IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| REVmc minutes for the July 2014 Plenary – San Diego | | | | |
| Date: 2014-07-18 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Jon Rosdahl | CSR Technologies | 10871 N 5750 W  Highland, Utah | +1-801-492-4023 | jrosdahl@ieee.org |
|  |  |  |  |  |

Abstract

Minutes for 802.11 REVmc TG mtgs held during the 802 Plenary in San Diego July 2014.

1. TG REVmc Called to order at 1:30pm by Dorothy STANLEY (Aruba) PM1 – in Harbor H ballroom
   1. Proposed Agenda
      1. See 11-14/0747r1 – Slide 3

Chair’s Welcome, Status, Review of Objectives, Approve agenda, minutes

Editor’s Report, including MDR status and issues

Timeline and Schedule

Comment resolution - MDR

* 1. **Patent Policy**
     1. No items identified
  2. **Review Agenda changes**
     1. See 11-14/0747r2 – Slide 3
     2. No objection for updated Agenda
  3. Objective for this week is Comment Resolution.
  4. **Review and approve Minutes**:
     1. Move to approve prior REVmc Meeting Minutes:
        1. Waikoloa minutes: <https://mentor.ieee.org/802.11/dcn/14/11-14-0494-00-000m-revmc-minutes-for-may-2014-waikaloa.docx>
        2. Teleconference minutes: <https://mentor.ieee.org/802.11/dcn/14/11-14-0837-00-000m-tgmc-telecon-minutes-11-july-2014.docx>
     2. No objection approved by unanimous consent
  5. Editor Report
     1. See doc 11-13/95r11
     2. Question on who is actually working on CIDs, there are a lot of CIDs that were assigned to Vinko, but he is delegating them out, we will need to update the CID assignments when we know who has accepted the assignment.
     3. Mandatory Draft Review (MDR) status and issues, see <https://mentor.ieee.org/802.11/dcn/14/11-14-0781-00-0000-p802-11revmc-mdr-report.doc>
  6. MDR Report
     1. Error on the file that Adrian had, so need to give him a minute to get the correct file.
     2. Will return to him later.
  7. Review TGmc Plan of Record (slide 8) 11-14/0747r2
* **20 July 2012 – 12 Sept 2012 – Call for Comment/Input**
* **29-30 Aug 2012 – NesCom, SASB PAR Approval**
* **Sept 2012 – Begin to process input**
* **Sept 2012 – 11aa, 11ae integration**
* **Jan – First WG Letter ballot - without 11ad**
* **Dec 2012 – March/May 2013 – 11ad integration**
* **Sept 2013 – Letter ballot on D2.0**
* **Dec 2013 – May 2014 – 11ac, 11af integration – D3.0 in May 2014**
* **July 2014 – Mandatory Draft Review**
* **Open August 15th, Close end Sept 2014 – Form Sponsor Pool (45 days); good for 6 months (end of March 2015)**
* **Sept 2014 – D4.0 – target, follow with D5.0 (unchanged)**
* **Nov 14 – Initial Sponsor Ballot**
* **July 2015– WG/EC Final Approval**
* **Dec 2015 – RevCom/SASB Approval** 
  + 1. Look at how the schedule may work out with a Dec 2015 completion possible target.
    2. 350 Technical comments to resolve – may cause us to slip the D4.0 to the November meeting, but still working to finish and get D4.0 out of Sept Session.
    3. Impact of slipping to Nov
       1. If D4.0 is in Nov, then D5.0 and or D6.0 would follow as needed.
       2. Then EC Unconditional SB approval March 2015 with the initial SB out of March 2015 mtg
    4. We will assess our status at the end of the week and see how it looks then.
  1. MDR Report
     1. Review 11-14/781r2
     2. Review a sample of the changes being suggested by the MDR review.
     3. Large number of “Set to” that are debatable if they are correctly used or not.
     4. Use of May, Must, Only still needing to be resolved
     5. Use of “shall only” needs to be considered
     6. Lots of issues that need to be resolved to a point where we have consensus on the solution of addressing the concerns.
     7. “TRUE” vs “true”
     8. “set to 1” problems reviewed....
     9. After the discussion, it was determined that the editors would go back and review the suggestions in this new light.
     10. Review use of “will”
     11. “Must be – > is” – look at a couple examples
     12. Discussion on the use of “Must”, but we need to look at each one individually.
     13. From the 2012 Style manual indicates that “must is deprecated and shall not be used when stating mandatory requirements; must is only used when an alternative is not available.
     14. Walk through the “must” one at a time. – documented in 11-14/781r2
     15. Subclause 12.2.2 requires that the same value is used for the NAS Client identifier and dot11FTR0KeyHolderID.” Be used as a replacement.
     16. In Annex N, change a “Must be specified... “ to “Specified...”
     17. Do not update deprecated clauses
     18. More review captured in 11-14/781r2
  2. Recess at 3:30pm

1. 802.11 TG REVmc called to order at 1:32pm by Dorothy STANLEY (Aruba)
   1. Review Agenda for today
      1. Note we had planned for Motion Telecon CIDs, but we have been asked to delay as some more editing of those CIDs need to be done.
      2. Updated Agenda captured on slide 3 11-14/
   2. Review 11-14/078r2 STEPHENS
      1. Make r3 out of today’s discussion
      2. Discussion to address comments on possible corrections to what was proposed from the Telecon.
      3. CID 3999 (EDITOR)
         1. Reivew comment
         2. Page 2 line 59: is not sufficient.
         3. The proposed addition would be consistent with other places, this would be a good idea
         4. Change Resolution to Accept
      4. CID 3343 (EDITOR)
         1. TSF value has only 21 hits
         2. TSF Counter has over a hundered
         3. No change made to the proposed resolution from the Telecon
      5. CID 3398 (EDITOR)
         1. The strike out was formed with a cut and past error
         2. The spreadsheet will be corrected next time
      6. CID 3022 (EDITOR)
         1. In reviewing this CID, it was found in 9.7.7.4 clearly an error, but Mark RISON will prepare a submission to address the new found issue.
         2. The submission from Mark RISON to address two items, but we will find out the problem with the second issue.
      7. CID 3016 (EDITOR)
         1. Review comment, there was also another issue found, so this would be added to the submission from Mark RISON, but no changes to the current resolution.
      8. There are 15 Instances of “DS PHY” that need to also be addressed in Mark’s submission.
   3. MDR Review – 11-14/0781r3
      1. Continue on with the review of the MDR review
      2. P1702-L8 – Change the Shall only to may – along with adding a sentence about Shall not to the end of the paragraph
      3. P1702-L28-29 – change to may along with the Shall not send....otherwise.
      4. P1706 L37-38 – discussed a replacement paragraph – determined that we only needed to delete the “only” .
         1. More discussion on the choices of possible change was held
         2. Trying to resolve the issue with the ambiguity that “Shall only” causes.
      5. P1706 L48-49 – More discussion on “Shall Only” replacement – is it “shall” or “may”
         1. You only send a report to the AP using the Destination URI only if you have detected a loss of connection.
         2. What is the “other interface” in this context?
         3. We spent a long time discussing the sentence, and then we decided to just delete the sentence.
      6. “Ensure”
         1. We need to ensure we don’t use ensure.
         2. The replacement proposed is close to what the practice is in implementing this text.
      7. P43 L55 – change ensure to determined – or we could replace it with “Validate”
      8. P115 L36 – no replacement was predetermined – or found at this time
      9. P1442 L31 – PCP adjusts the schedule to “ensure” non overlapping times, but that only makes it less likely. Change “to ensure” to “so”
      10. P1941 L42 – Ensure to verify – no change here – Ensure is ok in this case.
      11. P2331 L1 – change “to ensure” to “so”
      12. P2475 L26-27 – change “to ensure” to “to maintain”
      13. P3236 L45 – no change
      14. P3454 L64 – Delete the comment
      15. P3496 L1 – discuss the proposed change
      16. P3532 L51-52 – “Are required to” and “in order to ensure” delete and add “so to second phrase
      17. P3553 L4 – discuss the proposed change
      18. Language used for consistency – The MDR report indicates that there is something that not consistent, but need to have
      19. P2876 L13-14 -- R3: Jouni Proposes: a new proposal for consideration, incorporate the change proposed and remove the text...
      20. P3236 L45 – question on the quote that is embedded in the MIB.
          1. Discuss the proposal - “A road section identifier might be needed to make an address unique” (this may be a bit different)
          2. Marked the text for track changes
   4. Review Doc 11-14/922r0
      1. CID 3072 (MAC)
         1. Review Comment
         2. Proposed Resolution: Revised At 721.09 and 721.15, change from “10.8.3” to “10.8.4”.
         3. No objection – mark ready for motion
      2. CID 3093 (MAC)
         1. Review Comment
         2. Discussion on the value of “order”
         3. Proposed Resolution: Accept
         4. No objection – mark ready for motion
      3. CID 3096 (GEN)
         1. Review comment
         2. Proposed resolution: Revised Change from “may use” to “uses”
         3. No Objection – mark ready for motion
      4. Want to revisit CID 3093 (MAC)
         1. The Subelement ID is similar to the Order column, so is this also something that is being used or not
         2. Table 8-177
         3. So insert at P892 L11 the “The optional sub-elements are ordered by nondecreasing subelement ID.”
         4. Change Proposed Resolution: Revised. Remove the Oder column in Table 8-177 and insert the following at 892.11: “The optional sub-elements are ordered by nondecreasing subelement ID.”
         5. More discussion – this would be clearer as the order of the subelement ID.
         6. Not unanimous in the discussion
            1. Would like to not change the Proposed Resolution as originally proposed.
         7. StrawPoll – Which choice would you prefer?
            1. Accept - 5
            2. Jounie’s Suggestion (new Resolution) – 2
            3. 19 in the room
            4. Decision: Leave it as just Accept
         8. Mark Ready for Motion
      5. CID 3085 (MAC)
         1. Review comment
         2. Proposed Resolution: Accept
         3. No objection – mark ready for motion
      6. CID 3059 (GEN)
         1. Review comment
         2. Proposed Resolution: Accept
         3. No objection – mark ready for motion
      7. CID 3312 (GEN)
         1. Review Comment
         2. Proposed Resolution: Accept
         3. No objection – mark ready for motion
      8. CID 3609 (GEN)
         1. Review Comment
         2. Proposed Resolution: Accept
         3. No objection – mark ready for motion
      9. CID 3615 (GEN)
         1. Review Comment
         2. Proposed Resolution: make change as noted for CID 3615 in doc 11-14/922r1
         3. No objection – mark ready for motion
   5. Review Document 11-14/848 STANLEY
      1. From the Abstract: This submission contains proposed text changes based on the request for code point allocation related to draft-avula-shwmp-01.txt (Secure Hybrid Wireless Mesh Protocol) together with a request for ANA administration of the Active Path Selection Protocol Identifier value.
      2. Changes to the Draft were requested
      3. See in 8.4.2.97.2 – in Table 8-222; 2-254 are reserved values
      4. We would Need to add value definitions here and in the MIB
      5. The ANA flag should be “<ANA>”
      6. Is this request directly to the REVmc TG and therefore we don’t need to ask the WG? Or is this really something that the WG should be voting on.
      7. Dorothy suggested that we would discuss it here and then make a recommendation to the WG for consideration.
      8. The ANA can record who owns the value, and we should be able to put in the text “Reserved for use by the ANA” would have to figure out what name goes here.
      9. Ran out of time...Record attendance – go back to Harbor H for PM2
      10. Recessed 3:32pm
2. TG REVmc Called to order at 4:00pm by Dorothy STANLEY (Aruba) PM2 – in Harbor H ballroom
   1. Review Agenda see slide 3:

* CID 3152 – Sean/Menzo
* 11-14-885 – Bo Sun
* 11-14-0890 – Youhan Kim – 3GPP, also 11-14-0792 (CID 3309)
* Comment Resolution –11ad, 11-14 918, 919
  + 1. No objection to agenda
  1. **CID 3152** (MAC)
     1. Comment Reviewed
     2. Comment itself: "If one or more NonERP STAs are associated in the BSS, the Use\_Protection bit shall be set to 1 in transmitted ERP elements." Combined with the paragraph later in the same section (next page, lines 6-11), this seems to require use of protection mechanisms whenever there is even one NonERP STA associated in a BSS. This seems drastic. NonERP STAs may be very low duty cycle devices (IoT devices, security alarms, doorbells, etc.) Use of protection mechanisms for all transmissions in the BSS will cause a significant reduction in throughput and significantly increase time-on-air (and hence reduce battery life) for other STAs associated in the BSS. This may not even be necessary for acceptable operation of the associated NonERP STA(s). In any case the necessity or otherwise should be a matter for the AP to manage. The text should be changed so that non-AP STA use of protection mechanisms depends only on the AP, and the AP may or may not choose to require use of protection mechanisms.”
     3. Proposed Change: “On P1368 LL58-59, change "shall" to "may". On P1369 LL6-8 (first sentence of paragraph), change to "A non-AP ERP STA shall invoke the use of a protection mechanism after reception of the Use\_Protection bit with a value of 1 in an MMPDU from the AP." In the same paragraph (P1369 LL6-11), delete the last sentence and add in its place "An AP may change the Use\_Protection bit to 0. A non-AP ERP STA may disable protection mechanism use after reception of the Use\_Protection bit with a value of 0 in an MMPDU from the AP." On P1368 L27, change "ERP STA" to "non-AP ERP STA".”
     4. The desire is to have people think about this between now and Sept to allow for informed discussion and possible changes to be considered.
     5. Request to have the assignee updated to Menzo
  2. **Review Doc 11-14-885r1** – Bo SUN
     1. This document addresses CID 3043 and 3045
     2. CID 3043 (GEN)
        1. Proposed Resolution: Revised. TGmc Editor: replace “doze mode” with “Doze state” in pg2442/ln36 in Revmc D3.0 draft.
        2. There are 3 other locations with “Doze mode” that should be changed as well.
        3. There are also an Enumeration in clause 6 in a result code
        4. The request is to change all locations
        5. It would be ok to use the wording “replace “doze mode” globally in the standard.
        6. The Editor would need to search without case and with “\_” in the words.
        7. Updated Proposed Resolution: Revised. TGmc Editor: replace “doze mode” with “Doze state” globally (note there is an enumeration in clause 6 result code that needs changed as well).
        8. Bo will not post a r2.
     3. CID 3045 (GEN)
        1. Proposed Resolution: Revised. TGmc Editor: remove clause 22.3.15 at pg2519/ln58 and remove clause 23.3.15 at pg2600/ln52 in Revmc D3.0 draft.
        2. No objection to resolution – mark ready for motion
  3. **Review document 11-14./890r0** -- Youhan Kim (Qualcomm)
     1. Background in the document:
        1. 3GPP TSG RAN WG2 (RAN2) is developing a mechanism for interworking (IW) between 3GPP RATs (UMTS and LTE) and WLAN
* 3GPP had sent a liaison statement to IEEE 802.11 in April 2014 (11-14/0519r0)
* IEEE 802.11 responded as in 11-14/0658r6
* See next slide (slide 3)
* Discouraged use of RCPI and RSNI
  + 1. Supposition: Slide 15:
* RSNI is currently broken
  + RSNI definition fails (numerically cannot be computed) in some cases
  + Many ambiguities exists
* WLAN-3GPP IW should not be based on a metric which is broken
* RSNI is not RSRQ
  + 1. Compare of RCPI and RSSI
       1. Summary:
* RSSI and RCPI convey essentially the same information
  + RCPI is optional
  + RSSI is mandatory
* Both RSSI and RCPI has some ambiguities to be clarified
  + 1. Compare Beacon vs. Data
       1. Summary
* Beacon RSSI is always available
  + Before association
  + After association, w/ and w/o traffic
* Data packet RSSI is not as reliable for link quality accessment
  + Function of TX power, which is implementation specific (i.e. can change drastically)
    1. Suggested Way Forward:
* Communicate the following to 3GPP
  + Do not use RSNI for IW
    - Fixing RSNI would take some effort
    - Besides, RSNI does not necessarily reflect interference present in the packet. Hence, benefit for WLAN-3GPP IW is not clear
  + Replace RCPI w/ Beacon RSSI
    - Need some clarifications in the IEEE 802.11
      * Please see 11-14/0921 for details of the proposed changes
    1. Discussion –
       1. Averaging question – was averaging in Power Space or in DBM? – Power Space
       2. Metric for selection using RSSI has no notion of Noise floor
       3. Use of Beacon RSSI may be good for short term option, but we want to make sure that long term we move away from the RSSI usage
       4. Better Metric should be found.
       5. Q: Are you looking for a open or closed loop method?
          1. A: 3GPP is looking for both cases
          2. Then we need to assess both cases when the STA is and is not connected to the AP
       6. Discussion on whether people agree or not with the suppositions and the gap in the use of these metrics
       7. Is there a letter ready to send?
          1. No, but a letter should be prepared, and that slide 27 should be used for the text for the letter
          2. Also a throughput parameter should be proposed that 3GPP use as well.
       8. The accuracy of the Beacon should be better than 5dbm.
       9. The confidence should be higher than what is noted in the presentation.
       10. Agreement that Beacon RSSI should be a good solution
       11. When would the letter be created?
           1. Hopefully this week...would need to get a draft tonight and post for consideration.
           2. The letter should include slide 27 items as the highlight, with a reference to 11-14/890
       12. Throughput would be a better measurement than just RSSI, so we may want to estimate the throughput from time used and some other things that were inaudible.
           1. Looking for PHY related metrics only in this proposal, so while other Non-PHY metrics are there, it is not the point of this presentation.
       13. The Header of the file will need to be corrected, it indicates 2013 document.
    2. A Plan going forward”
       1. A draft letter will need to be prepared sooner than later
       2. A motion pointing to doc 11-14-921 that has the changes required (note that the footer has a small error as well).
       3. A new revision of document for 11-14/890 correcting the header.
       4. We can reconsider all these on Thurs PM1
  1. **Review doc 11-14/0792r4** Matthew FISCHER (Broadcom)
     1. CID 3309 (MAC) – EST Throughput SAPs
     2. Proposed Resolution from doc 11-14/792r4: Revise - generally agree with commenter, TGmc editor to execute proposed changes from 11-14-0792r4 found under all headings which include CID3309
     3. Abstract: This document proposes a resolution for CID 3309 of LB202, the comment on TGm Draft 3.0 suggesting the addition of a set of SAPs for providing an estimated throughput for a proposed or existing association.
     4. Discussion:
        1. Many external entities wishing to control the association decision of a device desire to know what the association will deliver in terms of throughput and quality of service before making the decision to associate. While it is conceivable that the external entity can gather information from existing Service Access Primitives to attempt to make a fully informed decision on association, the most important elements and parameters that would allow the external entity to make a reasonable estimate of throughput of the potential association are missing from the existing SAPs. Specifically, while parameters such as utilization, number of associations, QoS admissions, available admission capacity, link quality, BSS load and others provide a good amount of information on the current profile of traffic and associated STAs within a candidate BSS, none of the existing parametes provides any insight into the specific behaviour of the STA. Specifically, what the external entity cannot know the intracacies of the STA MCS selection algorithm, AMPDU aggregation algorithm or AMSDU aggregation algorithm and RTS/CTS use algorithm, each of which can have a significant impact on the expected throughput should the STA become associated with a particular BSS. Providing insight into these algorithms would be difficult to quantify, and therefore, it is much simpler to provide a single parameter which combines the effects of all of the hidden algorithms within the STA entity. Estimated throughput is just such a parameter.
        2. Even if the estimated throughput is not terribly accurate, one can assume that whatever process was used to generate an estimate for one potential or current connection is the same process that is used to evaluate the potential estimate for another potential or current connection, so that a traffic steering entity or network selection entity will at least have a relative comparison available between various possible connections, with the caveat that the comparison of an estimate for a current connection versus a potential connection might have different degrees of accuracy.
     5. Previously 802.11 provided the following response to 3GPP:

|  |  |
| --- | --- |
| Question 3: Does IEEE 802.11 WG consider any other WLAN signal metric more suitable for the above described mechanism? | Understanding that the objective of the mechanism is to select the network that provides the best match to the QoS and/or throughput requirements of the system, the consideration of RNSI/RCPI is not sufficient on its own to efficiently estimate the available throughput and QoS that will be experienced in the IEEE 802.11 WLAN. Other metrics should be taken into account, especially channel bandwidth, operating band, number of spatial streams, BSS load, and WAN metrics, see also the attached Table 1. Comparing only the RSNI/RCPI, as is, to thresholds presents some risks of poor decisions. Ideally, a single parameter, such as estimated available throughput, which combines all of the above parameters, would be determined inside of the WLAN modem and then delivered to the upper layers. |

* + 1. The authors of this proposal believe that this proposal is a linear continuation of the previous communication with 3GPP.
    2. The proposed changes create a new set of SAPs which allows the SME to request and receive an estimate of the throughput that the STA expects to achieve if it were associated with a specified BSS.
    3. Review the rest of the document that shows the changes being proposed.
    4. Discussion
       1. The Existence of a SAP without normative language is not very useful, but the current proposal has only one “should” that is a good start, but we need to be a bit more precise in how we are getting the answers for reporting the MCS for example
       2. What sense is a SAP useful? Only if the SME is local to that station, so which SME is doing the measurement -- STA or AP? Is this something that the 3GPP device has to include? Or is this some other thing that the AP needs to include.
          1. The general nature of how to put this info together should be done by at least asking the STA for the info without specificying the method for doing it...this will be better than just using the RSSI.
          2. If the SME or the Entity communicating through the SME is looking for several different connections, as long as the info is coming from the same STA, then the comparison will be valuable and it is the relative compare that would be correct. While some estimates may be different from BSS to BSS, but the relative should be somewhat more valuable rather than the absolute values that may be wanted in the future.
       3. If you get the info from the same source, then the relative is probably valid, but the use of this to compare Wi-Fi to Cellular is not going to be a good comparison if we do not define this more precisely.
          1. What was not put in the discussion was all the individual parameters that were missing from the SAP interface are also available, and the upper layer can get the other pieces directly from the SME and make its own number for compare to this new SAP is to allow for its own methodology.
       4. The estimates are per access category.
       5. The size of the AverageMDSUsize should be checked for the value.
       6. This proposal may not fully address the interworking with 3GPP as the use of Throughput estimates was not addressed, but as this proposal tries to address this, but it is not testable, and is very implementation dependant. We will need more work to determine the accuracy percentages.
       7. Uplink and downlink is different in how the values can be determined, and I am not sure how to estimate the RTS/CTS usage on the numbers
       8. Some throughputs will be affected by things that we are not in control of (upper layers). Are we going to be able to define how to get a proper Accuracy for the variables?
          1. Now way to guess how to account for the upper layers
          2. Accuracy – already covered that earlier
          3. Use of Public Action Frames could be used in place of Reciprocal estimates. It may be that these issues are minor.
       9. Defining the throughput is a very elusive item to do.
       10. Window size affects the throughput dramatically – need to add to the Parameter list. Power Save operation will also need to be accounted for in the parameter list. It is easy to find many things that will affect the throughput parameters. These things are very tricky and the limitations will need to be observed.
           1. Would like to collaborate to resolve the issues identified.
       11. How do you come up with a number that is derived from different implementation? There are many efforts that need to be added for defining the algorithms to include in getting the data.
       12. What value is the abstract interface by itself? Where is the mapping of the information to the user of the information?
           1. If there is nothing happening it is not valid?
           2. There is a SAP that allows for the TSF timer, it is not external over the air.
       13. The assumption is that there would be some communication to the external network (3GPP) that will want to make use of this information. This information would need to be sent to the L2-L2 interface in 3GPP.
       14. The Provider may already have this information, and a mapping could be created...if the interface is not there, then an interface would need to be there.
       15. The proposal is not based on the locality.
       16. There needs to be a mapping of the 802.11 SAP to the 3rd party interface.
       17. Why did we do this so late in the game? 3GPP is potentially going to move forward using estimates that will put the WLAN at a disadvantage, and we need to provide information that will make better choices of when the 3GPP and the WLAN networks is used. We want to provide a method that will allow for better integration of 3GPP and WLAN.
       18. There was more discussion that offered to help the authors revise and improve the presentation for consideration later in the week.
  1. **Review document 11-14/918r0** Payam TORAB (Broadcom)
     1. Abstract: This document proposes to allow ATIM frame exchange for PCPs, simplifies the meaning of the PCP Active field in Extended Schedule Element, and provides clarifications applicable to Awake Windows in DMG networks. It is submitted as a resolution to CID 3261.
     2. CID 3261(MAC)
        1. Review comment
        2. Review proposed changes
        3. Questions/comment
           1. Can the editor work with the authors on the style of the document as there is some work that could be done ahead of time to make it easier for later consideration.
        4. This will be brought up in Sept for consideration.
  2. Review tomorrow’s Agenda:
     1. PM1: Motions/Location/ doc 919
     2. PM2: Agenda
* Comment Resolution 11-14-0776r1, WFA liaison
* VHT CIDs – Fei Tong
* CID 3296 and more 11-14-793 – M. Fischer
* WBA Location Liaison – 11-14-706 S. McCann
  1. Recess at 6:00pm

1. TGMC Called to order at 1:30pm Wednesday PM1 by Dorothy STANLEY (Aruba)
   1. **Review agenda** – see slide 3 of r4

* 11ad, 11-14-919, Location, 11-14-933
* 11-14-0935 – Mark Rison
* 111-14-780 – Adrian Stephens
  + 1. No objection to agenda
  1. **Review doc 11-14/0919r0** – PCP Doze BI ATI CID 3262 (MAC)
     1. A one sentence summary is that this changes a “shall” to “should”....
     2. Question about why the exchange of frames is being done should/could be included in the text.
     3. This is not central to the change due to the comment being considered.
     4. Discussion on the proposal centered on some minor points of Power Save and the jitter of the Beacon periods.
     5. An update to 11-14/919 will be done, but allow for other stakeholders to review prior to asking for approval in September.
  2. **Review doc 11-14/933r1** – Location Related Corrections to Draft 3.0 – Carlos ALDANA (Qualcomm)
     1. Review the CIDS –
     2. CID 3034, 3076 (MAC)
     3. Concern on the use of “used to” – change to indicate
        1. Note that there is an extra “is” before the word reserved that was deleted that needs to be removed.
     4. Review the changes being proposed
     5. Note that there was an issue that was tracked for a revision to be brought back for review.
     6. There are now a list of several changes that will be fixed and brought back during Thurs PM1.
  3. **Review 11-14/0935** – Miscellaneous 802.11mc/D3.0 issues- Mark RISON (Samsung)
     1. Review proposed changes
        1. “Control type MPDU” to “MPDU of type Control”
        2. “MMPDU of type Data” and dot11GAS horrors reviewed
           1. Concern of missing Each on page 3
           2. But then it was pointed out that dot11GASReceivedFragmentCount and dot11GASTransmittedFragmentCount attributes from the MIB.
           3. The resolution should be deleted and any references to it.
        3. DMG MPDU Length
           1. P1216L45 see context
           2. Change sentence to include “when transmitted by a non-DMG STA”...
        4. DS PHY
           1. Proposal to remove the PLME primitive
        5. Order of sub element Ids
           1. Remove the “order” column in table 8-177, 8-178, 8-179
        6. VHT in TVHT Clause
           1. See P2573L53 for context
           2. Clause 23 text does discuss VHT PPDUs, but they may be more correctly labelled TVHT STA.

This is not necessarily true.

* + - * 1. On page 2573 the changes would make it a consistent use of the name to be “TVHT” (change “VHT” to “TVVHT”)
        2. Make the 3 instances of the changes
      1. An R1 will be motioned tomorrow with the changes discussed today.
  1. **Review MAC CIDs**
  2. Continue with 11-14/780r2-LB202 Stephens Resolutions- Adrian STEPHENS (Intel)
     1. CID 3693 (Editor)
        1. Review Comment
        2. Proposed Resolution: Revised. Replace “optionally send” with “the STA may send”.
        3. No objection – mark ready for motion
     2. CID 3117 (Editor)
        1. Review Comment
        2. Proposed Resolution: Revised. Change "Management frames are categorized as bufferable or nonbufferable, as shown in Table 8-85 (Element IDs)." to "Management frames are categorized as bufferable or nonbufferable, as shown in Table 10-1."
        3. No objection – mark ready for motion
     3. CID 3719 (EDITOR)
        1. Review Comment
        2. The proposed change is actually on something different and does not look at the problem cited. (howver, the proposed change is an improvement.)
        3. Straw poll:
           1. Do you prefer

A: A VHT AP may allow non-AP VHT STAs in TXOP power save mode to enter the Doze state during a TXOP, which it does by transmitting a VHT PPDU with the TXVECTOR parameter TXOP\_PS\_NOT\_ALLOWED set to 0.

B: A VHT AP allows non-AP VHT STAs in TXOP power save mode to enter the Doze state during a TXOP by transmitting a VHT PPDU with the TXVECTOR parameter TXOP\_PS\_NOT\_ALLOWED set to 0.

C: A VHT AP may allows non-AP VHT STAs in TXOP power save mode to enter the Doze state during a TXOP by transmitting a VHT PPDU with the TXVECTOR parameter TXOP\_PS\_NOT\_ALLOWED set to 0.

* + - * 1. Results: A: 5 B: 1 C: 4
      1. “it” would be the VHT AP – some thought still not clear
         1. Change “it” to “the AP”
      2. Proposed Resolution: Revised. An AP that supports TXOP power save is not required to offer TXOP power saving during any particular TXOP. It indicates whether it allows TXOP power saving as described in the following sentence. So “is allowing” is incorrect and “may allow” is correct. The language used in this para can be changed to make this operation more transparent.

Change “. A VHT AP shall indicate this” to “, which the AP does”

* + - 1. No objection – mark ready for motion
    1. CID3730 (EDITOR)
       1. Review comment
       2. Proposed Resolution: Accept
       3. No objection mark ready for motion
    2. CID 3738 (EDITOR)
       1. Review Comment
       2. Proposed resolution: Proposed Resolution: Replace “in cases where” with “if”.
       3. Review context page 1616 line 46
       4. Discussion on the teardown procedure
       5. No objection the proposed change as proposed - mark ready for motion
    3. CID 3029 (EDITOR)
       1. Review Comment
       2. Proposed Resolution: Accept
       3. No objection mark ready for motion
    4. CID 3030 (EDITOR)
       1. Review Comment
       2. Proposed Resolution: Revised. Delete “of the BSS” at the cited location.
       3. No objection mark ready for motion
    5. CID 3522 (EDITOR)
       1. Review Comment
       2. Proposed Resolution: Revised

At 1637.05 change “Statistics request frame” to “STA Statistics request”.

At 1647.48 change “accepts a Statistics request” to “accepts a STA Statistics request

At 1647.54 change “reject the received Statistics request” to “reject the received STA Statistics request”

At 2930.53 and 2937.14 change “a statistics request” to “a STA Statistics request”

Globally correct capitalization to “Directional Statistics request”.

Globally correct capitalization to “STA Statistics request”.

Globally change “Statistics Request frame” to “Statistics request”.

* + - 1. No objection mark ready for motion
    1. CID 3443 (EDITOR)
       1. Review Comment
       2. Proposed Resolution: Revised Change “may exceed” to might exceed” at the stated location.
       3. No objection mark ready for motion
  1. Recess at 3:30pm

1. TGmc called to order at 4:00pm PM2 Wednesday – Seaport C - by Dorothy STANLEY (Aruba)
   1. Review Agenda – 11-14/0747r4 – slide 3

* 11-14/0776 (NonOFDM CIDS)
* 11-14/ 908, WFA Liaison
* 11-14/905
* VHT CIDs – Fei Tong 11-14/902
* CID 3296 and more 11-14/793, 954 – Michael Fischer
* 3GPP Liaison – start at 5:30pm
* WBA Location Liaison – 11-14/706, 949 – S. McCaan – start 5:45pm
  + 1. No objection to Agenda – Specific Times set to ensure last two items get some time.
  1. **Review doc 11-14/905r1** - Non-OFDM Use Cases – WFA Liaison letter
     1. Review the letter for the Liaison from the WFA
     2. Suggest that people review the letter
  2. **Review document 11-14/0776r1**
     1. 3 CIDs covered – 3123, 3122, 3121 (GEN)
     2. Commenter has a submission that gives the basis for a solution, see doc 11-14/908r0.
  3. **Review document 11-14/908r0** –Isolating Clauses 16, 17, 19 and 20 - Graham SMITH (DSP Group)
     1. From the document:

Background

There have been several CIDs on the subject of making support of Clause 16 and 17 by clause 19 devices, optional. This proposal is based on that idea but proposes a cleaner separation.

Rationale

STAs and APs in the ISM 2.4GHz band are commonly referred to as:

* 11b: a device supporting only Clause 16 (DSSS) and 17 (HR/DSSS)
* 11b/g: a device supporting Clause 16 and 17 as well as Clause 19 (ERP)
* 11b/g/n: a device supporting Clause 20 (HT) as well as Clause 19, and Clauses 16/17.

Note that the term “11b/g” is commonly used even though the specification for a device supporting Clause 19 mandates that the device must support Clause 16/17. Hence it could be called “11g” but that is not the case.

This proposal builds on the common terminology such that “11g” would mean “Clause 19 only”.

Hence, when referring to the PHY support of an 802.11 device, the common terminology would be 100% clear, 11g is OFDM only, 11b/g is OFDM/CCK/DSSS.

For the user, if they have a STA that is 11b, then it is clear they would need an AP that supports 11b, such as 11b, 11b/g, or 11b/g/n, and vice versa.

Many presentations and statements have been made on how the presence of 11b devices, the fallback procedures that drop to 11b rates and the beaconing and probing at 11b rates that are common solely because of the present mandatory link between 11g and 11b, have affected network throughputs. On the other hand there are legitimate needs for 11b to be supported in some applications. Labelling and certification is outside the scope of the IEEE but by clearly distinguishing between the PHYs and in particular the CCK/DSSS PHY and the OFDM PHYs, which are not directly interoperable, allows the market to decide on how to certify and label and also on how any changes may be phased in over time.

In essence this proposal has the same effect of making support of 11b rates by 11g (or 11n) OFDM devices optional, but it does it in a cleaner manner. “

* + 1. Solution that does not “deprecate” 11b, but rather separates the PHYs for a cleaner definition to allow other possible changes to what is mandatory and what is optional
    2. Please review this submission, and then in Sept or Nov, we will consider a motion based on this submission.
  1. **Review Doc 11-14/902r1** – Resolution for some VHT PHY comments on REVmc/D3.0- Fei TONG (Samsung)
     1. This document contains proposed resolutions to LB202 comment 3157, 3158, 3159, 3160, 3161, 3162, 3163, 3164, 3165, 3167, 3168, 3169, 3170, 3171, 3172, 3173 and 3174.
     2. Changes as we go will be marked and an R2 will be posted
     3. CID 3157 (GEN)
        1. Review comment
        2. Proposed Resolution: Revised. Change to "MU transmission is different from VHT SU group addressed transmission"
        3. No objection mark ready for motion
     4. CID 3158 (GEN)
        1. Review comment
        2. Proposed Resolution: Accept
        3. No objection mark ready for motion
     5. CID 3159 (GEN)
        1. Review comment
        2. Proposed Resolution: Revised. Change "VHT-PHY-compliant developer" to "VHT PHY developer"

Also make similar change in 16.1.4, 17.1.4, 18.1.3.3, 20.1.3.3 and 21.1.2.2

* + - 1. There are 6 instances of “developer” why leave that in?
      2. Suggest that we change the resolution: “Change the text to “the method is implementation dependant”.

New Proposed Resolution: Revised – change “; the actual method of implementation is left to the discretion of the VHT-PHY-compliant developer” to “, but do not necessarily reflect any particular implementation”. Also make similar change in 16.1.4, 17.1.4, 18.1.3.3, 20.1.3.3 and 21.1.2.2

* + - 1. No objection mark ready for motion
    1. CID 3160 (GEN)
       1. Review comment
       2. Proposed Resolution: Reject; the purpose of the text in question is to give a high level description of VHT format; it is not intended to describe in details the frame structure. Therefore, there is no need to refer to a figure showing the frame structure. Also, the Figure 22-17 as suggested in the proposed change is intended to show the timing relationship between various fields, not the frame structure.
       3. No objection mark ready for Motion
    2. CID 3161 (GEN)
       1. Review Comment
       2. Discussion on the change that was made and the fact that the description was coupling the MAC and PHY...so the text should not describe what the MAC does with the variable in the PHY area.
       3. Rather than fix the second sentence at the cited location, delete it is the alternate proposal.
       4. <snip>
       5. Create a straw poll. Options 1 and 2 as described in the submission. Option 3 to delete the cited sentence to the end of the note.
       6. If the text is deleted, then the rounding concept is lost.
       7. The note refers to p2489.46.
       8. Straw Poll: - see options described in the submission.
          1. Result:
          2. Option 1: 0
          3. Option 2: 2
          4. Option 3: more than 2.
          5. Option 3 is the preferred approach.
    3. CID 3162 (GEN)
       1. – Review Comment
       2. Proposed Resolution: Revised. The new text reads “NOTE—When BEAMFORMED is set to 1, frequency domain smoothing as part of channel estimation is not recommended." (This is proposed change except the lower case 'f' in the word 'frequency').
       3. No objection to proposed resolution – mark ready for motion
    4. CID 3163 (GEN)
       1. Proposed Resolution: Accept
       2. - No objection to proposed resolution
    5. CID 3164 (GEN)
       1. Proposed Resolution: Revised. The Font used for "Table 20-1" should be set the same as the surrounding text.
       2. - No objection to proposed resolution
    6. CID 3165 (GEN)
       1. Proposed Resolution: Accept
       2. No objection to proposed resolution: Accept
    7. CID 3167 (GEN)
    8. Proposed Resolution: Revised. Change the left-most block in Figure 22-9 to say '80+80' instead of '160'.
       1. No objection to proposed resolution:
    9. CID 3168 (GEN)
       1. Review Comment
       2. Discussion on the proposal – no objection to the actual proposal
       3. Proposed Resolution: Revised. Replace the NTX Transmit Chains' to ' NTX Transmit Chains for each of the two segments'.
       4. No objection mark ready for Motion
    10. CID 3169 (GEN)
        1. Review Comment
        2. Proposed Resolution: Revised. Change "Apply the PVHTLTF matrix to the VHT-LTF sequence" to "Apply the PVHTLTF matrix to the data tones of the VHT-LTF sequence"
        3. No objection mark ready for motion
    11. CID 3170 and CID 3172 (EDITOR)
        1. Review Comments: P2462L44 and P2463L31
        2. Proposed Resolution: Accept
        3. Note that these are Editor assigned comments
    12. CID 3171 (EDITOR)
        1. Review Comment
        2. Proposed Resolution: Revised. Change "p-conver" to "pconver"; there are 15 instances in total.
        3. During the MDR review, there is a list of 43 of this type error that were defined for correcting, so we may be better to defer processing the Editor comments
        4. The rest of the CIDs are assigned to the EDITOR AdHoc, but some still have some technical parts that need to be discussed.
    13. CID 3172 (EDITOR
        1. Skip
    14. CID 3173, CID 3174, CID 3175 (EDITOR)
    15. Review Comment ( page 2463)
    16. Change “differently” to “as though the PPDU were an SUPPDU or something
    17. Original Proposed resolution: Revised.

The new text should read

**22.3.4.10.1 General**

For an MU transmission, the PPDU encoding process is performed on a per-user basis up to the input of the

Spatial Mapping block except that CSD is performed differently (as described in 22.3.8.3.2 (Cyclic shift for VHT modulated fields)). All user data is combined and mapped to the transmit chains in the Spatial Mapping block.

**22.3.4.10.2 Using BCC**

A Data field with BCC encoding is constructed using steps a) to k) in 22.3.4.9.1 (Using BCC), then applying CSD for a VHT MU PPDU (as described in 22.3.8.3.2 (Cyclic shift for VHT modulated fields)).

**22.3.4.10.3 Using LDPC**

A Data field with LDPC encoding is constructed using steps a) to k) in 22.3.4.9.2 (Using LDPC), then applying CSD as for a VHT MU PPDU (as described in 22.3.8.3.2 (Cyclic shift for VHT modulated fields)).

* + 1. There was no consensus on this one, but will have to take offline for conversation.
  1. **Review 11-14/936r0** – Follow-up Liaison response to 3GPP R2-141855 -Youhan KIM (Qualcomm)
     1. Review the introduction and the summary of the Letter
     2. Discussion on the response – initial comments were that this was premature, and that more work on the throughput would need to be done before a letter was sent.
     3. Alternative view is that what the 3GPP has now is wrong, so we should try to get fixed what we can at this initial stage.
     4. Concern that the letter is based in part on changes that have not been accepted yet.
     5. Concern that what is being prescribed as required features to get this support.
     6. The sentence “will be incorporated in subsequent drafts of IEEE 802.11” ...This gives a promise that we cannot really keep.
        1. The sentence has statements that have not occurred yet, but the 3GPP will want assurance that what is in 11-14/921r1 is going to be adopted or have some sense of what will be adopted rather than just a single
     7. Discussion on the use of RSSI and RSNI, but we know that 3GPP is using them even though that is not the best metric. So we need to find a solution that they can use rather than just say don’t use RSSI/
     8. The queue for discussion was cut – More discussion will occur tomorrow.
  2. **Review Doc 11-14/706r1** - WBA Liaison request regarding Location – Stephen MCCANN( Blackberry)
     1. Discussion that the 802.11 MIB is little-Indian is incorrect
     2. Question on the desire to understand the over the air values or the MIB values....
        1. It was thought that they wanted the over the air values.
     3. When you combine a fraction and integer part they would get the wrong result.
     4. The upper layer really only has access to the MIB. The values that they are getting in base 10 are not the right values.
     5. The upper layer uses the software interfaces not with over the air interface.
     6. We have MIB and over the air signalling points, so it would seem that the private interface that they are using is the source of the problem, but using sign extension they are amplifying the problem.
     7. They are looking into the IETF, and they see one field, and they look into the IEEE 802.11 STD and they see 2 fields and so they are confused.
     8. The alignment of the normative text should be pointed out.
     9. Discussion on the believe that WBA is just wrong.
     10. The author has some feedback to go and try again at writing the letter offline.
  3. We will consider motions at the start of the mtg tomorrow and we have pushed Matthew Fischer’s submission from today to tomorrow.
     1. Agenda for PM1
* Motions
* CID 3296 and more 11-14-793, 954-M Fisher
* VHT CIDS – Edward Au
* 11-14-923 – M. MONTEMURRO
* Plans for Sept, Schedule
* AOB, Adjourn
  1. **Recess** at 6:00 pm

1. TG REVmc Called to order Thursday PM1 at 1:36pm by Dorothy STANLEY (Aruba)
   1. **Review Agenda**

* Motions
* CID 3296 and more 11-14-793,
* 11-14/954-M Fisher
* 11-14/952 Gabor
* VHT CIDS – Edward Au -> move to Telecon
* 11-14-923 – M. MONTEMURRO -> Move to Telecon
* Plans for Sept, Schedule
* AOB, Adjourn
  + 1. Note listed on Slide 17 of 11-14747r6 is a list of all known submissions
    2. Unanimous approval of Agenda
  1. **Motion: #59** Teleconferences and Mon/Tues/Wed Comments
     + Approve resolutions to comments in
       - * The “Editor motion Telecon 20140711” and “Editor Motion f2f 2014-07-16” tabs in 11-13/0233r36 except for CID 3399
         * The “Motion MAC-AA” and “Motion MAC-AB” tabs in 11-13/0361r33
         * The “Gen-SDA-A” and “July Telecon” tabs in 11-14/975r0
         * CID 3045 in the “PHY (VHT)” tab and CID 3312 in the “Definitions” tab in in 11-14/975r0
         * And approve the resolution to CID 3399 as “Accepted”
     1. Moved Mike Montemurro, 2nd Stephen MCCAN
     2. Result: 23-0-2 motion passes
  2. **Motion #60** Location CIDS in 11-14-933
     1. Approve resolutions to CIDs 3034, 3076, 3108, 3109, 3110, 3111, 3112, 3113, 3115, 3266, 3268, 3375, 3469 as Revised with a resolution of “Incorporate the text changes in 11-14/0933r2
     2. Moved Ganesh VENKATESAN 2nd Carlos ALDANA
     3. Result: 29-0-1 Motion Passes
  3. **Motion #61** Fei Tong Presentation
     1. Approve the Resolutions in 11-14/902r2 except for CIDs 3173, 3174, 3175 and incorporate the indicated text changes into the TGmc draft.
     2. Move Mark RISON; 2nd Michael MONTEMURRO
     3. Discussion some of the CIDs were approved, we need to verify the numbers that are in need of the resolutions.
        1. Reviewed Each CID in 11-14/902r2 to determine if they were or not included in the previous Motion (#59).
        2. Motion to Modify the Motion to identify the following CIDs – 3161, 3162, 3163, 3164, 3165, 3167, 3170, 3171, 3172.
        3. No objection
     4. Final Version of Motion:
* Approve the Resolutions in for CIDS 3161, 3162, 3163, 3164, 3165, 3167, 3170, 3171, 3172 in 11-14/902r2 and incorporate the indicated text changes into the TGmc draft.
  + - 1. Move Mark RISON; 2nd Michael MONTEMURRO
      2. Result: 25-0-3 Motion Passes
  1. **Motion #62** – shwamp Liaison Text Changes and ANA allocation
     1. Move to approve the text changes in 11-14/0848r1, and approve the request that the ANA administer the Active Path Selection Protocol Identifier values, and assign the reserved shwmp value.
        1. Moved: Stephen MCCANN 2nd Guido HIERTZ
        2. Results: 29-0-2 – motion passes
     2. This motion will be brought to the WG for approval and submitting to the ANA
  2. **3GPP Liaison**
     1. Review document s on 3GPP proposals prior to considering any motion
     2. Review Doc 11-14/921r2 – Clarifications on Beacon RSSI – Youhan (Qualcomm)
        1. Review the changes from Tuesday when first presented.
        2. The MIB needed to have a Description of “This is a status Variable” and “It is written by MAC upon Receiving a Beacon Frame”.
        3. Q: how to make it work?
           1. Poll the MIB to determine which Beacon was captured, and the information from the RSSI.
           2. Question on if it is viable and workable
        4. C – Averaging multiple rx chains power does not seem reasonable.
           1. Averaging comment may be valid, but there are other places in the Standard that does this same method.
           2. Just because it was wrong in one place does not mean we want to repeat it.
           3. Just one person’s opinion – no consensus either way.
        5. With the changes an r3 will need to be posted.
     3. Review Doc 11-14/792r7 – CID3309 EST Throughput SAPS – Michael Fischer (Broadcom)
        1. An earlier version was presented on Tuesday.
        2. CID 3309 resolution has been updated, but should be updated again to r7 if a motion is taken on this document today.
        3. Another change was to modify the SAP definition to report Throughput in one direction. It was deemed that the “download” direction was the better choice.
        4. Q – Have the editors watch that the “minus” sign used is a real one.
        5. Question on the lack of explanation on all the various parameters that may be affected in the Attachments.
        6. Discussion on the value of the proposal and the value of parameters that can help determine the traffic
        7. Discussion on how Network selection and QoS is usable
        8. Getting an estimation of what the Throughput of the system is going to be and how it may be used is important, but we may not be ready for adding this function into the standard via the maintenance process instead of using a wider audience for the change.
        9. More Discussion on the timing of 3GPP and their decision and the fact that we do not have a published draft until Nov (d4).
        10. The delays in REVmc will mean that the 3GPP would not necessarily be able to use it. The RSSI value in this room is 100, but that does not mean it is useful for anything.
        11. We need to make WLAN better with something other than RSSI.
     4. We can look at the two submissions independently or in combination. The Current liaison letter references one or both the documents.
     5. **Motion 63**: Beacon RSSI and Throughput document Motion
        1. Resolve CID 3309 as “Revised” with a resolution of “incorporate the text changes in 11-14/921r3 and in 11-14/0792r7 into the TGmc draft.
        2. Moved: Matthew Fischer 2nd Youhan Kim
        3. Request to Divide the Motion – Guido HERITZ
           1. There was an objection
           2. Motion to divide Stephen Rayment, 2nd Stephen McCaan
           3. Not debatable
           4. Motion to divide Result: 9-26-13 – Motion to divide fails
        4. Request to include in minutes that there is a claim that there are serious technical flaws in RSSI and RCPI. –by Dick Roy
        5. Results: 36-5-10 motion passes
        6. Comment that some of this work has a possible strong correlation with 802.21 and we should get some cross talk with them.
  3. **Proposed Liaison Document** 11-14/936r2 – Liaison Response to 3GPP R2-141855
     1. Review new text added/updated in this version of submission
     2. An R3 was posted due to the change in versions of the cited documents.
     3. Motion 64: 3GPP Liaison letter
        1. Approve the Liaison statement in 11-14/936r3 and request that he WG Chair send the Liaison as indicated, with editorial license.
        2. Moved Youhan KIM 2nd Matthew Fischer
        3. Question: From the 3GPP point of view, can all the cited documents be publically accessed.
        4. Motion to amend: to exclude the final bullet (the reference to 11-14/792)
           1. Words to add to motion: “Deleting the last paragraph and reference [3]:”
           2. Moved Stephen Rayment 2nd Filip MESTANOV
           3. Not seen as a friendly change, and a request for having the complete letter correctly made when the letter comes to the WG.
           4. What is the motion to amend covering – it was explained.
           5. Question was called and no objection was made.
           6. Motion to amend Results: 5-30-5 – motion to amend fails.
        5. Back to the main motion –
        6. Result: 30-7-7 motion passes
  4. Not enough time to consider WBA Location Liaison – Stephen to bring directly to WG on Friday.
  5. **Review 11-14/793r1** – LB202 CID 3297-NSS support partitioning – Matthew Fischer
     1. Review new changes
     2. Limited time: 2 questions allowed: Spatial streams question – existing draft implies you have support of max NSS for all bands
     3. There is now a proposal that breaks this out for 80+80 non-contiguous, and 160.
  6. We have Conference calls noted in the Agenda Slide Deck, if there are issues tell Dorothy offline. We can determine new or changes to the call time with sufficient (10-day notice).
  7. **Adjourned** 3:30pm

**References:**

* **Agenda:**

<https://mentor.ieee.org/802.11/dcn/14/11-14-0747-06-000m-tgmc-july-2014-agenda.pptx>

<https://mentor.ieee.org/802.11/dcn/14/11-14-0747-05-000m-tgmc-july-2014-agenda.pptx>

<https://mentor.ieee.org/802.11/dcn/14/11-14-0747-04-000m-tgmc-july-2014-agenda.pptx>

<https://mentor.ieee.org/802.11/dcn/14/11-14-0747-03-000m-tgmc-july-2014-agenda.pptx>

<https://mentor.ieee.org/802.11/dcn/14/11-14-0747-02-000m-tgmc-july-2014-agenda.pptx>

<https://mentor.ieee.org/802.11/dcn/14/11-14-0747-01-000m-tgmc-july-2014-agenda.pptx>

<https://mentor.ieee.org/802.11/dcn/14/11-14-0747-00-000m-tgmc-july-2014-agenda.pptx>

* **REVmc WG Ballot Comments**

<https://mentor.ieee.org/802.11/dcn/13/11-13-0233-36-000m-revmc-wg-ballot-comments.xls>

<https://mentor.ieee.org/802.11/dcn/13/11-13-0233-35-000m-revmc-wg-ballot-comments.xls>

<https://mentor.ieee.org/802.11/dcn/13/11-13-0233-34-000m-revmc-wg-ballot-comments.xls>

* **Editor Reports**

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

* **GEN AdHoc Comment File**

<https://mentor.ieee.org/802.11/dcn/14/11-14-0975-00-000m-lb202-gen-adhoc-comments.xls>

* **MAC AdHoc Comment Files:**

<https://mentor.ieee.org/802.11/dcn/13/11-13-0361-33-000m-revmc-mac-comments.xls>

<https://mentor.ieee.org/802.11/dcn/13/11-13-0361-32-000m-revmc-mac-comments.xls>

* **Misc:**

<https://mentor.ieee.org/802.11/dcn/14/11-14-0848-01-000m-shwmp-text-changes-and-ana-allocation.docx>

<https://mentor.ieee.org/802.11/dcn/14/11-14-0848-00-000m-shwmp-text-changes-and-ana-allocation.docx>

<https://mentor.ieee.org/802.11/dcn/14/11-14-0922-01-000m-some-lb202-resolutions-a.docx>

<https://mentor.ieee.org/802.11/dcn/14/11-14-0922-00-000m-some-lb202-resolutions-a.docx>

* **11-14-780 – remaining trivial technical – Adrian**

<https://mentor.ieee.org/802.11/dcn/14/11-14-0780-03-000m-lb202-stephens-resolutions.doc>

<https://mentor.ieee.org/802.11/dcn/14/11-14-0780-02-000m-lb202-stephens-resolutions.doc>

<https://mentor.ieee.org/802.11/dcn/14/11-14-0780-01-000m-lb202-stephens-resolutions.doc>

* **Prepared resolutions - Mark Hamilton**
* **Comments needing discussion – Mark Hamilton**

<https://mentor.ieee.org/802.11/dcn/13/11-13-0361-33-000m-revmc-mac-comments.xls>

<https://mentor.ieee.org/802.11/dcn/13/11-13-0361-32-000m-revmc-mac-comments.xls>

* **11-14/902 – Some VHT PHY comments – Fei Tong**

<https://mentor.ieee.org/802.11/dcn/14/11-14-0902-03-000m-resolution-for-some-vht-phy-comments-on-revmc-d3-0.doc>

<https://mentor.ieee.org/802.11/dcn/14/11-14-0902-02-000m-resolution-for-some-vht-phy-comments-on-revmc-d3-0.doc>

<https://mentor.ieee.org/802.11/dcn/14/11-14-0902-01-000m-resolution-for-some-vht-phy-comments-on-revmc-d3-0.doc>

<https://mentor.ieee.org/802.11/dcn/14/11-14-0902-00-000m-resolution-for-some-vht-phy-comments-on-revmc-d3-0.doc>

* **11-14-923 – Michael Montemurro**
* <https://mentor.ieee.org/802.11/dcn/14/11-14-0923-00-000m-tgmc-selected-mac-comment-resolutions.docx>
* **11-14-793 – Matthew Fischer**

<https://mentor.ieee.org/802.11/dcn/14/11-14-0793-01-000m-lb202-cid3296-cid3297-bw-nss-support-partitioning.docx>

<https://mentor.ieee.org/802.11/dcn/14/11-14-0793-00-000m-lb202-cid3296-cid3297-bw-nss-support-partitioning.docx>

* **11-14-954 – Matthew Fischer**

<https://mentor.ieee.org/802.11/dcn/14/11-14-0954-00-000m-lb202-cid3296-bw-support.docx>

* **11-14-0955 – regulatory comments – Peter Ecclesine**

<https://mentor.ieee.org/802.11/dcn/14/11-14-0955-00-000m-lb202-regulatory-comments.docx>

* **11-14-952 – location comments- Gabor Bajko**

<https://mentor.ieee.org/802.11/dcn/14/11-14-0952-01-000m-resolution-to-location-comments.docx>

<https://mentor.ieee.org/802.11/dcn/14/11-14-0952-00-000m-resolution-to-location-comments.xls>

* **11-14-930 – location comments – Brian Hart**

**Pending**

* **11-14-915, 916 – security comments – Dan Harkins**

<https://mentor.ieee.org/802.11/dcn/14/11-14-0915-00-000m-lb202-security-comments.xls>

<https://mentor.ieee.org/802.11/dcn/14/11-14-0916-00-000m-security-comments-lb202.docx>