (Samsung); Jon ROSDAHL (Qualcomm); Adrian STEPHENS (Intel); Edward AU   
(Huawei); Emily QI (Intel); Mark HAMILTON (Ruckus); Menzo WENTINK (Qualcomm)

Jinjing JIANG (Marvell); Osama ABOULMAGD (Huawei); Sigurd SCHELSTRAETE (Quantenna); Solomon TRAININ (Intel); Sean Coffey (Realtek);

* 1. **Review patent Policy**
     1. No Issues
  2. **Review draft agenda 11-16/572r0**
     1. <https://mentor.ieee.org/802.11/dcn/16/11-16-0572-00-000m-tgmc-may-2016-teleconference-agenda-planning-document.docx>

**The draft agenda is:**

1. Call to order, attendance, and patent policy

2. Editor report

3. Comment resolution (see below)

CIDs 7074, 7077, 7075 (Ganesh) 30 mins11-16-276- CIDs 7278 et al – Mark RISON – 20 mins  
CID 7772 – Graham SMITH (reassociation list) – 20 mins  
11-16-228 – Graham SMITH – 20 mins  
CID 7698 – Edward AU – 10 mins  
Mark RISON CIDs – 30 mins  
Solomon TRAININ -11-16-0566-00-000m NAV setting fixes in DMG network (fix for recently found error) – 15 mins

4. Motions (20 mins): MAC (11-16-565r41)

5. AOB

6. Adjourn

* + 1. Review the draft agenda, and Ganesh is not here today, so remove from today.
    2. Menzo and Edward want more time for CID 7698 – Move to Tues PM1 in Waikoloa.
       1. Edward listed the CIDs involved: CIDs 7658, 7698
    3. Reminder Telecons between now and Waikoloa – May 9 and 13th
       1. Time for 13th is two hours later than normal
    4. Final approved Comment Resolution order:

11-16-276- CIDs 7278 et al – Mark RISON – 20 minsCID 7772 – Graham SMITH (reassociation list) – 20 mins11-16-228 – Graham SMITH – 20 minsMark RISON CIDs – 30 minsSolomon TRAININ -11-16-0566-00-000m NAV setting fixes in DMG network (fix for recently found error) – 15 mins11-16-0567-00-000m BSS intention in DMG discovery beacon (resolve issue introduced in document 406)Motions (20 mins): MAC (11-16-565r41)

* + 1. No objection to the updated Agenda plan.
  1. **Editor Report -** Adrian STEPHENS (Intel)
     1. Approved changes from the Cambridge F2F have been edited and a 5.4 is nearly ready. Will wait to include the approved CIDs from today as well.
     2. There is some more DMG changes that also need to be finalized. Assaf’s changes may need some review to ensure it is complete.
     3. 8 CIDs with Editor Review State: 7015, 7073, 7111, 7236, 7552, 7558, 7570, 7780
        1. Need more feedback from the group before proceeding.
        2. Dorothy to find agenda time.
  2. **Review doc: 11-16/276r7** – Mark RISON (Samsung)
     1. <https://mentor.ieee.org/802.11/dcn/16/11-16-0276-07-000m-resolutions-for-some-comments-on-11mc-d5-0-sbmc1.docx>
     2. CID 7278(MAC), 7280(MAC), 7281(EDITOR), 7282(EDITOR), 7283(EDITOR), 7284(EDITOR), 7285(EDITOR), 7286(EDITOR), 7287(EDITOR), 7288(EDITOR), 7289(EDITOR), 7290(EDITOR), 7292(MAC):
        1. Review comment discussion and proposed changes.
        2. Discussion on the “Join” – Association.request parameters are available, but not for the Authentication part.
        3. Change of “Shall” to “are” is this one place is different from the others and thought to be better to be consistent with “are”
        4. Discusion on which information elements are included (see 249.3 (DLS.rsp). (see comment mgr33)
        5. Discussion on DLS.ind – (see comment mgr32) – VHT caps should also be passed up.
        6. Discussion on Join.req not having the VHT capabilities included – thought to be an oversight, and will add them to the request.
        7. More time is still need to finalize this set of CIDs.
        8. R8 can be used for marking the full set of CIDs ready for motion
        9. ACTION ITEM #1: Mark RISON to post R8 and note to the Reflector that it is there for review. Will motion in Waikoloa.
        10. Some CIDs in this list were in Graham’s document. – understood and noted.
     3. Proposed Resolution: REVISED (MAC: 2016-05-06 14:47:33Z): Incorporate the changes in 11-16/276r8 <<https://mentor.ieee.org/802.11/dcn/16/11-16-0276-08-000m-resolutions-for-some-comments-on-11mc-d5-0-sbmc1.docx>> for CID 7278(MAC), 7280(MAC), 7281(EDITOR), 7282(EDITOR), 7283(EDITOR), 7284(EDITOR), 7285(EDITOR), 7286(EDITOR), 7287(EDITOR), 7288(EDITOR), 7289(EDITOR), 7290(EDITOR), 7292(MAC): which addresses the comments requested changes.
     4. Mark all ready for motion – will review prior to Waikoloa motion
        1. Mark HAMILTON to update the MAC CIDs, Adrian STEPHENS to update the EDITOR CIDs
  3. **Review doc 11-16/556r0** Graham SMITH (SR Technologies)
     1. <https://mentor.ieee.org/802.11/dcn/16/11-16-0556-00-000m-resolution-of-cid-7772-on-d5.docx>
     2. CID 7772 (MAC)
        1. This CID was to pulled out to separate document. (11-16/556)
        2. Questions on TSPECS, what is a non-AP STA expecting when it re-associates? Compare to the non-AP STA side on P1627.
        3. Long list of issues. Not sure that we can resolve in timely manner if we could agree at all.
        4. Decision to try to get to a single list..
        5. [Comment in Ad Hoc notes:] MAC: 2016-05-06 14:50:57Z - Discussed 11-16/556r0. Agreed to keep just one list, in the STA section, and have the AP reference that list. Still need to sort out the details of getting that list right, including Jouni's comments. Graham will bring back.
        6. Action ITEM #2: Graham – to work offline and find a possible resolution for the May 13th.
  4. **Review doc 11-16/228r6** Graham SMITH (SR Technologies)
     1. <https://mentor.ieee.org/802.11/dcn/16/11-16-0228-06-000m-resolution-for-cids-7087-7088-edca.docx>
     2. CID 7087, 7088, 7541 (MAC)
        1. Review comments
        2. Review discussion from submission
        3. Review proposed changes
        4. Discussion on the changes – agreed more time to review may be needed.
        5. CCADel – this time is the time to complete the CCA
           1. Is aCCA time plus D1
           2. CCADEL time is the time left over after taking into account all the other parts.
           3. May need more view for the figure 10-26
        6. Discussion – a lot of these changes cause a significant change to the channel access methods, and we should not look at doing this level of change at this point in the process.
           1. Discussion on how significant the change really is, and if there are any actual changes to the channel access, or is it just clarification of the text description.
        7. ACTION ITEM #3: Graham to work with Mark H. onffline in the review of the text to ensure it is correct and clear (no technical changes). Plan to revisit on May 13th Telecon to agree on direction.
        8. Straw Poll:
           1. Agree in principal make changes similar to those shown today to resolve the EDCA comments cited.

Yes – No - Abstain

* + - * 1. Results: 4-3-6 Y/N/A
      1. Will add to the May 13th Telecon and discuss again
  1. **Review doc: 11-16/276r7** – Mark RISON (Samsung)
     1. <https://mentor.ieee.org/802.11/dcn/16/11-16-0276-07-000m-resolutions-for-some-comments-on-11mc-d5-0-sbmc1.docx>
     2. CID 7396 (MAC)
        1. Review comment
        2. This CID had been held to allow Mark HAMILTON time to review.
        3. Discussion on the consistency of the change at 568.32.
        4. Review context of the change.
        5. Discussion on the “or BlockACK” – agreed to remove in the 10.3.2.9 changes
        6. Discussion on the “Delayed BlockACK” which needs more review.
        7. Schedule for Tuesday PM2 in Waikoloa for final review
        8. ACTION ITEM #4: Mark RISON to review and update per the discussion. Prepare to bring back in Waikoloa
     3. CID 7608 – already marked ready for motion
     4. CID 7349 - still open
     5. CID 7393 – pending the Menzo and Edward presentation/discussion.
     6. CID 7277 (MAC)
        1. Review comment
        2. Review changes – remove the word “Also”
        3. Proposed Resolution: CID 7277 (MAC): REVISED; Make the changes shown under “Proposed changes” for CID 7277 in 11-16/276r8 <<https://mentor.ieee.org/802.11/dcn/16/11-16-0276-08-000m-resolutions-for-some-comments-on-11mc-d5-0-sbmc1.docx>>, which clarify the intent of clock offset estimation.
        4. No objection – Mark ready for Motion
     7. Mark RISON indicated that he ran out of CIDs prepared.
     8. Mark RISON is waiting on pending e-mails on several outstanding CIDs.
  2. Review doc: 11-16/566r0 Solomon TRAININ (Intel)
     1. <https://mentor.ieee.org/802.11/dcn/16/11-16-0566-00-000m-nav-setting-fixes-in-dmg-network.docx>
     2. Abstract: A DMG CTS frame may contain BF training fields that impact the DMG CTS frame’s length. Impact of the fields on the DMG CTS length is not reflected in the current definition of Setting and resetting the NAV. This contribution proposes text changes to resolve the error
     3. Review discussion:

There are two errors in text that defines setting and resetting the NAV in DMG networks.

1. The existent text defines: A STA that used information from an RTS frame as the most recent basis to update its NAV setting is permitted to reset its NAV if no PHY-RXSTART.indication primitive is received from the PHY during the TXOP continuation timeout with a duration of (2 x aSIFSTime) + (CTS\_Time) + aRxPHYStartDelay + (2 x aSlotTime) starting when the MAC receives a PHY-RXEND.indication primitive corresponding to the end of the RTS frame. The “CTS\_Time” shall be calculated using the length of the CTS frame and the data rate at which the RTS frame used for the most recent NAV update was received at.

The existent definition assumes that the CTS\_Time is fully predictable because the length of the CTS frame is constant. This assumption is correct for operation in 2.4GHz and 5GHz frequency bands, but it is not correct for DMG (60 GHz) network where the size of the DMG CTS frame depends on variable training fields appended to the end of the CTS frame, which is only known if a STA is able to receive the DMG CTS frame. The training length value may vary from 0 us to almost 91 us. Therefore, using of the length field of the DMG CTS frame to calculate the CTS\_Time may cause a substantial difference between expected and real value of the CTS\_Time, which results in wrong decision of NAV setup – in fact, the NAV may be not set even if the RTS/CTS handshake succeed and a TXOP is established.

To fix the error a TDMG-CTS time for DMG network is calculated by adding Training Length of the RTS frame multiplied by Length of TRN Unit (2.836us) to the calculated time.

1. In the text that is common for non-DMG and DMG networks (10.3.2.4 Setting and resetting the NAV) a PHY-RXSTART.indication primitive that is issued at receive of PLCP Header is used to indicate frame arrival. However in the text that defines DMG specific multiple NAV update preamble detection is used to indicate frame arrival (10.36.10 Updating multiple NAV). Definition in 10.36.10 should be fixed to use the PHY-RXSTART.indication primitive.
   * 1. Discussion on when the DMG RTS and DMG CTS differences
     2. Discussion on duration of Slot time and how many are included.
        1. 2 aSIFsTime not 2 slot times
        2. We could change to “3 x SlotTime” and then put in a note to explain why it is 3.
        3. Why not just put the explainatin in the text? – because the aPHYStartDelay in the normal case has 3 different possible values in the DMG case, so we need a less restricting method of describing this case.
        4. Why not add a new parameter with a where description that explains what is being called out.
        5. The “2 x aSlotTime” is there to allow recovery
     3. We seem to have somewhat clear direction, need to have Solomon to work with Adrian to structure the additional parameter and clean the language.
     4. ACTION ITEM #5: Solomon to work with Adrian on Monday AM UK Time to resolve the issues.
     5. As this document is not addressing a specific comment will be brought as a separate motion during the Waikoloa meeting.
   1. Review doc 11-16/567r0 Solomon TRAININ (Intel)
      1. <https://mentor.ieee.org/802.11/dcn/16/11-16-0567-00-000m-bss-intention-in-dmg-discovery-beacon.docx>
      2. Abstract: Define use of the BSS Type field in DMG Beacon with Discovery Mode set to 1
      3. Review discussion:

Active scan in DMG requires engaging in BTI/A-BFT and then exchange probes between stations. The role of the BTI/A-BFT is to provide basic connectivity between stations to allow probe exchange. In case a STA that initiates active scanning is looking for specific type of BSS, the STA gets the information only after completion of probe exchange due to lack of BSS type information in the SSW frame transmitted to the active scan initiator. For example, searching for a PBSS and not an infrastructure BSS, and vice versa, the STA shall do a probe exchange to get the BSS type information. Providing the BSS type information as an intention of the STA that initiates active scanning improves link utilization and allows spending less power in scanning phase. The information is conveyed only in DMG Beacon with Discovery mode field set to 1.

* + 1. Review Proposed Changes
    2. Review Table 2 – editorial error “Wildcard” not “Wildcart”.
    3. Sequence of table – 9-64-xyz needs to be identify what order it should be included – R1 will correct the issue.
    4. Reference to the table and then descriptive text to the table added afterward, so it would be better to put the description into the table in a different column.
       1. Solomon would ask for assistance from Adrian to get this change made.
    5. “in all other cases” is really only the case of when Discovery mode is zero.
       1. The table title should not have the “in all other cases”
    6. ACTION ITEM #6: Solomon will post the R1 after getting feedback from Adrian.
  1. Motions:
     1. **Motion 215: MAC CIDs**

Approve the comment resolutions in the following document and tab indicated and incorporate the indicated text changes into the TGmc draft:

* “Motion MAC-BR” Tab in <https://mentor.ieee.org/802.11/dcn/15/11-15-0565-41-000m-revmc-sb-mac-comments.xls>, updating the CID 7789 resolution text url to r3.
  + - 1. “Motion MAC-BS” Tab in <https://mentor.ieee.org/802.11/dcn/15/11-15-0565-41-000m-revmc-sb-mac-comments.xls> , inserting the word “Change” at the beginning of the resolution text for CID 7378, and in the resolution to CID 7822, change “subfield (see Figure 9-27)” to “field (see Figure 9-27)”
      2. Moved: Edward AU Seconded: Solomon TRAININ
      3. Discussion: None
      4. **Result: 12-0-0 Motion Passes:**
    1. **Motion #216**: **Editor CIDs**

Approve the comment resolutions in the following document and tab indicated and incorporate the indicated text changes into the TGmc draft:

Editorials - ready for motion CBG 2" tab in <https://mentor.ieee.org/802.11/dcn/15/11-15-0532-40-000m-revmc-sponsor-ballot-comments.xls>

* + - 1. Moved: Adrian STEPHENS 2nd: Jon ROSDAHL
      2. Discussion:
         1. Concerned that the time identified and motion was limited this time, but it was noted that these CIDs were discussed last week in the Face to Face meeting in detail, and the resolutions were posted last week.
      3. **Results: 12-0-0 Motion Passes**
    1. Motion on CID 7553 (Clause 4 mesh PMKSA):

Move to approve the comment resolution to CID 7553 in the “CID 7553” tab in <https://mentor.ieee.org/802.11/dcn/15/11-15-0565-41-000m-revmc-sb-mac-comments.xls>

* + - 1. Discussion:
         1. This was originally marked accepted, but we had a review actioned for Dan HARKINS to review, and he objects to this deletion.
         2. There are two “mesh PMKSA” in this area. And only one needs to be deleted
         3. Will wait and have more discussion.
    1. **Motion #217: CID 7549 (TDLS action field information):**

Move to approve the comment resolution to CID 7549 in the “Motion CID 7549” tab in <https://mentor.ieee.org/802.11/dcn/15/11-15-0565-41-000m-revmc-sb-mac-comments.xls>

* + - 1. Moved: Menzo WENTINK Seconded: Adrian STEPHENS
      2. Discussion:
         1. Menzo indicated that he had been actioned to review this proposed resolution and found it ok.
      3. **Result: no objection – unanimous consent – Motion Passes**
    1. **Motion #218: CID 7532 (OMN extension to non-VHT):**

Move to approve the comment resolution to CID 7532 in the “Motion CID 7532” tab in <https://mentor.ieee.org/802.11/dcn/15/11-15-0565-41-000m-revmc-sb-mac-comments.xls>

* + - 1. Moved: Mark RISON Seconded: Edward AU
      2. Discussion:
         1. Speaking against the motion – not enough review has been done.
      3. Ran out of time – Discussion not completed, plan to consider a motion on the topic in a future meeting
  1. Next Call is Monday May 9th 8am PT (11am ET)
  2. Adjourned 1:02pm ET

**References:**

March 6:

<https://mentor.ieee.org/802.11/dcn/16/11-16-0572-00-000m-tgmc-may-2016-teleconference-agenda-planning-document.docx>

<https://mentor.ieee.org/802.11/dcn/16/11-16-0276-07-000m-resolutions-for-some-comments-on-11mc-d5-0-sbmc1.docx>

<https://mentor.ieee.org/802.11/dcn/16/11-16-0276-08-000m-resolutions-for-some-comments-on-11mc-d5-0-sbmc1.docx>

<https://mentor.ieee.org/802.11/dcn/16/11-16-0556-00-000m-resolution-of-cid-7772-on-d5.docx>

<https://mentor.ieee.org/802.11/dcn/16/11-16-0228-06-000m-resolution-for-cids-7087-7088-edca.docx>

<https://mentor.ieee.org/802.11/dcn/16/11-16-0566-00-000m-nav-setting-fixes-in-dmg-network.docx>

<https://mentor.ieee.org/802.11/dcn/16/11-16-0567-00-000m-bss-intention-in-dmg-discovery-beacon.docx>

<https://mentor.ieee.org/802.11/dcn/15/11-15-0565-41-000m-revmc-sb-mac-comments.xls>

<https://mentor.ieee.org/802.11/dcn/15/11-15-0532-40-000m-revmc-sponsor-ballot-comments.xls>

<https://mentor.ieee.org/802.11/dcn/15/11-15-0565-41-000m-revmc-sb-mac-comments.xls>