IEEE P802.11  
Wireless LANs

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| REVmc Minutes for May - Vancouver | | | | |
| Date: 2015-05-14 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Jon Rosdahl | CSR Technologies Inc | 10871 N 5750 W  Highland, UT 84003 | +1-801-492-4023 | jrosdahl@ieee.org |
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Abstract

The IEEE 802.11 TG REVmc Minutes for May 802 Wireless Interim in Vancouver, BC, Canada.

1. **Minutes for 802.11 TGmc** REvmc BRC for Monday 11 May 2015 PM1 – called to order by Dorothy STANLEY (Aruba) 1:30pm
   1. Introduction of Officers: Chair: Dorothy STANLEY (Aruba); Vice-Chair: Mark HAMILTON (Ruckus Wireless); Vice-Chair/Secretary: Jon ROSDAHL (CSR); Editor: Adrian STEPHENS (Intel); Co-Editors: Edward AU (Marvel) & Emily Qi (Intel)
   2. Review Patent Policies
      1. No Issues identified
   3. **Review Logistics:**
      1. **See slide 7 in doc 11-15/492r2**
   4. **WG chair has delegated BRC Ballot Resolution Committee responsibility to TGmc:** 
      1. **See** [**http**](http)[**://www.ieee802.org/11/email/stds-802-11/msg01475.html**](http://www.ieee802.org/11/email/stds-802-11/msg01475.html)
      2. *“The resolution of comments is delegated to TGmc, acting as a sponsor Ballot Resolution Committee (BRC):*
      3. *For convenience, we will continue to use the term “TGmc” to represent this BRC*
      4. *Any voting member of 802.11 can vote at TGmc meetings*
      5. *TGmc can consider motions (e.g. comment resolution,  other changes to the draft, to recirculate) in any of its meetings – including telecons*
      6. *TGmc will meet during 802.11 F2F meetings*
      7. *Ultimately the WG is required to approve any request to the executive committee to move the project to the standards board for approval.”*
   5. **Review agenda** 11=15/494r2 Slide 3

Monday PM1

1. Chair’s Welcome, Status, Review of Objectives, Approve agenda, minutes
2. Editor’s Report
3. Comment resolution:
   1. Editor need input,
   2. RAC Comment group
   3. CIDs 5863 and 6871 to 6899
      1. Reviewed the entire week schedule (Slide 3 and 4)
      2. Slide 4 (Carlos CORDEIRO (Intel) and Assaf KASHER (Intel) are making the presentation for Soloman TRAININ (Intel))
      3. Alesandare EITAN – Comment 5857 withdrawn – An email requested to document the withdrawal
      4. Request to present 11-15/0012 – Ganesh VENKATESAN (Intel) would like to present, but not tied to a comment in Wed pm1 with the Location CIDs
      5. Request to present 11-15/0516 – Graham SMITH (SR Technologies)– “CCA for 11b” – Wed PM2
      6. Request to find Champion for Topics to help process comments – Plan for end of PM1
      7. Move to approve the modified agenda
         1. Moved: Jon ROSDAHL, 2nd David HUNTER
         2. No discussion, No objection to unanimous approval
      8. An R3 of 11-15/494 will be posted shortly
   4. **Approval of prior meeting minutes**
      1. Move to approve

Berlin minutes: <https://mentor.ieee.org/802.11/dcn/15/11-15-0228-01-000m-revmc-minutes-for-march-berlin.docx>

Teleconference minutes: <https://mentor.ieee.org/802.11/dcn/15/11-15-0557-00-000m-revmc-telecon-1-may-2015.docx>

* + - 1. Moved Jon ROSDAHL, 2nd David HUNTER
      2. No discussion, No Objection to unanimous approval
  1. **Editor Report 11-13/95r21 (Adrian Stephens)**
     1. Review <https://mentor.ieee.org/802.11/dcn/13/11-13-0095-21-000m-editor-reports.ppt>
     2. Initial Sponsor Ballot Comments CID start with 5001
     3. Review past performance (see slide 7)
     4. Concern that we may need to have 445 days to complete processing the CIDs
        1. This is based on the total number of Technical comments in the past 4 ballots
     5. We have only 350 Speculative edits done, but well on way to completing the processing of the Editorial CIDs.
     6. Question to the Chair – is there a cunning plan to process the 1899 comments?
        1. Yes, we are looking to hold a F2F once a month, and have more telecons to get the comments processed, and looking to find more volunteers.
  2. **Comment Resolutions**:
  3. **Editor “Needs input Comments”:**
     1. CID 6522
        1. Review comment
        2. Two instances of HMAC-SHA1 in the draft.
        3. Proposed resolution to change to “HMAC-SHA-1”
        4. The proposed change is consistent with the normal use
        5. Adrian to bring a formal proposal for this CID later
        6. Adrian to check for other possible soft hyphen that breaks the HMAC-SHA-1 differently that makes it hard to identify in the document
     2. CID 6270
        1. Review Comment
        2. Propose Changing the name of DMG SC PHY to DMG SC Modulation; DMG low-power SC PHY to DMG low-power SC modulation; etc.
        3. Discussion on the ramification of the change
           1. Will the change cause confusion?
           2. Is there a better word than modulation? – format?
           3. Is DMG a PHY or is DMG SC a PHY?
           4. What goes on at the PHY layer is sometimes in other places called a stream?
           5. Are there only one PHY and 3 modulations?
           6. Extended Rate PHY has several Modes with in it, and we should try to use the existing terminology for the parts of the PHY.
        4. Argument that the DMG SC PHY is a perfectly fine PHY.
        5. Previous Discussion was that a MAC has a single PHY, so if these different things are not able to stand alone, then they may not be a PHY.
           1. We may need to use a different term
           2. May be an entity – PHY Entity?
        6. Single PLCP would be made, and then you could have the subset of the different “PHY” Types.
        7. Asked the group to think over the different options and come back to discuss during the TGad part of our session.
     3. CID 6701
        1. Review Comment
        2. There was a hidden Editor Comment that said it was correct
        3. Question on why not two rows in the table?
        4. Discussion on various reasons for having one or two rows.
        5. Agree to have two rows – Edward to make a formal proposal
     4. CID 6837
        1. Review comment
        2. Note doc 11-14/1058 changed from upper to Lower
        3. Previous CID 3374
        4. Changing back to Capital discussion
        5. Need to be clear to use upper case for the name of variable, but lower case in the concept discussion
        6. Note that in the document had some upper case and some lower case uses of “non”
        7. Headings have to have a leading capitol regardless of the name format
        8. Consistency decisions have a large burden to make consistent going forward.
        9. One proposal is to not make changes that do not make meaningful improvements
        10. Some of the same words in other clauses are not upper cased
        11. CID 5846 and 5847 are similar and have specific locations pointed out.
        12. Straw Poll:
            1. For CID 6837,

A) Reject the comment, text is not ambiguous, and there are no clear rules on capitalization that require a change.

B) Accept – change to upper case parameter names

Result: A: 8 B: 7 – clearly not a clear result

* + - 1. Edward to look at the detail provided in the other CIDs (5846 & 5847) and try resolve the CID (6837) with the changes noted in the other CIDs
    1. CID 6573
       1. Review Comment
       2. Discussion on the history of the change of the labels.
       3. The complete list of changes is not included in the comment, and the CID will be rejected unless a detail description of the changes is given – The Commenter would like time to present the changes.
    2. CID 6364 and 6365
       1. Review comments
       2. The resolutions proposed conflict
       3. The parameters were flipped –
       4. Defer discussion until we take the Security CIDs
  1. **RAC related Comments**
     1. CID 6871 MAC
        1. Review comments
        2. In 802-2014 – changed the way the OUI is specified
        3. The context of the “OUI” is being used is done a couple different ways.
        4. The use of Company ID in the context of the OUI may or may not be usable
        5. CID may be distinguished by two bits that makes it non-ambiguous
        6. Discussion on the use of OUI or CID term and usage
        7. The Direction is to add a definition for the union of “OUI or CID”, and we can look for a different term to make
        8. Suggestion “ Registered ID” – RID then you can change the OUI to RID
        9. Organizational Identifier – then make two more that have a length specific suffix to differentiate the size requirements
           1. Suggestion to have OI-24 and OI-48 etc
        10. The use of OUI and CID as product names that the RAC is providing is important to ensure it is used as they want it used
        11. The use of OUI and CID needs to be unambiguous.
        12. The field name may be overload of the term “OUI” but the field names may be left, but the description needs to allow for the “or CID” be added.
        13. Minimum change may be to just accept the RAC recommendations – change the text to match
        14. The RAC assigns MA\_L, MA-M, and MA-S, which may be confusing for what is a CID or OUI – see page 23 in 802-2014 for some useful guidance for proposed changes.
        15. Transfer the RAC Group of CIDs and CID 5863 to the GEN AdHoc for proposal of resolution. Schedule a Telecon for reviewing the CIDs
  2. Time Check – 5 minutes
  3. Assignment of Comment Groups
     1. Request for Vinko Erceg (Broadcom) to handle VHT
        1. – PHY layer yes, but MAC layer not wanting to do.
        2. GEN AdHoc to assign Vinko Erceg (Broadcom) the VHT-PHY
        3. MAC AdHoc needs a volunteer for VHT-MAC
        4. MAC AdHoc to create a comment group and then look for Volunteer
     2. DMG items should be mostly addressed on Tuesday
     3. Looking for suggestions of potential volunteers
     4. MAC AdHoc – Security assign to Dan
     5. Security items in MESH CID 6183 and 6511 should be moved to Security Comment Group.
     6. For MESH assign to Guido or Kaz,
     7. For TDLS Assign to Menzo
     8. For TPC move 5530, 5545 & 5550 move to DMG, and look at the others to be moved to a different comment group.
     9. Assign Location CIDs to Carlos ALDANA (Qualcomm)
  4. Recess at 4:30pm

1. **Minutes for 802.11 TGmc** REvmc BRC for Monday 11 May 2015 PM2 – called to order by Dorothy STANLEY (Aruba) 4:00pm
   1. Continue with Comment resolution:
   2. Comment resolution – Annex E
      1. CID 5834 GEN
         1. Review comment
         2. Discussion on value of vs indicated by
         3. Proposed Resolution: REVISED (GEN: 2015-05-11 23:11:43Z) Change cited sentence to "The Maximum Power Level field indicates the maximum power, in units of 0.5 dBm, allowed to be transmitted on the channel indicated in the Channel Number field."
         4. No objection - Mark ready for Motion – Vancouver A
      2. CID 5835 GEN
         1. Review comment, it is in G.1 not Annex E.1
         2. The term White space here is the typo graphical not the regulatory nature.
         3. Proposed resolution: ACCEPTED (GEN: 2015-05-11 23:16:35Z)
         4. No objection - Mark ready for Motion – Vancouver A
      3. CID 5971 GEN
         1. Review comment
         2. Proposed Resolution: Revised; at 3337.63 insert “a Multi-domain capable STA shall support Table E-4 Global Operating Classes. Use of non-Global Operating Classes may be deprecated in future revision of the standard.
         3. Discussion
            1. Concern that we may cause a backward compatibility issue.
            2. Concern on the location of the new sentence

The sentence on 3338 is the intro to the following table, so the location is the right place.

* + - 1. Deprecation should either be done or not, not “in the future”
      2. Change “Multi-domain Capable STA” with “dot11MultiDomainCapabilityActivated”, and put parenthesis around the “Global Operating Classes” as it will be removed when we get to publication.
      3. Concern still exists on the new “Shall” statement
      4. Are we ready to deprecate or not?
      5. Discussion on the entries in Table E-1 that are not covered in E-4
         1. If we make a change will it impact the existing devices
      6. The Global Class information and the Local Class information has to be both put in the beacon today. If all STAs supported Global Class, then it would be simpler.
         1. Can we direct new devices to use the Global Classes
      7. Need Class equivalent values in the global class for 15-16-17.
      8. The plan is to have Peter E go and make a presentation to show the new classes and address the backward compatibility on the topic.
      9. Final version of the possible resolution: GEN: 2015-05-11 23:37:03Z Possible Resolution: At 3337.63 insert "A STA for which dot11MultiDomainCapabilityActivated is true shall support Table E-4 (Global operating classes). Use of non-Global Operating Classes is deprecated and may be removed in a future revision of the standard." And insert Table E-1 classes 16, 17, 18 into Table E-4.
      10. Assign to Peter ECCLESINE (Cisco Systems) and mark defer.
    1. CID 5973 GEN
       1. Review comment
       2. If you are deprecating a table, why deprecate the entries separately?
          1. This directs future devices to use the new class definitions
          2. This comment is not needed if CID 5971 deprecates the table?
          3. If we get the former CID deprecated, then we don’t need this one.
       3. What is the proper way to mark the cited entries as deprecated?
          1. Note? Just mark it as deprecated.
          2. Just state the things that are deprecated.
       4. Proposed Resolution: At 3343.3, Insert the following text: "Use of classes 3, 4, 5, 6, 8, 9, 10, 11, 13, 14, 15, 17, 18, 19, 20, 22, 23, 24, 26, 27, 28, 29, 33, 35, 38, 40, 43, 45, 47, 48, 49, 50, 52, 53, 54, 55 is deprecated and they may be reserved in a future version of the standard. " Comment - CID 5971 resolution may provide the deprecation.
       5. Peter will include this in the discussion on the submission he will bring to the Telecon.
    2. CID 5974 GEN
       1. Review comment
       2. This is a new rule from the FCC
       3. Peter to prepare text, but it may be too early to include in the standard.
       4. We would need to change E2.2.2, and it may be a too big for now.
       5. Recommendation: REJECTED (GEN: 2015-05-11 23:55:40Z)– The comment fails to identify changes in sufficient detail so that the specific wording of the changes that will satisfy the commenter can be determined.
       6. Mark Ready for Motion – Vancouver A
    3. CID 6307 GEN
       1. Review comment
       2. There are other CIDs that also address this in part: CID 6305 and 6306
       3. Discussion around the terms and way to resolve the issue
       4. Some believe we do not need a change
       5. Concern on if the note proposed provides any extra information
       6. Review potential change context
       7. Duplication of location can cause a problem in maintenance going forward.
       8. Proposed Resolution: REJECTED (GEN: 2015-05-12 00:14:24Z) The necessary information for the clause 20 and 22 operation is in Annex E. For the clause 23 reference, the last sentence at 2628.46 indicates that the ED mechanism is not used.
       9. Discussion:
          1. Commenter is ok with Reject for 20 and 22.
          2. In 23, CCA-ED, it is not relevant.
       10. Straw Poll:
           1. Accept Resolution:
           2. 7 yes 1 no
       11. Mark ready for Motion – Vancouver A
    4. CID 6306 EDITOR
    5. CID 6305 GEN
    6. CID 6308 GEN
       1. Review comment
       2. Transfer 6306 to GEN AdHoc to handle
       3. Not sufficient info for a change
       4. Commenter does not want to do a submission if it is not going to be acceptable to the group.
       5. Discussion on moving the regulatory sentences that are optional and move back to Annex D, and not have it sprinkled in various PHY clauses. – Optional CCA-ED was in Annex D, and did not have sentences that should not be in other clauses.
       6. Support for having the naming made clear
       7. Support for preparing a submission to sort out the words.
       8. Straw Poll:
          1. A. Reject
          2. B. Develop new names and identify detailed changes
          3. A-4 B-7
       9. For 6305 and 6306 will be marked submission required and assigned to Mark Rison –
       10. If the submission required CIDs are not done at the end of the Comment processing, we will reject the comments without submissions.
    7. CID 6506 GEN
       1. Review comment
       2. Review context to look at possibly adding a sentence
       3. Proposed Resolution: REVISED (GEN: 2015-05-12 00:34:20Z) - At 2368.32, add “The CCA-ED is not required for license-exempt operation in any band."
       4. Discussion on having a note not just text…
       5. Make a note in clause 20,22, and 23
       6. New Proposed Resolution: REVISED (GEN: 2015-05-12) - At 2368.32, add "NOTE--The CCA-ED is not required for license-exempt operation in any band." and at 2264.57, 2553.57, 2628.44 change similar statements to NOTEs.
       7. No objection - Mark ready for Motion – Vancouver A
    8. CID 6507 MAC
       1. Propose to move to Security Group
    9. CID 6399 MAC
       1. Review Comment
       2. Discussion on when the paragraph should be applicable
       3. Does this paragraph require “dot11Operating Classes Implemented is True”?
          1. It was determined not to be needed.
       4. Where do you get the Transmit power limit?
       5. Could we split the clause into two sub-clauses and make 9.21.3 and 9.21.3a
       6. Proposed Resolution: Revised; At 1320.25 add a new section header "Operation with the Transmit Power Envelope element" that contains the test from lines 25 through 49. Remove "and Transmit Power Envelope element" from the existing 9.21.3 section header."
       7. No objection - Mark ready for Motion
  1. We will start on 11ad Comments on Tuesday
  2. There are roughly 40 more DMG comments we will start on Tuesday PM2.
  3. Recess at 6:00pm

1. **Minutes for 802.11 TGmc** REvmc BRC for Tuesday 12 May 2015 PM1 – called to order by Dorothy STANLEY 1:34pm
   1. Review Agenda 11-15/494r4
      1. Note Wed PM2 updated documents- for Matt Fischer
   2. Today’s Agenda 11ad:

* 11ad related presentations and CIDs – Carlos CORDEIRO & Assaf KASHER (Intel)
  + CIDs 5001, 5002, 5003, 5004: 11-15/0253
  + CIDs 5005, 5006, 5007: 11-15/0254
  + CID 5008: 11-15/0255
  + CID 5009: 11-15/0256
  + CID 5010: 11-15/0538
  + CID 5011
  + CID 5222: 11-15/0618
* Payam TORAB(Broadcom)-11-15/0410 - DMG control frame rate selection -
* Carlos Cordeiro (Intel)
  + CIDs 5112, 5113, 5114, 5115, 5116, 5118, 5119, 5120, 5122: 11-15-534
  1. Doc 11-15/023r1 – Carlos CORDEIRO (Intel)
     1. Grant Frame Notifications
     2. CBAP – Contention Based Access Period
     3. DTI Transmission Rules
     4. Minor changes to the R0 that was presented in Berlin.
     5. There were some editorial changes that were made, so an R2 needs to be posted.
     6. Comments related to presentation:
        1. CID 5001, 5002, 5003, 5004 MAC
           1. Proposed Resolution: Revised. Incorporate the text changes in 11-15/023r2.
           2. No objection – mark ready for motion
  2. Doc 11-15/254r1 – Carlos CORDEIRO (Intel)
     1. 11-254 and 11-15/255 have been incorporated in another presentation that is not quite ready to present, so we will need to skip to next document
     2. CID 5005, 5006, 5007 MAC– will be covered later
  3. Doc 11-15/0256r0 - Carlos CORDEIRO (Intel)
     1. CID 5009 MAC - covered in this document
     2. Review document
     3. Awake window is not in the PCP power management mode., so need to delete “A PCP STA advertises as defined in 10.2.6.3.”
     4. Discussion on changes in the document – Note an R1 will have to be posted.
     5. The new submission that is coming later should add more text to the text we are looking at changing here.
     6. Proposed Resolution: Revised. Incorporate the changes in 11-15/256r1 – Editor to make grammatical changes as needed.
     7. No objection - Mark ready for Motion
  4. Doc 11-15/538r1 Assaf KASHER (Intel)
     1. CID 5010 MAC
     2. Beam Tracking
     3. A BRP response may come after a separate link access process, and thus provide stale information.
     4. 1.2. Add a timeout, so no response is sent, after too much time goes by.
     5. 1.3. Editorial issues:
        1. Concern on the complex first sentence in first paragraph
        2. There are a couple “Consider” in the proposal – we have spent a lot of time removing all the “Consider”s in the draft.
        3. Second paragraph, “may consider” – what is the normative effect?
        4. 1.3.3. PHY\_TXEND should be PHY-TXEND. “.ind” should be “.indication”
        5. The changes being discussed are not necessarily editorial, and we may want to put it in as shown and then take a comment to fix it later, or we can take it offline to fix and bring back later.
     6. In a dense environment, you may not make the timelimits, so that may cause a STA to not use the Beam tracking. In a very dense environment, is it possible you may never get the response within the time limit?
     7. Discussion on do we have all the normative behaviour included.
     8. Timing issue with SIFs and DIFS needs more thought
     9. As this is a link-wise parameter, the values have to be negotiated between the two different STAs, if we look at it as a link-wise parameter that the AP enforces, it may make it easier.
     10. P1516L14 – the question on need for the change indicated.
     11. There are 2 things to address in the document – editorial, and then address the level and completeness of the exchange – maybe a new revision of the document could be brought back at a later time.
  5. **Doc 11-15/618r0** – Carlos CORDIERO (Intel)
     1. CID 5222 MAC
     2. Review the document
     3. Rules for RD initiator and Rules for RD responder
     4. Question for Carlos
        1. Can you make it work with the AC methods? Send packets in the AC Constraints set to one is the same way as it is now.
     5. AC - TID above 7 are used for SCMM and SPCA
     6. UP has a relationship with the TID in EDCA
     7. There are a couple comments about the text discussing only SCMM, it should be expanded to include SBCA.
     8. Comments can be done in the next round of balloting, or we can try to just fix it now prior to voting to include it.
     9. The Access policy is a very general parameter
     10. The main issue is that you can have many frames mapped to the same AC
     11. More discussion offline is going to be needed – and then bring back later.
  6. **Doc: 11-15/410r1** - DMG control frame rate selection –
     1. This document was discussed in march
     2. Review document to see if any additional changes are needed, and see if this document has a comment to tie to.. CID 3264 was the prior letter ballot, and no Sponsor Ballot CID has been identified.
     3. DMG rate selection rules
     4. Simple proposal – only one page
     5. Read the text out
     6. This change enables a lower MCS rate to be used.
     7. A motion will be crafted to incorporate the text changes discussed.
  7. Doc: 11-15/534r0 – Carlos CORDIERO (Intel)
     1. CID 5112 MAC
        1. Review Comment
        2. Beamforming and how to set the sector sweep parameter
        3. This is same as a doc we reviewed in March – 11-14/1570r2, and we missed getting it motioned into the draft.
        4. Review the changes proposed.
        5. Proposed resolution: Revised – Incorporate the text changes in 11-15/0534r0 for CID 5112.
        6. Mark Ready for Motion
     2. CID 5113 MAC,
        1. Review Comment
        2. Proposed Resolution: Accept
        3. No objection - Mark Ready for Motion
     3. CID 5114 MAC,
        1. Review comment
        2. Proposed Resolution Revised – Incorporate the text changes in 11-15/0534r0 for CID 5114
     4. CID 5115 MAC,
        1. Proposed Resolution: Accept
     5. CID 5116 MAC,
        1. Proposed Resolution: Accept
     6. CID 5118 MAC,
        1. Proposed Resolution: Accept
     7. CID 5119 MAC,
        1. Proposed Resolution: Accept
     8. CID 5120 MAC,
        1. Proposed Resolution: Accept Editor to apply Editorial correction
     9. CID 5122: MAC
        1. Proposed Resolution: Accept
     10. For this document, we need to either make the changes as shown and then we need to make a comment to fix up, or we can look for Editorial license to make any corrections.
  8. Review CID 5857 GEN:
     1. 11-15-533 Alesandare EITAN
     2. Suggestion to Remove DMG OFDM
     3. Proposed Resolution: REJECTED (GEN: 2015-05-12 22:10:44Z) The comment fails to identify changes in sufficient detail so that the specific wording of the changes that will satisfy the commenter can be determined.
     4. No objection – mark ready for Motion – Vancouver A
  9. Editorial DMG CIDs
     1. CID 6270 EDITOR
        1. We talked about this yesterday, and the group was asked to look for a new word for discussion today. Modulation was not the right word, and we needed to find a different work, like format or mode.
        2. VHT and HT – terminology for Greenfield caused some confusion
           1. Legacy formats may have issues
        3. PHY Format may help in defining the item.
        4. Format may not be the best word to use based on the experience in 11n and 11ac. PHY Mode may be better to use.
        5. Question on the use of mode in the draft? – lots of them
        6. The choice of “PHY Mode” will be used by the editor and do a global change to see if the problem can be resolved.
        7. The flavors of the 60Ghz PHYs are different and so a PHY Mode may be a good way to differentiate the different flavors.
  10. CID 5015 GEN
      + 1. Review Comment - Removal of PMD
        2. Proposed Resolution: Accept
        3. Mark ready for motion – Vancouver A
  11. CID 5017 GEN
      1. Removal of PMD – Review comment
      2. Proposed Resolution: Accept
      3. Mark ready for motion – Vancouver A
  12. CID 5085 MAC
      1. DMG operation
      2. Review comment
      3. Proposed Resolution: REVISED (MAC: 2015-05-12 22:27:00Z): Replace cited sentence with "Channel access by a DMG STA is related to beacon interval timing."
      4. Discussion on the BTI duration field use.
      5. No objection – Mark ready for motion
  13. CID 5086 MAC
      1. Review Comment
      2. Moving the 2nd paragraph up makes sense
      3. Proposed Resolution: REVISED (MAC: 2015-05-12 22:29:26Z): Move the second paragraph of 9.36.1 to the end of 9.36.2.
      4. No objection – Mark Ready for motion
  14. Recess at 3:31pm

1. **Minutes for 802.11 TGmc** REvmc BRC for Tuesday 12 May 2015 PM2 – called to order by Dorothy STANLEY (Aruba) 4:01pm
   1. Review Agenda – 11-15/494r4 slide 3
   2. **DMG Operation and DMG PHY category comments**
      1. CID 5087 MAC
         1. Review comment
         2. Proposed Resolution: Revised; Change the cited location as shown: Max(guard time, MBIFS), where guard time is defined in 9.36.6.5 (Guard time), following….
         3. No objection – Mark Ready for motion
      2. CID 5088 MAC
         1. Review comment
         2. ATI Transmission rules
         3. Discussion on the expected behavior
         4. Proposed Resolution: Revised – Remove the cited Sentence
         5. No objection – Mark Ready for motion
      3. CID 5092 MAC
         1. Review comment
         2. Proposed Resolution: Accept
         3. No objection – Mark Ready for motion
      4. CID 5093 MAC
         1. Review comment
         2. Proposed Resolution: Accept
         3. No objection – Mark Ready for motion
      5. CID 5094 MAC
         1. Review comment
         2. Proposed Resolution: Accept
         3. No objection – Mark Ready for motion
      6. CID 5164 MAC
         1. Review Comment
         2. BHI definition found in clause 3
         3. The DTI in the list is wrong, but to remove will need to add definition for the CBAP and SP schedule.
         4. Assign CID to Carlos CORDIERO for corrected text and proposed resolution.
      7. CID 5461 MAC
         1. Review Comment
         2. Discussion on the default value is zero
         3. Proposed Resolution: Rejected: The MIB definition at 3186.65 identifies the default and a range of values.
         4. No objection – Mark Ready for motion
      8. CID 5473 MAC
         1. Review Comment
         2. Discussion whether this is similar to editorial comments
         3. Do we want to have fields to have a single value that is the same?
         4. Discussion on if the DMG Parameters Field and Beacon Interval Control Field being the same for certain conditions.
         5. Proposed Resolution: Revised – Change the cited sentence to "Each subfield in the Beacon Interval Control field and DMG Parameters field of each DMG Beacon frame transmitted by the AP or PCP shall retain the same value from start to completion of a TXSS phase."
         6. Mark Ready for Motion
      9. CID 5474 MAC
         1. Review comment
         2. Similar to CID 5473
         3. Discussion on what changes are needed.
         4. Proposed Resolution: Revised, Change the cited sentence to “All DMG Beacon frames transmitted within the number of beacon intervals specified within the most recently updated TXSS Span field have the same value for each subfield within the Beacon Interval Control field (10.1.3.3 (...))."
         5. Mark Ready for Motion
      10. CID 5477 MAC
          1. Review Comment
          2. Discussion on more changes that may be made. – Maybe a sequence diagraph to make it clear?
          3. Discussion on how to reword the sentence – “requesting STA” is unambiguous
          4. Proposed Resolution: Revised, at the cited location, change as follows: “If the Dialog Token field in the Link Measurement Report frame is equal to the nonzero Dialog Token field of the Link Measurement Request frame, then the MCS, SNR, and Link Margin fields of the Link Measurement Report frame shall be computed using the measurements of the PPDU that is the next frame received from the requesting STA.”
          5. Mark ready for Motion
      11. CID 5480 MAC
          1. Review comment
          2. Discussion on “may vs may not”
          3. When does the report get sent?
          4. Discussion
          5. Maybe make two sentences to help ambiguity
          6. Word smithing activity to define the sentences.
          7. Proposed Resolution: Revised – Change the first and second bullet list item as shown, and insert a third bullet as shown:

* If the STA implements the recommendation indicated in the Activity field of the Link Measurement Report, it shall send a Link Measurement report containing a DMG Link Adaptation Acknowledgment element. The Activity field of the DMG Link Adaptation Acknowledgment element shall be set to the value of the Activity field in the received DMG Link Margin Subelement.
* If the STA does not implement the recommendation indicated in the Activity field of the Link Measurement Report, it may send a Link Measurement report containing a DMG Link Adaptation Acknowledgment element. The Activity field of the DMG Link Adaptation Acknowledgment element shall be set to 0, indicating that the STA did not change its transmit power.
* A STA shall not send a Link Measurement Report later than 2×aPPDUMaxTime after it acknowledged the reception of the Link Measurement report.
  + - 1. Mark ready for Motion
    1. CID 5484 MAC
       1. Review Comment
       2. Straw Poll:
          1. A: Leave as it is
          2. B: Modify the Text
          3. A – 2 B – 4
          4. Results indicate a change is desired
       3. Word smithing effort to make the change
       4. Proposed Resolution: Revised, at the cited location, change as shown: “A STA indicates support for fast link adaptation by setting the Fast Link Adaptation field in the STA’s DMG Capabilities element to 1. A STA that does not support fast link adaptation sets the Fast Link Adaptation field in the STA’s DMG Capabilities element to 0.
       5. Mark Ready for Motion
    2. CID 5486 MAC
       1. Review Comment
       2. Proposed Resolution: Revised: Revised Change "use" to "initiate"
       3. Mark Ready for Motion
    3. CID 5489 MAC
       1. Review Comment
       2. This cited text is in the context of the receiving STA.
       3. Word smithing to get the new sentence right.
       4. Proposed Resolution: REVISED (MAC: 2015-05-13 00:40:49Z): Change the cited text as shown: "A STA that transmits an unsolicited DTP Report frame should not send a new unsolicited updated DTP Report frame unless the STA has received a frame from the peer STA indicating that the peer STA has switched to the DTP configuration last sent."
       5. Mark Ready for Motion
    4. CID 5941 GEN
       1. Review Comment
       2. Jon to recategorize the Clause 23 items to TVHT PHY for CID 5941, 5942, 5943, 5944,5945, 5946, 5948, 5949, 5950, 5951, 5952, 5953, 6479 and 6222
    5. CID 5982 MAC
       1. Review comment
       2. Revised change has been done in by the changes in CID 5118 that may address this issue.
       3. “SIFS” would be deleted
       4. We may need to just redraw the figure and undo CID 5118.
       5. Proposed Resolution: REVISED (MAC: 2015-05-13 00:49:38Z). Remove the SIFS and arrow between SSW-ACK and the first BRP frame and move the dashed lines that indicate the start of the BRP set-up to the beginning of the BRP frame (Sector list) (leaving extra space to the left of the dashed line).
       6. Change CID 5118 Resolution to be REVISED (MAC: 2015-05-13 00:49:38Z): Remove the SIFS and arrow between SSW-ACK and the first BRP frame and move the dashed lines that indicate the start of the BRP set-up to the beginning of the BRP frame (Sector list) (leaving extra space to the left of the dashed line).
       7. Mark both ready for motion.
       8. We then edited the figure online to ensure it was complete and correct.
    6. CID 5983
       1. Review comment
  1. Ran out of time
     1. Next set of comments: CID 5990, 5996, 6222, 6271, 6387, 6479
  2. Recess 6:00pm

1. **Minutes for 802.11 TGmc** REvmc BRC for Wednesday 13 May 2015 PM1 – called to order by Dorothy STANLEY (Aruba) 1:31pm
   1. Review Agenda – 11-15/0494r6
2. Comment Resolution – Location CIDs:
   1. 11-15/0171 Carlos ALDANA (Qualcomm)
   2. 11-15/0012r0 – Ganesh VENKATESAN (Intel)
   3. Location CID – 11-15/0171r3 Carlos ALDANA (Qualcomm)
      1. Review document
      2. Abstract:

* This contribution addresses some concerns about Fine Timing Measurement Protocol. In particular it addresses CIDs 5172, 5173, 5175, 5176, 5178, 5180, 5181, 5183, 5186, 5187, 5189, 5670, 5859, 6048, 6231, 6232, 6778, 6780, 6781, and 6790.
* It uses Draft 4.0 as a baseline.
* We propose to reject comments 6780 and 6790 and make the changes (shown in red) in this document to address the remaining ones.
  + 1. All the CIDS covered will need to have the same Resolution. This can be done in a group, but that means that if any of the CIDs are not resolved, it will hold up the document.
    2. CID 5172 MAC
       1. Review comment
       2. Change in Clause 8.4.2.36
    3. CID 5173 MAC
       1. Review comment
       2. Change is on page 9
    4. CID 5175 MAC
       1. Review comment
       2. Change is on 6
    5. CID 5176 MAC
       1. Review Comment
       2. Change in 8.6.8.33
    6. CID 5178 MAC
       1. Review Comment
       2. Change is on page 9
       3. Add equation 10-6 to be the same format as equation 20-5
    7. CID 5180 MAC
       1. Review Comment
       2. Change on page
    8. CID 5181 EDITOR
       1. Review Comment
       2. Change on page 8 – the Editor has already made this change
       3. Remove CID 5181 from the list of comments addressed.
    9. CID 5183 & CID 6778 EDITOR
       1. Review Comment
       2. Change on page 10 –
       3. Also marked as editorial – but the editor needed a submission so will be addressed with this submission.
       4. Figure was updated - but there are many issues.
          1. Font should be Arial, grid removed, “ACK” should be “Ack”
          2. This needs to be redrawn to make cleaner
          3. Many of the changes needed should be done before submitting
          4. Editor willing to help fix up
       5. Will need to produce an R3 to have the group consider
       6. Concern on Min\_Delta FTM is shown as full time, rather than a minimum.
       7. This figure tries to show a lot of information, and so it may be a busy figure the adjustment of the timing may cause a problem.
       8. The Editor expects that it would take 4 hours to redraw it and that this CID would be considered at a later time.
       9. The only change for these CIDs is the Figure changes – so delete the Figure and remove the two CIDs
    10. CID 5186 MAC
        1. Review comment
        2. Change on page 4
    11. CID 5187 MAC
        1. Review Comment
        2. Change on page 4 and 5
        3. Questions on changes –
           1. missing comma “…No Preference , subject…”
           2. Discussion on the Note – Should it be a note?
           3. IF not a Note, then we need to add equation numbers, and change “it is recommended” to “should”
           4. Suggested Formula change to subject to the “equation number” added.
           5. Concern that the change may cause some confusion.
           6. Italic usage should be the same through out
           7. The Abbreviation – TFTM\_R There is not a “FTM\_R” in the text.
           8. Minimum policy, but no maximum policy – need to add text to specify what the behaviour should be in the alternative cases.
           9. Need a similar statement in the Min and the Max paragraphs
        4. Still an open CID
        5. Remove from this submission
    12. CID 5189 EDITOR
        1. Editor Comment – Submission Required
        2. Review Comment
        3. Agreed to the change
    13. CID 5670, EDITOR
        1. Editor Comment – open
        2. Remove from Document
    14. CID 5859, EDITOR
        1. Editor Comment – marked as accepted by the Editor
        2. Remove from this submission
    15. CID 6048, CID 6231, & CID 6232, MAC
        1. Review Comments
        2. Changes made on page 6 – Clause 8.4.2.166
    16. CID 6781 EDITOR
        1. Editor Comment – open
           1. Review changes.
    17. CID 6780 EDITOR
        1. Editor Comment – Already Rejected
        2. Review Editor Resolution – no objection.
        3. Remove CID from Submission
    18. CID 6790. MAC
        1. Review comment
        2. Discussion –
           1. Table 8-247 has the FTM Format and Bandwidth description.
           2. Concern that the rule is not consistent in Non-FTM measurement frames
           3. The special frame in an “FTM Session” or in a Burst instance.
        3. Straw Poll:
           1. Should we reject the CID, or get a submission to clarify the text.

Result: Reject – 10 Clarify needed - 1

* + - 1. Proposed Resolution: Reject, We have the language in 10.24.6 (page 1746 line 39) “The responding STA should transmit Fine Timing Measurement frames with the requested format and bandwidth.” This includes FTM\_1, so there is no reason to add any additional language.
    1. Based on the discussion, we will resolve the following CIDS: 5172, 5173, 5175, 5176, 5178, 5180, 5186, 5189, 6048, 6231, 6232, 6781, and 6790 with 11-171r3
    2. Bring back 11-15/171r3 Thursday PM2
  1. Document 11-15/0012r0 – Ganesh VENKATESAN (Intel)
     1. Abstract - This submission addresses the following:

1. Updates related to resolving how LCI and Location CIVIC capabilities are advertised in Extended Capabilities and Radio Measurement Enabled Capabilities elements.
   * 1. Review changes proposed in document
     2. Discussion on the format of the MIB variable description.
     3. Need to change dot11RMLCIConfigured is set to true without putting in who set this to True.
     4. 10.24.6.7 has a reference that needs to be added
     5. More work will need to be done before this submission can be accepted, will work on a new revision, and bring back later this week, but would like to look at the last part of the document starting at 10.11.10.2 to the end for any additional comments from the group.
     6. Continuing with 10.11.10.2
        1. Misspelled “Measurment” should be Measurement caught here, but was not caught in the Sponsor Ballot comments
        2. Discussion on change to 10.24.6.2 and if the dot11WirelessManagementImplemented is correct or not.
     7. Annex C changes
        1. Review MIB additions
        2. Add definition of the new “Group” for Fine Timing measurement variables
        3. Only put in new variables – concern on variables that have not been put in a group. The variable may show up in more than one group
        4. A Compliance statement states a group for compliance, and so a variable may be in more than one group as different groups may need an option to have a particular variable.
     8. Have time on Thursday PM2 to review again.
   1. CID 5260 Editor
      1. Review comment
      2. See 116.53 – see context
      3. EDITOR: 2015-04-28 07:43:01Z - Before the editor's launch into a set of ~50 changes, and implicitly create a new WG element of style, I would ask for discussion as to whether "for an <entity>" is awkward when "In an <entity>" might be less awkward.
         1. When searching “for a”, there are lots of hits
         2. “for a DMG STA”… seems to be one that should be “in”
         3. Concern that not all the stylistic changes are caught in one time, so we need to check if it has all been caught to be better.
         4. With some random checks it looks like this style issue has been addressed.
      4. Discussion on if the cited sentence would be correct if the change happened, or if we need to just delete “For an ESS,”
      5. Proposed Resolution: Revised, Change “For an ESS, the AP” to “In an RSN, an AP “ at the cited location.
      6. Mark Ready for motion
      7. Look at other “for a” comments
         1. CID 5278
            1. Discussion on Table 8-18
            2. Proposed changes include changes and the value being set.
            3. What is the value in doing this
         2. Commenter can look at rechecking the CIDs, note that are problems are caught.
         3. Have we identified all occurrences
      8. Should we make this type of changes?
      9. STRAW POLL:
         1. “are we willing to live with the stylistic awkwardness of “for a” when “in a” might be better?
            1. Discussion –

change on a case basis may be ok

Request that the style guide be updated.

* + - * 1. Results: 9 yes, 2 no, 3 abstain
  1. Recess at 3:31pm

1. **Minutes for 802.11 TGmc** REvmc BRC for Wednesday 13 May 2015 PM2 – called to order by Dorothy STANLEY (Aruba) 4:00pm
   1. Agenda 11-15/0494r6
2. Comment Resolution – CIDs 5959, 5960 Matt FISCHER 11-15-653, 11-15-654,
3. 11-15-0516 Graham SMITH CCA 11b
4. 11-15-668 Sigurd SCHELSTRAETE
   * 1. No changes to agenda
   1. Review document 11-15-654r5 - Matt FISCHER (Broadcom)
      1. Review status of document and history of this document.
      2. From Abstract: “ suggesting the creation of additional partitioning of support indication for NSS values”
      3. From changes before, needed to add a MIB variable – this has been done in this version
      4. Read out the document history:

*Revisions to 11-14-0793*

R9: add MIB variable

Add modifications to subclauses affected by the Extended NSS BW Support indication – e.g. Rx Supported VHT-MCS and NSS Set

Add VHT capability bit, do not modify existing VHT Cap definitions, but only add new functionality, replacing previously reserved bits

Update baseline text to Draft P802.11REVmc\_D4.0

Remove CID information referring to old WG letter balloting process

*Revisions to 11-15-0654:*

R0: initial – beginning with 11-14-0793r9, including the following changes:

In Rx Supported VHT-MCS and NSS Set and Tx Supported VHT-MCS and NSS Set, change the language to only require interpretation of the half NSS bit if the recipient of the bit is capable of interpreting the bit and in the new subclause Half Maximum NSS Support Signalling, remove the text that restricted the transmission of the half NSS signalling bits only to STA that have indicated support for interpretation of the bits. This change is needed because an AP for example, can broadcast capability in a beacon to all STA, both supporters and non-supporters and the interpretation of the half NSS bits are then left to the recipients of the bits. Those recipients that have the capability are required to interpret the value of 1 and those that do not have the capability are allowed to ignore the bits.

R1: providing the alternative, recipient determined setting of the capability bits

R2: yet another alternative, that allows both BW and NSS modifications to deal with the broadcast capability information problem that is created by previous alternatives – that is – if an AP sends VHT Capability information in a broadcast Beacon, then it is unclear whether the association response information will override the Beacon information at a non-AP STA that associates with the AP, so a different signalling method is proposed which allows the creation of a “secret” extended NSS and BW operational set which is only understood by STA that have the optional capability to understand these bits.

R3: remove some inserted text that mentioned basic channel width set

Extended NSS BW Support bit description in the table – changed TVHT case to reserved and removed change marks, as this section is new text for insertion.

R4: reorder the entries in the tables, add another entry to cover a missing case

Some simple capitalization issues repaired

R5: Remove paragraph that said that computation of Max VHT NSS field is computed assuming that the MIB variable is false – this is not necessary when the entire set of instructions for these fields is read together

* + 1. CIDs 5960
       1. Review Comment
       2. Discussion on the use of Frame Format description, and the access that is given to the MIB variables.
       3. Discussion on the issue of Receive the Frame and from that information, you need to infer the MIB variable values and what I need to set it as.
       4. Page 5, Table 8-240, need to identify which MIB variable was needed.
       5. Simply delete the offending reference.
       6. Discussion on “the channel widths” vs “some of the channel widths”
       7. Discussion on “Supported VHT-MSC and NSS Set field” – fix up in table 8-240
       8. Review of Table 80140bb
          1. Concern that things are already broken, the table should be only the meaning of the bits, and how to set the bits should be in the text.
          2. That is not the case, this table is for the state transmitting the field.
          3. There are two different tables, and if so then we need to have them closer together.
       9. Some of the Columns in the table seem to be a capability bit function
       10. Table column the last two columns are the same if not reserved. – this was claimed not to be true for the RX table.
       11. If we delete the Capability Bit = false column would it be still valid?
           1. We would lose the explicit reserved bits
           2. After more discussion it was agreed that column 3 could be deleted.
       12. There is an issue with the “\*” and “\*\*” that should be “see note 1” and “See Note 2” and a proper Note at the end of the table for each.
       13. Change “20/40/80/160” to “20, 40, 80, and 160”
       14. Missing Caption on the Figure in clause 8.4.2.157.3
           1. The figure is not being changed so just remove it.
       15. The table does not indicate that this on a per stream basis
           1. The note seems to infer it, but it is not clear
       16. Different interpretation in clause 8 and clause needs to be avoided.
       17. Replace the “per” with “by”.
       18. 9.7.12.1 –
           1. Concern with a VHT Capabilities element reverence needed to be added.
           2. Update to first paragraph done
           3. Update the 3 paragraph
           4. Then discussed possibly undo the changes
    2. Time check – made it through 2/3 of the document, but at time for now.
    3. Schedule time for Thursday PM1 (last 45 minutes)
  1. Review Doc 11-15/0516r2 Graham Smith CCA 11b
     1. Review Document
     2. CCA for Clauses 16, 17 and 19
     3. Review current state of the CCA for 11b
     4. We still have to meet the regulations, and the limits given in the regulation.
     5. Why do we change the standard just for regulatory issue? The editor note about telling people that devices built to the 802.11-2012 vs those built to 802.11-2016 may be different devices and standard devices
        1. The way to help 11b devices without getting rid of them altogether
     6. The change in clause 19 needs to add the Energy Detect CCA and CCA-CS change to match the rest.
     7. Most commenters seemed to support the main direction. The Note was a source of consternation and comment.
     8. Question on the interpretation of the Table on slide 3
     9. Question on how we get -62dBm? Some cases it is -58dBm, and some
     10. STRAW POLL - A
         1. **Would you support a change to the CCA for DSSS and CCK along the lines as described for Option A, B or C**
         2. **Yes**
         3. **No**
         4. Result: 18-Yes 0-No 11Abstain
     11. STRAW POLL – B
         1. **Which Option would you prefer for 11b devices?**

**Option A – Mandate energy detect CCA (-80dBm, 100mw TX)**

**Option B - Add mandatory -62dBm energy detect CCA**

**Option C – Mandate -82dB valid signal and -62dBm  
 energy detect CCA.**

* + - 1. **Result: 0-A, 12-B, 11-C, 3-No Preference**
  1. Review document 11-15/668r Sigurd SCHELSTRAETE
     1. Introduction of Document indicates looking for feedback
     2. CID 5879 MAC
        1. Review comment and background
        2. Review example
        3. Conclusion – Decouple sounding and MU reception – would be a good thing.
        4. There are two different approaches to allow the decoupling that would be backward compatible.
        5. The changes suggested are proposed to be very minor with low complexity.
        6. Discussion
           1. What about the compatibility notion? There is more info about the use of the extensible field can be brought in subsequent discussion.
           2. If the field is there or not tells the difference for the STA, so the ignored field will not cause a problem is the thought
           3. Reevaluate the example to see if it was complete.
           4. Slide 9 question –
        7. For this topic, we will consider this again in July at the 802 Plenary –
        8. Assign CID to Sigurd SCHELSTRAETE.
  2. MAC Comment Resolution:
     1. CID 6291 MAC
        1. Assign to Carlos CORDEIRO and the DMG Comment Group
        2. We have touched on most of the DMG comments
        3. If we find any other mislabeled DMG comment we will add the DMG Comment Group.
     2. CID 6442 MAC
        1. Review comment
        2. When is immediate not immediate?
        3. We may want to look at the use of immediate, but in most cases the context makes it clear on the usage.
        4. Example random p1250L46
        5. Example 876L58 –
        6. A Common global usage of “immediate” cannot be defined.
        7. Some are before or some after, it is just not SIFS.
        8. A submission required would be the minimum to resolve this.
        9. Do we need to make those individual examples.
     3. Ran out of time
  3. Recess 6:01pm

1. **Minutes for 802.11 TGmc** REvmc BRC for Thursday 14 May 2015 PM1 – called to order by Dorothy STANLEY (Aruba) 1:32pm
   1. Review Agenda – 11-15/494r7

PM1

1. Comment Resolution –
   1. CID 6025, 6026, 6028 - Jouni MALINEN (Qualcomm)
   2. 11-15/0531 Michael FISCHER (Broadcom)
   3. CID 6097 – EPD, 11-15-654 (45 Mins)

PM2 –

1. Comment Resolution –
   1. 11-15/171r4,
   2. CID 0678,
   3. 11-15/12
2. Motions
3. ARC Topics
4. Plans for future
   * 1. Chair reviewed Agenda items for both PM1 and PM2
     2. No objection to Agenda Plan – 11-15/494r8
   1. Comment Resolution: Jouni MALINEN (Qualcomm)
      1. CID 6025 MAC
         1. Review Comment
         2. CID6239, CID6240, CID6564 that are all on this same topic.
            1. I see that CID6239 is exactly the same comment
            2. CID6240 is more general.
            3. the same comment in CID6564.

Question on might define "sequential" as plus one.  Also CID6456 about "monotonic", which the spec often regards as meaning "increasing". Need to fix that too.

Discussion on Monotonically –

Action item: Jouni MALINEN and Mark RISON to work on proposal for CID 6456

Chair requested to Assign CID6239, CID6240 and CID6254, all MAC comments, to Jouni MALINEN.

* + - 1. 717L59 – indicates that Extensible needs to be marked a certain way.
         1. Discussion on that the table -- should it be filled in with yes/no and then delete the cited sentence?
         2. Note that the entry for RSN is extendable, but does not have a “Yes” in the extensible column. At the very least, need to add “Yes” for RSN and “No” for MDE.
      2. No objection to the proposed changes noted by the comment., and we can accept the comment as is.
      3. Then we would like a volunteer to fix the table, and we would address it later.
      4. IF we fill in the blanks with “No” then we may have an issue going forward.
      5. Work would need to be done to ensure that the table is correct.
      6. Proposed Resolution: Accept
      7. Mark Ready for Motion – New motion MAC tab started
    1. CID6026
       1. Review Comment
       2. see clause 11.6.6.4   page1978.40 :
          1. do we have a good reason for mandating "disassociate"?  Would like to implement an AP STA that would only allow "deauthenticate".
          2. Don't know why that should not be allowed.
       3. Some Agree in principle -- the only saving would be to save two frames.
       4. The proposal is to change “shall disassociate" always changes to "shall disassociate or deauthenticate".
          1. It already says that if you deauthenticate then you are disassociated.
       5. The reason the proposal is to just disassociate is that it depends on the AP;  the other is that there are a lot of APs that don't work well, so to be safe the STA has to disassociate first and then deauthenticate.
       6. Chair requested - Is there any objection to saying: “Accept” for this comment? Hear none, so this is "Accept".
       7. Proposed Resolution: ACCEPTED (MAC: 2015-05-14 21:05:08Z)
       8. There were 9 other “shall disassociates" found
          1. Don't know if they all need changes -- but more comments for the ones that do can me made
          2. Chair noted that we will take those specific ones up later.
    2. CID 6028 MAC
       1. Review Comment
       2. See page 1973.13 for context in 11.6.5
       3. Proposed Resolution: REVISED (MAC: 2015-05-14 21:08:50Z): Replace "The key counter is incremented (all 256 bits) each time a value is used as an IV. The key counter is not allowed to wrap to the initialization value." with "The key counter can be used as additional input data for nonce generation. A STA derives a random nonce for each new use."
       4. No objection to the proposed language
       5. Mark Ready for Motion
  1. **Doc: 11-15-531r0** Michael FISCHER (Freescale Semiconductor)
     1. Title: ”Possible solution to the Beacon Length Problem”
     2. Abstract: It is possible for the frame bodies of Beacon and Probe Response frames to exceed the maximum (non-VHT) MMDPU size of 2304 octets. The existing standard does not specify what is to be done in when this occurs. Leaving this situation unspecified is likely to lead to interoperability problems as new elements continue to be added. A recommended solution is to permit some of the elements to be sent with short periodicity, rather than requiring all of them to appear in every Beacon. The same problem exists for Probe Response frames, but requires a different solution**.**
     3. Legacy PHYs have the potential problem.
     4. Initial Classification of elements for Beacon use is given in R1 of this document
     5. Questions:
        1. Where did we get the source on the count of octets?
           1. This is a best estimate of the current state.
           2. Observed values, not necessarily Typical values
        2. Transmitting different Beacon information with different intervals may cause a problem with legacy devices as the Beacon is different from expected.
           1. It may be that is the case, but we need to start looking at where we can do this or where not done. There is a risk, but we need to look at the changes.
        3. Could you find a different size that is used rather than 2404 bytes.?
           1. Suggested 1/16 or 1/8 of the beacon time.
           2. Throughput is an issue, so we should track that as well.
        4. Can we shorten the Beacon as short as we can, but the solution should address the DTIM for Power Save info for example.
        5. We can also use some EDCA Capability method to avoid putting everything in the beacon
        6. It is possible, but may not be practical to limit the size.
        7. Getting consistent behavior is the real issue with a change to the Beacon.
        8. We may not hit the limit for the short term, but we can look at the long term and how to make an extensible Beacon and what can be deleted.
        9. Discussion on the changes to the Beacon that may or may not cause a problem.
     6. New document to be posted = 11-15/0531r1.
  2. **CID 6097 – EPD** – Dick ROY (SRA)
     1. Review Comment
     2. Review doc 11-14/1522r2
        1. Title: LPD to EPD in 5.9GHz
        2. Abstract: This document proposes changes to Draft P802.11REV mc\_D3.0 to affect a change from LPD to EPD in 5.9 GHz bands (see also 11-14/1521).
        3. Review document
        4. Question on if we want to follow this direction
        5. Concern on the larger context that this was not as agreeable to follow this proposal.
           1. Result of the Straw Poll in January did not have a majority
           2. The Straw Poll taken in January was a question on if we should make the change in D4.0 or to wait until Sponsor Ballot, so now the question is to clean up the draft as it is asserted that there are manufacturers that have started to implement it.
           3. The support in 1609 was questioned – it was asserted it was not supported, and another that asserted it was supported
        6. Does this proposed change cause a problem with 802.11ak proposal?
           1. No
        7. It is believed to have addressed all of the concerns voiced in January, so we may want to reconfirm this from the affected parties.
        8. Do we want to get an official statement – Liaison from the interested party?
        9. Time – move to next topic
  3. **Doc: 11-15-0654**r6 – Matthew FISCHER (Broadcom)
     1. Title: LB1000 CID5960 NSS support partitioning
     2. Abstract: This document proposes a resolution for CID 5960 of LB1000 (first sponsor ballot), a comment on TGm Draft 4.0 suggesting the creation of additional partitioning of support indication for NSS values.
     3. Explain changes since yesterday when presented.
     4. Identify changes in R5 and R6.
     5. Then back to where we left off.
     6. The table 9-abcd has double column, but in table 8 did have a column removed.
        1. Discussion on how to best present the material.
        2. If we make two tables, then you could drop the Extend NSS BW Support column
        3. You could also merge the cells that are duplicate.
     7. Questions and discussion
        1. Bandwidth and VHT Capabilities not understood by legacy, There needs to be a corresponding bit of information between the capabilities element (capabilities for the AP) and the VHT element that has the BSS limitations. So There may be a discord between the VHT operation element if one says 160 and the other bits would be at 80 bits.
        2. The AP announces operation, then if the AP announces the BSS can operate in a wider bandwidth
        3. There are no combinations where the mode is in conflict, it is always a subset of the BSS capabilities. – Discussion on how that is the case.
        4. The legacy station sees reserved bits for the BSS bandwidth settings.
        5. Discussion on the various methods to indicate the bandwidth settings
        6. Concern that there is a lot of work that needs to be carefully reviewed before we change this for 160 – This should be an either or – either we use 160 or we don’t use 160 (for both one and two streams).
        7. The features being advocated here allows for more options in the frequency space rather than the special streams option.
        8. There are some benefits for this feature, but we need to make sure we have checked the ramifications of the changes being proposed.
        9. Discussion on how to double up on the number of MCS that are supported.
     8. There are more changes to the document that need to be made, and would be able to bring back for further review at a later time. – R7 to be posted.
     9. STRAW POLL:
        1. I support the direction of 11-15/654?
           1. Results: 9 Yes, 7 No, ?-Abstain
  4. Return to EPD discussion
     1. Verbal presentation from US DOT ITS representative – Steve SILL
     2. US DOT supports standards development efforts via SDO consensus processes and generally defer to the collective expertise of the collective WG for technical decisions.
     3. Responded to the question from earlier, that the IEEE 1609 WG did vote to adopt the EPD frame format.
  5. Recess 3:30pm

1. **Minutes for 802.11 TGmc** REvmc BRC for Thursday, 14 May 2015, PM2 – called to order by Dorothy STANLEY (Aruba) 4:00pm
   1. Review Agenda - 11-15/494r8 slide 3
2. Comment Resolution:
   1. 11-15/0012r3 Ganesh VENKATESAN (Intel)
3. Motions
   1. MAC/GEN CIDS – 11-15/565r2 & 11-15/0665
   2. 11-15-171r4
   3. 11-15/0678r1
   4. 11-15/0410r1
   5. CID 6097
   6. 11-15/256r1
   7. BRC F2F Mtg
4. ARC topics
5. Plans for July,
6. Schedule
7. AOB
8. Adjourn
   * 1. No objection to the Agenda Plan
   1. **Review document 11-15/0012r3** Ganesh VENKATESAN (Intel)
      1. Title: Location Capability in Extended Capabilities and RM Capabilities element (relative to Draft 4.0)
      2. Abstract: This submission addresses the following:
9. Updates related to resolving how LCI and Location CIVIC capabilities are advertised in Extended Capabilities and Radio Measurement Enabled Capabilities elements.
   * 1. Review changes from last presentation
     2. Issue with LCI Civic -- dot11STALCITable needs update.
     3. May need to have separate variable for the FTM specific
     4. There is more work in the document that will need to occur offline.
        1. 10 minute limit to get any feedback today.
     5. Question on the use of ASN.1 usage
     6. Set to 0 while being configured, and set to 1 when valid
     7. Discussion on the dot11RMLCIConfigured
     8. Discussion on when the values are valid – need to know when it takes affect.
     9. Need to find the more consistent way to indicate “when” the variable is valid
     10. Request to get a teleconference agenda slot when possible.
   1. **Motions:**
      1. **Motion # 121**
         1. Approve the comment resolutions in

The “Motion MAC-AM” tab in <https://mentor.ieee.org/802.11/dcn/15/11-15-0565-02-000m-revmc-sb-mac-comments.xls> except for 5120 and 5122

The “Vancouver A” tab in <https://mentor.ieee.org/802.11/dcn/15/11-15-0665-00-000m-revmc-sb-gen-adhoc-comments.xlsx>

and incorporate the indicated text changes into the TGmc draft.

* + - 1. Moved: Adrian STEPHENS, 2nd Jon ROSDAHL
      2. Discussion: None
      3. Results: 18-0-0 motion passes
    1. **Motion # 122**
       1. Resolve CIDs 5172, 5173, 5175, 5176, 5178, 5180, 5186, 5189, 6048, 6231, 6232, 6781, and 6790 as “Revised” with a resolution of “Incorporate the text changes indicated in <https://mentor.ieee.org/802.11/dcn/15/11-15-0171-04-000m-clarification-to-fine-timing-protocol.docx> into the TGmc draft.
       2. Discussion – The practice of resolving a lot of CIDs in a single document
          1. The scope of the changes should be documented in a CID resolution to let the commenter know what the changes were.
          2. The CID specifics could have been documented better in the document
          3. Review REVcom comment resolution expectations and guidelines.
          4. Heretofore we have had a pattern that is generally correct, but in this instance, we did not put the CID tag inline to indicate that disposition of the CID.
          5. The presentation of getting the full picture was the idea for getting the resolutions presented in a clear manner.
       3. Moved: Carlos ALDANA, 2nd Jon ROSDAHL
       4. Discussion: were Editor CIDS noted in the database.
       5. Results: 15-3-1 motion passes
    2. **Motion #123**
       1. Resolve CID 5187 as “Revised” with a resolution of “Incorporate the text changes indicated in [https://](https://mentor.ieee.org/802.11/dcn/15/11-15-0678-00-000m-cid-5187-comment-resolution.docx)[mentor.ieee.org/802.11/dcn/15/11-15-0678-01-000m-cid-5187-comment-resolution.docx](https://mentor.ieee.org/802.11/dcn/15/11-15-0678-01-000m-cid-5187-comment-resolution.docx) into the draft.
       2. Moved: Carlos ALDANA, 2nd: Jonathan SEGEV
       3. Discussion: none
       4. Results: 19-0-0 Motion Passes
    3. **Motion #124**
       1. Incorporate the text changes indicated in <https://mentor.ieee.org/802.11/dcn/15/11-15-0410-01-000m-dmg-control-response-frame-rate-selection.docx> into the draft.
       2. Moved: Genesh VENKATESAN 2nd Jon ROSDAHL
       3. Discussion: none
       4. Results: 16-0-2 Motion Passes
    4. **Motion #125**
       1. Resolve CID 6097 as “Accepted”
       2. Moved: Guido HIERTZ; 2nd: Mark RISON
       3. Discussion: Note, This will incorporate <https://mentor.ieee.org/802.11/dcn/14/11-14-1522-02-000m-lpd-to-epd-in-5-9ghz.docx>
       4. Results: 8-0-11 Motion Passes
    5. **Motion #126**
    6. Resolve CID 5009 as “Revised” with a resolution of “Incorporate the changes indicated in <https://mentor.ieee.org/802.11/dcn/15/11-15-0256-01-000m-802-11ad-atim-frame-usage-clarifications.docx>

Editor to make grammatical edits, as needed.”

* + - 1. Moved Mark HAMILTON 2nd: Sean COFFEY
      2. Discussion – none
      3. Results: 8-0-8 motion passes
    1. **Motion – Authorize TGmc BRC meeting**
       1. Authorize the TGmc BRC to hold a meeting June 17-19, 2015 in the Jones Farm, Hillsboro, Oregon for the purpose of Sponsor Ballot comment Resolution.
       2. Moved: Ganesh VENKATESAN, 2nd :Dick ROY
       3. Discussion – is it possible to dial into the meeting?
          1. The WG P&P preclude having both a F2F and Electronic Meeting at the same time.
          2. STRAW POLL: How many could attend: 6 (of 23 in the room)
          3. Can the BRC make motions to approve resolutions? Yes they can.
          4. The Face to Face meeting is hard to attend in all cases.
       4. Results: 8-4-9 Motion Passes
  1. **Teleconferences**:
     1. May 29, June 5, June 26 – 10am ET for 2 hours
     2. No objection to the Telecon schedule
     3. Motion to approve Telecon Schedule – Unanimous consent
     4. Agenda items are the Comment Resolution with Action items assigned this week.
  2. **Schedule Review**
     1. June 17-19 2015 Portland
     2. August 19-21 TBD??
     3. Check for host for the August meeting
  3. **ARC Topics** –
     1. Doc: 11-15/555r1 – Mark HAMILTON
        1. Title: Normative DS SAP proposal
        2. Abstract: This document is a follow-up to 11-14/1218, with a proposal to make the DS SAP (and thusly, Annex R) normative text.
        3. Review document
        4. Discussion on the current Figure R-1
        5. Discussion continued on the Figure R-1 that is being proposed.
        6. Question on the ordering of the resulting clauses
        7. Concern on having the DS behind the figure may not be as acceptable
        8. Could the DS be drawn with curly braces or as a cloud or something that is not a straight rectangle to differentiate it from the other rectangle boxes?
        9. Please consider this as a proposal and get feedback to Mark H. to help improve.
     2. **Doc 11-15/540r1**
        1. Title: Updates to REVmc 5.1.5
        2. Abstract: This document is a follow-up to 11-13/113, with proposed updates to subclause 5.1.5 material (mostly the figures), for consideration by ARC SC, and then TGmc.
        3. Review Document – updates to the figures
        4. ARC proposal to REVmc
        5. The document has material that still needs some changes in the later part of the document, but the first 3 changes are desired to make in the Draft.
  4. TG Adjourned at 6:00pm

**References:**

Monday:

<https://mentor.ieee.org/802.11/dcn/15/11-15-0494-00-000m-tgmc-agenda-may-2015.pptx>

<https://mentor.ieee.org/802.11/dcn/15/11-15-0494-01-000m-tgmc-agenda-may-2015.pptx>

<https://mentor.ieee.org/802.11/dcn/15/11-15-0494-02-000m-tgmc-agenda-may-2015.pptx>

<https://mentor.ieee.org/802.11/dcn/15/11-15-0228-01-000m-revmc-minutes-for-march-berlin.docx>

<https://mentor.ieee.org/802.11/dcn/15/11-15-0557-00-000m-revmc-telecon-1-may-2015.docx>

<https://mentor.ieee.org/802.11/dcn/15/11-15-0494-03-000m-tgmc-agenda-may-2015.pptx>

<https://mentor.ieee.org/802.11/dcn/13/11-13-0095-21-000m-editor-reports.ppt>

<https://mentor.ieee.org/802.11/dcn/14/11-14-1058-01-000m-ld202-cid-3774-proposed-resolution.doc>

Tuesday:

<https://mentor.ieee.org/802.11/dcn/15/11-15-0494-04-000m-tgmc-agenda-may-2015.pptx>

<https://mentor.ieee.org/802.11/dcn/15/11-15-0254-01-000m-802-11ad-non-pcp-sta-power-management-clarifications.docx>

<https://mentor.ieee.org/802.11/dcn/15/11-15-0256-00-000m-802-11ad-atim-frame-usage-clarifications.docx>

<https://mentor.ieee.org/802.11/dcn/15/11-15-0256-01-000m-802-11ad-atim-frame-usage-clarifications.docx>

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<https://mentor.ieee.org/802.11/dcn/15/11-15-0538-01-000m-beam-tracking-clarification-cid5010.docx>

<https://mentor.ieee.org/802.11/dcn/15/11-15-0618-00-000m-clarification-of-rd-for-semm-access-policy-cid5222.docx>

<https://mentor.ieee.org/802.11/dcn/15/11-15-0410-01-000m-dmg-control-response-frame-rate-selection.docx>

<https://mentor.ieee.org/802.11/dcn/15/11-15-0534-00-000m-resolution-to-11ad-related-cids.docx>

<https://mentor.ieee.org/802.11/dcn/15/11-15-0171-01-000m-clarification-to-fine-timing-protocol.docx>

<https://mentor.ieee.org/802.11/dcn/15/11-15-0171-02-000m-clarification-to-fine-timing-protocol.docx>

<https://mentor.ieee.org/802.11/dcn/15/11-15-0494-05-000m-tgmc-agenda-may-2015.pptx>

Wednesday:

<https://mentor.ieee.org/802.11/dcn/15/11-15-0171-03-000m-clarification-to-fine-timing-protocol.docx>

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<https://mentor.ieee.org/802.11/dcn/15/11-15-0494-06-000m-tgmc-agenda-may-2015.pptx>

<https://mentor.ieee.org/802.11/dcn/15/11-15-0516-02-000m-cca-for-clauses-16-17-and-19.pptx>

<https://mentor.ieee.org/802.11/dcn/15/11-15-0668-00-000m-discussion-of-cid-5879.pptx>

Thursday:

<https://mentor.ieee.org/802.11/dcn/15/11-15-0494-07-000m-tgmc-agenda-may-2015.pptx>

<https://mentor.ieee.org/802.11/dcn/15/11-15-0494-08-000m-tgmc-agenda-may-2015.pptx>

<https://mentor.ieee.org/802.11/dcn/15/11-15-0494-09-000m-tgmc-agenda-may-2015.pptx>

<https://mentor.ieee.org/802.11/dcn/15/11-15-0531-00-000m-a-possible-solution-to-the-beacon-length-problem.pptx>

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<https://mentor.ieee.org/802.11/dcn/14/11-14-1522-02-000m-lpd-to-epd-in-5-9ghz.docx>

<https://mentor.ieee.org/802.11/dcn/14/11-14-1521-03-000m-epd-for-ieee802-11-5-9ghz-operations.pptx>

<https://mentor.ieee.org/802.11/dcn/15/11-15-0654-06-000m-lb1000-cid5960-nss-support-partitioning.docx>

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[https://](https://mentor.ieee.org/802.11/dcn/15/11-15-0678-00-000m-cid-5187-comment-resolution.docx)[mentor.ieee.org/802.11/dcn/15/11-15-0678-01-000m-cid-5187-comment-resolution.docx](https://mentor.ieee.org/802.11/dcn/15/11-15-0678-01-000m-cid-5187-comment-resolution.docx)

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<https://mentor.ieee.org/802.11/dcn/15/11-15-0256-01-000m-802-11ad-atim-frame-usage-clarifications.docx>

<https://mentor.ieee.org/802.11/dcn/15/11-15-0555-01-0arc-normative-ds-sap-proposal.docx>

<https://mentor.ieee.org/802.11/dcn/15/11-15-0540-01-0arc-updates-to-revmc-5-1-5.docx>