IEEE P802.11  
Wireless LANs

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| Minutes REVmd AdHoc- April 2018 - Ft Lauderdale | | | | |
| Date: 2018-04-12 | | | | |
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Abstract

Minutes for the 802.11 REVmd AdHoc held April 10-12, 2018 in Ft. Lauderdale, Florida.

Thanks to Mark Hamilton taking notes for the minutes at different times during the week.

Extracted Action Item List located on last page after References

1. **802.11md – REVmd AdHoc Ft. Lauderdale, Tuesday April 10, 9:30am – 11:30am (AM1)**
   1. **Meeting called to order** at 9:30am ET by the chair, Dorothy STANLEY (HPE)
   2. **Attendance** for some portion of the time-block:
      1. In person:
         1. Jon ROSDAHL (Qualcomm)
         2. Dorothy STANLEY (HPE)
         3. Mark HAMILTON (Ruckus/ARRIS)
         4. Sean COFFEY (Realtek)
         5. Michael MONTEMURRO (Blackberry)
         6. Graham SMITH (SR Technology)
         7. Joseph LEVY (Interdigital)
         8. Edward AU (Huawei)
      2. Remotely on the Bridge:
         1. Osama ABOUL-MAGD (Huawei)
         2. Emily QI (Intel)
         3. Chris HANSEN (Perasso)
         4. Jouni MALINEN (Qualcomm)
         5. Menzo WENTINK (Qualcomm)
   3. **Review Patent Policy and Attendance Policy**
      1. No Patent Issues noted
   4. **Review Agenda**

# 2018 April Ad-Hoc Agenda

As approved at the January 2018 interim meeting, TGmd will hold an ad-hoc meeting on Tuesday, Wednesday and Thursday April 10-12, 2018 in Fort Lauderdale, FL USA. Teleconference facilities will be provided.

Location:

W Hotel, 401 North Fort Lauderdale Beach Boulevard, Fort Lauderdale, Florida 33304

Teleconference bridge: we will start with the join.me teleconference bridge; if that is unworkable, an alternate will be sent via email.

**Draft AGENDA**

1. Call to order, attendance, and patent policy
   1. Call for potentially essential patents: **If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance:** 
      1. Either speak up now or
      2. Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible or
      3. Cause an LOA to be submitted
   2. <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0180-05-00EC-ieee-802-participation-slide.pptx>
2. Comment Resolution
   1. Tuesday April 10- 9:30am – 11:30am (AM1)
      1. Obsolete/Deprecate comments – discuss direction
         1. CID 1377 HT-delayed BA
         2. CID 1378 PSMP
         3. CID 1006, 1410, 1411 WEP
         4. CID 1412 Dual beacon and dual CTS
         5. CID 1504 STKSA (resolved by 11-18-480)
         6. CID 1445 Operating Classes
         7. CID 1341 GCMP deprecate
         8. CID 1460 Deprecate “Use group cipher suite”
      2. 11-18/619r0 - Editor 2 CIDs: - Edward AU (Huawei)

<https://mentor.ieee.org/802.11/dcn/18/11-18-0619-00-000m-revmd-editor2-lb232-comments.xlsx> - CID 1484

* + 1. CID 1047 – General – Separate section for DMG MAC features
    2. Clause 4 CIDs 1329, 1236
    3. Additional CIDs
  1. Tuesday April 10, 1pm – 3pm (PM1)
     1. Sean Coffey presentations
     2. General CIDs 1265, 1266, 1267, 1268
     3. 11-18/670 - Mike MONTEMURRO (Blackberry)
     4. Clause 3 definitions: CIDs 1039, 1040, 1041, 1042
     5. Additional CIDs
  2. Tuesday April 10, 3:30pm – 5:30pm (PM2)
     1. Security CID 1188
     2. Clause 4 CIDs: 1534, 1574
     3. Clause 5 CIDs: 1527, 1559, 1561
     4. 11-18/669 - Mark HAMILTON (Ruckus/ARRIS)
     5. Additional CIDs
  3. Wednesday April 11, 9:30am – 11:30am (AM1)
     1. 11-18/658 – non-trivial editorial CIDs - Emily QI (Intel)
     2. 11-18/672, 11-18/666 - Graham SMITH (SR Technologies)
     3. Additional CIDs
  4. Wednesday April 11, 1pm – 3pm (PM1)
     1. 11-18/674r1 – multiple BSSID CIDs - Abhishek Patil (Qualcomm)
     2. Additional CIDs
  5. Wednesday April 11, 3:30pm – 5:30pm (PM2)
     1. Cancelled – local event
  6. Thursday April 12, 9:30am – 11:30am (AM1)
     1. 11-18/655 Graham SMITH – (SR Technologies)
     2. Clause 6 CIDs
  7. Thursday April 12, 1pm – 3pm (PM1)
     1. GEN CIDs – assignments & Selected CIDs - Jon ROSDAHL (Qualcomm)
     2. 11-18/676 - Edward AU (Huawei)
     3. Additional CIDs
  8. Thursday April 12, 3:30pm – 5pm (PM2)
     1. Additional CIDs
     2. Plans for May meeting

1. AOB
2. Adjourn
   * 1. Reviewed the draft agenda and modifications were made.
     2. No objection to approve the Agenda Plan as we discussed
     3. See 11-18/626r4 for the approved agenda:
        1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0626-04-000m-2018-april-agendas-for-teleconferences-and-ad-hoc-meeting.docx>
   1. **Obsolete/Deprecate comments** – discuss direction
      1. CID 1377 (GEN) HT-delayed BA
         1. Review Comment
         2. Some feedback was that we should not delete as it may be useful for Light Communication or when more scheduling is defined.
         3. We had prepared a removal submission for this before, but was concerned for the usage.
         4. S1G seems to use it as well, and we need to discuss this more.
         5. As we are in AdHoc, we are not going to make motions this week, but we will be preparing a direction for further discussion at the May Interim.
         6. There is no support for removal at this time.
         7. There is an issue to resolve that on page 774 it indicated that this was Obsolete.
         8. 11-17/1137r3 was prepared and was used for CID 61:
            1. REVISED (MAC: 2018-01-16 22:28:09Z): Incorporate the text changes indicated in 11-17/1137r10 <<https://mentor.ieee.org/802.11/dcn/17/11-17-1137-10-000m-resolutions-for-obsolete-blockack.docx> > into the TGmd draft. These changes remove BlockAckReq, Basic BlockAck variant, and Non-HT block ack capabilities.
         9. It was noted in 802.11-2016 as obsolete, so we are possibly ready for removal.
         10. 11ah added text to 10.25.6.2 indicating that they are using this feature.
         11. Options: it may need to be removed, it maybe that it needs to be un-obsoleted, or it may be that just leaving marked obsoleted is correct.
         12. See table 11-4 where it is marked obsolete
         13. More investigation is needed.
         14. Need to find out if 11ah is actually using this feature, or if it was just noted in the list of features
         15. ACTION ITEM #1: Mike M to contact Yongho Seok for clarification on 11ah use. CID 1377 (GEN) – Topic HT-delayed BA
      2. CID 1378 (MAC) PSMP
         1. Review Comment
         2. This needs to be sent to the reflector
         3. Request to mark obsolete.
         4. ACTION ITEM #2: Dorothy to send to reflector request to consider obsoleting, and discuss in May – CID 1378 - PSMP
      3. CID 1006, 1410, 1411 (PHY) WEP
         1. Review list of CIDS
         2. CID 1233, 1234 were added.
         3. This topic is very controversial.
         4. Submission 11-18/652r0 has been prepared for consideration.
         5. Will take up on Tuesday of the Interim Session.
      4. CID 1412 (MAC) Dual beacon and dual CTS
         1. Review CID
         2. ACTION ITEM #3: Dorothy will email the reflector with a request for comments about making these obsolete. Note that Dual CTS and Dual Beacon are deprecated in 802.11-2016. – CID 1412 (MAC)
         3. Currently this is marked deprecated.
      5. CID 1504 (MAC) STKSA (resolved by 11-18-480)
         1. Review comment
         2. The document noted addresses this issue.
         3. The submission changes SMKSA to PMKSA.
         4. This document was discussed in March.
         5. This was part of the removal of SMK
         6. Proposed Resolution: REVISED (MAC: 2018-04-10 14:31:50Z): Incorporate the changes in 11-18/480r1 <<https://mentor.ieee.org/802.11/dcn/18/11-18-0480-01-000m-peerkey-deletion-cleanup.docx>> which correct this and other Peer-key text removal points. At this cited location it changes SMKSA to PMKSA.
         7. No objection – Mark Ready for Motion
      6. CID 1445 (PHY) Operating Classes
         1. Reviewed comment
         2. Assigned to Peter E
         3. This CID should be rejected with the technical reason.
      7. CID 1341 (PHY) GCMP deprecate
         1. Review comment
         2. Discussion: not appropriate to deprecate mechanisms in widespread use and being actively deployed;
         3. Notes: • Disagreement about the claim this is “excessively” vulnerable.
         4. The mechanism is in use in deployments.
         5. Not appropriate to deprecate. It can be implemented properly to avoid the nonce re-use issue.
         6. • This is the only security available for 60 GHz, currently.
         7. Assign CID to Jouni for crafting reject resolution.
      8. CID 1460 (PHY) Deprecate “Use group cipher suite”
         1. Review comment
         2. Mark CID submission required
         3. The proposed change is not clear.
         4. Assign CID to Mark RISON
      9. No other CIDs identified for Obsolete or Deprecation.
   2. **Review doc 11-18/619r0** - Editor 2 CIDs - CID 1484 - Edward AU
      1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0619-00-000m-revmd-editor2-lb232-comments.xlsx> -
      2. CID 1484 (Editor2)
         1. Review Comment
         2. A lot of work to make this change – it is not an Editorial comment.
         3. Move CID to PHY AdHoc
         4. Question of if this should just be rejected?
         5. There was a lot of concern that making a change would need careful review, but no one was willing to volunteer to generate the possible changes, it is ok as is, while not consistent, it is accurate.
         6. The Receive Sequence Count and replay counter are concepts and having things cleaned up may be a good thing.
         7. Would need a submission.
         8. Mark Submission required, Assign to Mark RISON. Make part of Security comment group and move to PHY.
      3. CID 1047 (GEN) – General – Separate section for DMG MAC features
         1. Review Comment
         2. Discussion
         3. The 11ax use of separate clauses is currently experimental, and the direction going forward will be reviewed. The current view of the Editor group is that it applies to 11ax going forward, and while this may change in the future, the 11ax must complete before being applied to the rest of the document.
         4. Proposed Resolution: REJECTED (GEN: 2018-04-10 14:58:56Z) The 802.11 Editors have considered. The 802.11ax use of separate clauses is currently experimental. That direction going forward will be considered after 11ax completes. It is the current Editors' view that split out MAC clauses will only be used on amendments going forward. While this direction may change in the future, the 11ax experiment must complete.
         5. No objection – Mark Ready for Motion
   3. **Clause 4 CIDs 1329, 1236**
      1. CID 1329 (GEN)
         1. Review Comment
         2. Review CID 286
            1. REVISED (GEN: 2017-10-13 15:29:08Z) Delete the cited text at 200.37 and add at 200.43 ", but does not operate in the 2.4 GHz band" to the end of the next para, just before the full stop
         3. Discussion to leave the text as is.
         4. CID 1587 (PHY) is similar – asks for more clarity to 2893.15
         5. We may need to modify text in both locations.
         6. Clause 19 says it is for both 2.4 and 5 bands.
         7. Clause 21 is the contradictory issue, saying that Clause 19 implementation.
         8. Clause 4 indicates that Clause 21 does not operate in 2.4. We do not want to say only operates in 5Ghz, as it may operate in other bands.
         9. Have we got Clause 21 devices operating in 2.4Ghz, while the spec did not specifically preclude it.
         10. In Clause 21, it is talking about being compliant with the mandatory PHY Specifications defined in Clause 19.
         11. Discussion on the VHT use in 2.4 and if that is something we should address, and do we want to preclude compliance. If we don’t restrict this to just 5, but if we move to 6 or some other band, we may not want to be restricted,
         12. Discussion on if Clause 4 is normative or not
         13. VHT applicability to 2.4 is the main issue, and that would need to be a Tuesday large group discussion.
         14. Should we limit this from 2.4, or state that it is just in 5? That is the argument to address. Future bands could be addressed in the future. We should define what we have now and not try address future unknown.
         15. Move CID 1329 to PHY AdHoc group
         16. ACTION ITEM #4: Mark HAMILTON - Prepare a submission on the 3 CIDs (1329, 1587,1621) to outline the question. Do we want to allow 2.4, or preclude or do we want to limit to only 5Ghz or allow adding 6Ghz band… and what about 11ax – Note that CID 1621 is only reference as Peter E is preparing a submission on this one. – See **CIDs 1329, 1236**
      2. CID 1236 (GEN)
         1. Review Comment
         2. The concern is that the change would become self referenceable.
         3. We need to create a rejection for this CID.
         4. This change would cause an optional item to become mandatory.
         5. One way to look at this would be to make not doing QMF obsolete.
         6. QMF is covered by 4.5.6.2
         7. Discussion to use typical "would make existing implementations non-conformant" language to reject. Note subclause 4.5.6.2
         8. The comment proposed QMF be made mandatory, it is currently optional for QoS STAs.
         9. Proposed resolution: REJECTED (GEN: 2018-04-12 16:54:37Z) The proposed change would make QMF mandatory for all QoS STAs and would make all deployed QoS STAs potential non-compliant.
         10. No objection – Mark Ready for Motion
   4. Recessed at 11:40am ET
3. **802.11md – REVmd AdHoc Ft. Lauderdale, Tuesday April 10, 1pm – 3pm (PM1)**
   1. **Called to order** at 1:04pm by the Chair, Dorothy STANLEY (HPE)
   2. **Attendance**:
      1. In person:
         1. Jon ROSDAHL (Qualcomm)
         2. Dorothy STANLEY (HPE)
         3. Mark HAMILTON (Ruckus/ARRIS)
         4. Sean COFFEY (Realtek)
         5. Michael MONTEMURRO (Blackberry)
         6. Graham SMITH (SR Technology)
         7. Joseph LEVY (Interdigital)
         8. Edward AU (Huawei)
      2. Remotely On the Bridge;
         1. Emily, QI (Intel)
         2. Youhan Kim (Qualcomm)
         3. Menzo WENTINK (Qualcomm)
   3. **Review Patent Policy**
      1. No issues
   4. **Review Agenda for this time slot:**
4. Sean Coffey presentations
5. General CIDs 1265, 1266, 1267, 1268
6. 11-18/670 - Mike MONTEMURRO
7. Clause 3 definitions: CIDs 1039, 1040, 1041, 1042
8. Additional CIDs
   * 1. No changes to the agenda
   1. **Sean Coffey presentations:**
      1. **Review Doc 11-18/673r0** – ERP Rates
         1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0673-00-000m-erp-rates.pptx>
         2. CID 1599 (MAC)
         3. Abstract:

For very low power, low data rate IoT applications, devices operating at 2.4GHz may choose baseline 802.11, 802.11b (HT), or 802.11g (ERP). Each poses some problems. ERP devices are required to support 1, 2, 5.5, 11, 6, 12, and 24 Mbps rates: the OFDM rates are burdensome and the data rates are overkill. On the other hand, DSSS and HT devices don’t support the 6 Mbps OFDM preamble, and require protection modes, lowering BSS throughput appreciably.

It would be useful to allow reduced functionality ERP devices, (1 and 6 Mbps, or any other subset of ERP rates).

CIDs addressed: 1599

* + - 1. Presentation of Submission
      2. Discussion:
         1. Discussed the rate change that would occur in this scenario
         2. Use of 11b only devices can cause a 30% loss of net throughput.
         3. Sensor devices need to have a way to not cause the entire network 30% losses.
         4. We can try to look at new devices getting a way to negotiate protection modes, but for legacy, we want to speak in a code such that we achieve the desired results.
         5. Are they restricted to a subset of rates? No, there is no reason to do that. If you have any OFDM preamble you should have 6Mbps to allow to read the preamble.
      3. Straw Poll:
         1. Do you support adding definitions of VERP devices, along the lines outlined in this presentation?

1. Yes
2. No
3. Need more detail but generally supportive
4. Need more detail but generally not supportive
5. No opinion
   * + - 1. Results: 2-0-4-0-4
     1. **Review Doc 11-18/0677r0** - Speak only when Spoken to mode -Sean Coffey
        1. **<** <https://mentor.ieee.org/802.11/dcn/18/11-18-0677-00-000m-speak-only-when-spoken-to-mode.pptx> **>**
        2. Was proposed during CC, but needed more detail.
        3. Has heard other people are also interested in this.
        4. Purpose is for managing 11b-only devices, but other purposes are possible.
        5. Primary use case is to allow 11b-only device to join BSS without triggering protection mode. Protection is only needed during windows when these devices are allowed to TX.
        6. Second use case could be supporting very low CCA threshold (to support distant clients), but only use that threshold during the windows when they are allowed to TX.
        7. Many options, to be evaluated for the protocol details. Could be done as a flexible mechanism, with negotiated options.
        8. C: These kinds of devices more and more are sleeping a long time. Would be good to do analysis of overhead of periodic window openings (to allow these devices to wake/TX for one of them), compared to bandwidth expense of current mechanisms. A: Agreed. Could consider linking to Beacons, with a very short window after Beacons, for example.
        9. C: Could interact with 11ba. A: Yes, and other things like TWT, etc. Specifically, didn’t connect with any one other technique.
        10. C: This is more than just power save by another name. It isn’t really TX “when spoken to”, its more correctly, “during this window”. It fits in with the growing set of methods of the AP controlling who talks and when (like 11ax is doing). A: This has the addition of telling devices “do not transmit” during long periods (outside the windows), which is a different sort of optimization.
        11. C: This seems to be a bit conflicting with the previous presentation (on “VERP”). Or, at least it is introducing yet another variant, and we don’t want to have too many variations. A: Different vendors with different design expertise or needs might use one or the other. Or, it might make sense to have both, VERP for clients on legacy APs (for example), and this for new APs. C: VERP is really for OFDM-capable devices (non-OFDM devices can use 1 and 2Mbps only, now). But, this presentation is targeting devices that are non-OFDM (for low cost). So, they are really separate use cases. A: This is useful beyond just non-OFDM use cases. And, VERP is all about “fooling” the BSS into not going into protection mode, just because there are non-OFDM devices. But, generally agree about discussion the relationship between these.
        12. C: Need to be careful to consider long duty-cycle devices and clock accuracy in methods like this. A: Agreed.
        13. **Straw Poll:**
            1. Yes: 1,
            2. No: 1,
            3. Need more detail generally supportive: 3,
            4. Need more detail generally not supportive: 1,
            5. No opinion: 5.
            6. Results: 1-1-3-1-5
        14. Will go and do more work and bring back.
   1. **General CIDs 1265, 1266, 1267, 1268**
      1. CID 1265 and 1266 (GEN)
         1. Review Comments
         2. Section 4 discussion
         3. Discussion p216 as an example location.
         4. Having overview in Clause 4 seems useful
         5. The statements in Clause 4 are declaring that a shall statement exists elsewhere.
         6. Mandatory or optional support is declared in clause 4, so it seems like a normative sentence.
         7. We could drop the “Mandatory” or “Optional”, but we should list the features.
         8. Discussion on Clause 4 could or should not be.
         9. Should it be a list or paragraph that is more verbose?
         10. Not all the subclauses in 4 are written in the same format or style.
         11. We should determine if the bullet or the paragraph form is better.
         12. The style or format error is what the comment seems to claim.
         13. What is the purpose of Section 4? To give a novice to get an understanding of what features are related to a specific feature set.
         14. Discussion on how to rewrite Clause 4 to be consistent in the format and style of the subclauses.
         15. Having the Editor group look at describing a proposal for the style was not thought to be a good idea.
         16. Getting the Task Groups to find a consistent manner of describing the features that they are adding.
         17. For these Two CIDs they are Submission required, assigned to Joe LEVY.
      2. CID 1267 (MAC)
         1. Review comment
         2. The subclause 11.23.6.5 has been corrupted with the 11ah addition (S1G)
         3. The interleaving of the 11ah makes it harder to look at. So pulling into two separate clauses would be a better way to describe this.
         4. Pulling TDLS and S1G apart in a description may make it easier to read.
         5. If there are MAC requirements that are different, then pulling it out seems ok, but if there is overlap, does that justify the interleaving of the descriptions.
         6. This really is a Style and presentation issue.
         7. Mark CID a Submission required.
         8. Straw Poll:
            1. Agree with the Direction to separate
            2. 5 Yes, 1 no, 4 no opinion
         9. AdHoc Notes:

MAC: 2018-04-10 18:59:54Z - status set to: Submission Required

MAC: 2018-04-10 18:58:03Z: Discussed at FLL ad hoc, supportive: 5, not supportive: 1, no opinion: 4.

* + 1. CID 1268 (MAC)
       1. Review Comment
       2. Discussion on the use of BI or not to use BI
       3. Should DMG have the only “BI” and use beacon interval elsewhere?
       4. Figure 11-12 has unscheduled BI which has to do with DMG ATIMs.
       5. This is a submission Required
       6. Look to make change outside of fieldnames and related to DMG.
       7. AdHoc Notes:

MAC: 2018-04-10 19:10:11Z: From FLL ad hoc, consider changing "BI" to "beacon interval" when it's used outside DMG. Don't change within DMG context (Doze BI, Awake BI, etc.) Submission Required.

* 1. Recess at 3:11pm (20 minutes)

1. **802.11md – REVmd AdHoc Ft. Lauderdale, Tuesday April 10, 3:30pm – 5:30pm (PM2)**
   1. Called to order at 3:31pm by the chair, Dorothy STANLEY (HPE)
   2. Attendance
      1. In person:
         1. Jon ROSDAHL (Qualcomm)
         2. Dorothy STANLEY (HPE)
         3. Mark HAMILTON (Ruckus/ARRIS)
         4. Sean COFFEY (Realtek)
         5. Michael MONTEMURRO (Blackberry)
         6. Graham SMITH (SR Technology)
         7. Joseph LEVY (Interdigital)
         8. Edward AU (Huawei)
      2. Remotely on the Bridge:
         1. Emily QI (Intel)
         2. Yohan Kim (Qualcomm)
         3. Osama ABOUL-MAGD (Huawei)
   3. **Reminder of Patent Policy**
      1. No items Noted
   4. **Review document 11-18/670r0** - Mike MONTEMURRO
      1. < <https://mentor.ieee.org/802.11/dcn/18/11-18-0670-00-000m-lb232-revmd-phy-sec-comments.xls> >
      2. CID 1244 (MAC)
         1. Review Comment
         2. Proposed Resolution: ACCEPTED (MAC: 2018-04-10 19:33:52Z)
         3. No Objection - Mark Ready for Motion
      3. CID 1528 (MAC)
         1. Proposed resolution: REVISED (MAC: 2018-04-10 19:34:34Z): Replace Figure 11-15 with Figure 11-13 from IEEE 802.11ai-2016 (2nd imprint).
         2. M No Objection - Mark Ready for Motion
      4. CID 1554 (MAC)
         1. Proposed resolution: ACCEPTED (MAC: 2018-04-10 19:35:38Z)
         2. No Objection - Mark Ready for Motion
      5. CID 1237 (PHY)
         1. Review status
         2. A presentation was shown in March
         3. Proposed Resolution: Accepted
         4. No Objection – Mark Ready for Motion
      6. CID 1235 (PHY) - OWE
         1. Review Status
         2. This may need a larger forum for discussion
         3. Need to discuss in the larger forum.
      7. CID 1004 (PHY)
         1. Review Comment
         2. Review context – 2309.44
         3. Proposed Resolution: Accept
         4. No objection – Mark Ready for Motion
      8. CID 1323 (PHY)
         1. Review comment
         2. Review Context 2315.17
         3. Add CID 1323 to Graham’s list of CIDs to address with the other WEP CIDs.
         4. Assign to Graham
         5. Mark Submission Required.
      9. CID 1005 (PHY)
         1. Review Comment
         2. Review context p2318.32
         3. After discussion the direction was for a rejection.
         4. The first two sentences are not incorrect and in the context, provide a counter to what SAE is.
         5. Proposed Resolution: Reject; The cited text, when taken in context is unambiguous. At 2318.48, the text indicates that SAE is resistant to Dictionary Attacks.
         6. Mark Ready for Motion
      10. CID 1028 and 1027(PHY)
          1. Review comments
          2. Header Compression stuff needs more review.
      11. CID 1026 (PHY)
          1. Review Comment
          2. Review Context 2354.40
          3. Proposed Resolution: Accepted
          4. No Objection – Mark Ready for Motion
      12. CID 1019 (PHY)
          1. Review Comment
          2. Concern that not enough review had been done yet.
          3. ACTION ITEM #5: Mike to circulate on reflector and bring back later.

Topic: PN and replay detection on a receiver for CCMP and GCMP. – CID 1019 (PHY)

* + 1. CID 1148 (PHY)
       1. Review Comment
       2. Concern that not enough review had been done yet.
       3. ACTION ITEM #6: Mike to circulate on reflector and bring back later. Topic: EAPOL-key frames, key descriptor version – CID 1148 (PHY)
    2. CID 1538 (PHY)
       1. Review Comment
       2. Review context 2409.13
       3. Add this CID list of CIDs being reviewed and brought back.
    3. CID 1188 (PHY)
       1. Review Comment
       2. The Deprecated key in this case should not be deleted. It is a place holder as deprecated.
       3. The paragraph prior to table 12-8 has the AKM “Deprecated” called out and so the referenced entry should be in the table.
       4. Proposed Resolution: Accept.
       5. No objection – Mark Ready for Motion
  1. **Clause 3 definitions: CIDs 1039, 1040, 1041, 1042**
     1. CID 1039 (GEN)
        1. Review Comment
        2. 2G4 is defined on page 180.60, but it is a forward reference to the cited definition
        3. And 181.1 also has a definition.
        4. Page 168.20, it has HT STA 2G4
        5. Concern about not having an explicit “AP” listed.
        6. Proposed Resolution: REJECTED (GEN: 2018-04-10 20:21:16Z) HT STA 2G4 is defined at 168.21. and an AP comprises a STA. also see 180.60 and 181.1
        7. No objection – Mark Ready for Motion
     2. CID 1040 (GEN)
        1. Review Comment
        2. Proposed Resolution: REJECTED (GEN: 2018-04-10 20:21:16Z) HT STA 2G4 is defined at 168.23. and an AP comprises a STA. also see 180.60 and 181.1
        3. No objection – Mark Ready for Motion
     3. CID 1041 (GEN)
        1. Review Comment
        2. Reject the 40MC HT STA is a defined term.
        3. See page 2125.60 for title in 11.15.5.
        4. Suggest change title to “40 MC HT STA 2G4”
        5. Proposed Resolution REVISED (GEN: 2018-04-10 20:37:03Z) at 158.31 "40MC HT STA is a defined term and is valid for the definition of 40MC HT STA 2G. No change to the definition is required.

At page 2125.60 Change the title in 11.15.5 from "Scanning requirements for 40-MHz-capable STA" to “Scanning requirements for 40MC HT STA 2G4”

at Page 4178.30 change"40-MHz-capable" to "40MC"

at Page 4178.27 change "40-MHz-capable" to "a 40MC HT AP"

* + - 1. No objection – Mark Ready for Motion
    1. CID 1042 (GEN)
       1. Review Comment
       2. Proposed Resolution: REJECTED (GEN: 2018-04-10 20:46:32Z) at 158.31 "40MC HT STA" is a defined term and is valid for the definition of 40MC HT STA 2G. No change to the definition is required
       3. No objection – Mark ready for motion
  1. **Review Document 11-18/669r0** – Mark HAMILTON
     1. < <https://mentor.ieee.org/802.11/dcn/18/11-18-0669-00-000m-revmd-mac-comments-assigned-to-hamilton.docx> >
     2. CID 1398 (MAC)
        1. Review Comment
        2. Review context 2280.60
        3. In case of OMN, STA could send OMN frame, or include OMN element in Beacon. In case when OMN is not supported, STA could send Notify Channel Width frame, or change the STA Channel Width field in the HT Operation element.
        4. Proposed resolution: Revised; Replace the cited note with: “A Notify Channel Width frame or the STA Channel Width field in the HT Operation element is used to signal STA operating channel width changes to and from STAs that are not operating mode notification capable. (Note to editor: clause 11.40”)
        5. No objection – Mark Ready for motion
     3. CID 1425 (MAC)
        1. Review comment
        2. Review discussion
        3. Proposed Resolution: Accept
        4. No objection – Mark Ready for Motion
     4. CID 1381 (MAC)
        1. Review Comment
        2. Review discussion
        3. Proposed Resolution: Accept
        4. No Objection – Mark Ready for Motion
     5. CID 1382 (MAC)
        1. Review Comment
        2. Review Discussion
        3. Proposed Resolution: Rejected. For dot11BSSTransitionActivated to be true, logically, dot11BSSTransitionImplemented must also be true without needing to state so.
        4. No Objection – Mark Ready for Motion
     6. CID 1390 (MAC)
        1. Review Comment
        2. Review discussion
        3. Proposed Resolution: Accept - Note to Editor the change is at P1063L48
        4. No Objection – Mark Ready for Motion
  2. Additional CIDs
     1. CID 1534 (GEN)
        1. Review Comment
        2. Proposed Resolution: REJECTED (GEN: 2018-04-10 21:31:59Z) the result of a FILS setup yields a PMKSA which can be used with caching.
        3. No Objection – Mark Ready for Motion
     2. CID 1574 (GEN)
        1. Review Comment
        2. Suggest we just delete “the PMKSA can contain a single PMK.” At 266.59 at 267.02 remove "Each PMK identifier names a PMKSA; the PMKSA contains a single PMK."
        3. The “The” at p266.58 should be “A”
        4. Proposed Resolution: REVISED (GEN: 2018-04-10 21:38:27Z) At 266.59 delete “the PMKSA can contain a single PMK.”

at 267.02 remove "Each PMK identifier names a PMKSA; the PMKSA contains a single PMK."

at 256.57 change "The" to "A"

* + 1. No objection Mark Ready for Motion
  1. **Recess at 5:30pm**

1. **802.11md – REVmd AdHoc Ft. Lauderdale, Wednesday April 11, 9:30am – 11:30am (AM1)**
   1. **Called to order** at 9:32am by the chair, Dorothy STANLEY (HPE)
   2. **Attendance:**
      1. In person:
         1. Jon ROSDAHL (Qualcomm)
         2. Dorothy STANLEY (HPE)
         3. Mark HAMILTON (Ruckus/ARRIS)
         4. Michael MONTEMURRO (Blackberry)
         5. Graham SMITH (SR Technology)
         6. Joseph LEVY (Interdigital)
         7. Edward AU (Huawei)
      2. Remotely on the Bridge:
         1. Emily QI (Intel)
         2. Menzo WENTINK (Qualcomm)
   3. **Review Patent Policy**
      1. No issues
   4. **Review Agenda** for today:
2. Wednesday April 11, 9:30am – 11:30am (AM1)
   1. Emily QI – 11-18/658 – non-trivial editorial CIDs
   2. Graham SMITH – 11-18/672, 11-18/666
   3. Additional CIDs
3. Wednesday April 11, 1pm – 3pm (PM1)
   1. 9.4.2.45 (multiple BSSID) CIDs – 1287, 1289 to 1299
   2. Additional CIDs
4. Wednesday April 11, 3:30pm – 5:30pm (PM2)
   1. Cancelled – local event
      1. No changes to the proposed Agenda
   2. **Review document 11-18/658** – non-trivial editorial CIDs - Emily QI
      1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0658-00-000m-lb232-proposed-resolutions-for-editor-ad-hoc.doc>
      2. Review Document
      3. CID 1092 (EDITOR)
         1. Review Comment
         2. Review Discussion
         3. Proposed Resolution: Revised. Change “The procedures defined in this standard provide fresh keys by means of various protocols and handshakes.”

To: “The procedures defined in this standard provide fresh keys by means of protocols called the 4-way handshake, FT 4-way handshake, FT protocol, FT resource request protocol, group key handshake, and FILS authentication protocol.”

* + - 1. No objection – Mark Ready for Motion
    1. CID 1115 (Editor)
       1. Review Comment
       2. Editor Agreed to change “NDP Announcement frame” to “VHT NDP Announcement frame” at 784.01.
       3. Then more locations were identified for possible changes. Reviewed the other proposed locations.
       4. Discussion on proposed changes.
       5. ACTION ITEM #7: Menzo to check with Alfred -: Potential issue for S1G NDP Announcement Frame. - CID 1115-
       6. Proposed Resolution: Revised.

At 784.01: change “NDP Announcement frame” to “VHT NDP Announcement frame”.

At 889.6: change “NDP Announcement frame” to “VHT NDP Announcement frame”.

At 1917.12: change “NDP Announcement field” to “HT NDP Announcement subfield”.

At 1917.29: Change “NDP announcement subfield set to 1” to “HT NDP Announcement subfield set to 1”.

At 1918.16: Change “NDP announcement indicator” to “HT NDP Announcement subfield”.

* + - 1. No objection – Mark Ready for motion
    1. CID 1257 (EDITOR)
       1. Review comment
       2. Proposed resolution: Accept
       3. No objection – Mark Ready for Motion
    2. CID 1304 (Editor)
       1. Review Comment
       2. Review feedback received on this CID.
       3. Proposed Resolution: Revised; Change cited text to “controlled access phase (CAP): A time period during which the hybrid coordinator (HC) maintains control of the medium. It might span multiple consecutive transmission opportunities (TXOPs) and can contain polled TXOPs.”;
       4. No objection – Mark Ready for Motion
    3. CID 1086 (Editor)
       1. Review Comment
       2. Review potential changes – 5 instances
       3. Concern in clause 9.8.1 change to “PV1 MAC header”
       4. Do not change first proposed change.
       5. Discussion on the value of the proposed changes
       6. PV1 MAC Header is also used at p2354 in figure 12-17, and at p3747.34 in the Dot11S1GStationConfigEntry.
       7. The discussion was that the text is accurate, and that the explicit naming is necessary as the PV1 MAC Header is a different MAC header from the PV0 MAC Header (Traditional)
       8. Proposed Resolution: Reject; The current text is accurate. The format of the PV1 MAC header is different from the format of the original MAC header.
       9. No Objection – Mark Ready for Motion
    4. CID 1091 (Editor)
       1. Review Comment
       2. Editor agreed with commenter
       3. Discussion on the format of the Table
       4. The table should be change to “Type value” “Type”, “Description”
       5. Discussion on the way that the “Description” should be formatted.
       6. Suggestion to keep the bulleted format.
       7. Will bring back later.
    5. CID 1101 (Editor)
       1. Review Comment
       2. Discussion on the value of separating the table, and if we do split the table the possible concern for two tables causing a ripple effect of confusion.
       3. Alternatively, we could have the main table have an 255 entry that references an extension table.
       4. One-point concern is that we have changed the table each revision, and we should leave well enough alone.
       5. Propose to Reject; Having all information in one table provides a single reference. The current table is clear. No need to change.
       6. The later part of the comment is about having “field” added to the title label. Discussion on the value of that proposed change.
       7. The paragraph at 904.6 describes the element format and shows the specific fields in context in Figure 9-136. We do not need to add “field” in all the table labels.
       8. Proposed Resolution: Reject; Having all information in one table provides a single reference. The current table is clear. Also, Figure 9-136 shows the Element format. No need to add “field” in the column
       9. No Objection – Mark Ready for Motion
    6. CID 1104 (Editor)
       1. Review Comment
       2. Discussion on the Element ID 255 definition
       3. Add a note that Element ID 255 means a format with the Element ID Extension field present.
       4. Discussion on 255-0 p914.5 – should just be reserved
       5. Need to have the reserved inline in the table in the logical spots.
       6. Proposed Resolution: Revised; At 915.48 and 914.50, Change “Reserved for elements using the Element ID Extension field” to “Reserved”.
       7. Need to update the table and bring back the other items of having the reserved rows inline the proper place.
  1. **Review doc: 11-18/672** - Graham SMITH
     1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0672-00-000m-resolutions-for-block-ack-related-comments.docx>
     2. These are CIDs related to Block Ack. Menzo will coordinate with Graham on the Block Ack CIDs he is working on.
     3. CID 1391 (MAC)
        1. Review Comment
        2. Review discussion
        3. Discussion on the use of BA Agreement vs block ack agreement and “sent” vs “send”. Can we just drop the word “sent”?
        4. Proposed Resolution: Revised; Make the changes for CID 1391 in 11-18/672r1 <https://mentor.ieee.org/802.11/dcn/18/11-18-0672-01-000m-resolutions-for-block-ack-related-comments.docx> which changes the cited text in line with the commenters suggestion.
        5. No objection – Mark Ready for Motion
     4. CID 1392 (MAC)
        1. Review comment
        2. Review discussion
        3. Proposed Resolution: Accept
        4. No objection – Mark Ready for Motion
     5. CID 1308 (MAC)
        1. Review Comment
        2. Resolution in 11-17/1137 had a change, but had an error that should have kept the initial text.
        3. The proposed resolution just put the new clause back into the document.
        4. Proposed Resolution: REVISED Insert new clause 10.25.3 and remove Editor’s Note.

**10.25.3 Data and acknowledgement transfer using immediate block ack policy and delayed block ack policy**

“After setting up an immediate block ack agreement following the procedure in 10.25.2 (Setup and modification of the block ack parameters), and having gained access to the medium and established protection, if necessary, the originator may transmit an A-MPDU. The RA field of the frames that are not delivered using the GCR block ack retransmission policy shall be the recipient’s individual address. The RA field of GCR frames delivered using the GCR block ack retransmission policy shall be set to the GCR concealment address. The originator requests acknowledgment of outstanding QoS Data frames by sending a BlockAckReq frame.”

* + - 1. No Objection – Mark Ready for Motion
    1. CID 1313 (MAC)
       1. Review Comment
       2. Review the process of Block Ack process and the use of WinStart 0.
       3. The SSN has to be WinStart 0 or a number higher.
       4. Proposed Resolution: REJECT; Using partial-state operation it is possible that the SSN is greater than WinStart 0 as the recipient may be using a bit map based upon the received Data frames.
       5. No objection – Mark Ready for Motion
  1. **Review doc 11-18/666** – Graham SMITH
     1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0666-00-000m-resolution-for-ps-related-comments.docx>
     2. CID 1378 (MAC)
        1. Need more review
     3. CID 1466 (MAC)
        1. Assign to Mark RISON – mark submission required.
     4. CID 1469 (MAC)
        1. Review comment
        2. Review discussion
        3. The use of the Power Management subfield in Data and in Management frames are explicitly defined.
        4. In the field, the implementations are not consistent.
        5. PS-POLL is the grey area for this situation. What is done with the PM Bit in the PS-POLL? There are some implementations that set the bit and then won’t talk to you again.
        6. More discussion will need to be done.
  2. **Recessed at 11:48am**

1. **802.11md – REVmd AdHoc Ft. Lauderdale, Wednesday April 11, 1pm – 3pm (PM1)**
   1. **Called to order** at 1:03pm by the chair, Dorothy STANLEY (HPE)
   2. **Attendance**:
      1. In person:
         1. Jon ROSDAHL (Qualcomm)
         2. Dorothy STANLEY (HPE)
         3. Mark HAMILTON (Ruckus/ARRIS)
         4. Michael MONTEMURRO (Blackberry)
         5. Graham SMITH (SR Technology)
         6. Joseph LEVY (Interdigital)
         7. Edward AU (Huawei)
      2. Remotely on the Bridge:
         1. Emily QI (Intel)
         2. Menzo WENTINK (Qualcomm)
         3. Abhishek Patil (Qualcomm)
         4. Jouni Malined (Qualcomm)
         5. Youhan Kim (Qualcomm)
   3. **Review Patent Policy**
      1. No issues noted
   4. **Review doc** **11-18/674r1** – multiple BSSID CIDs - Abhishek Patil (Qualcomm)
      1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0674-01-000m-lb232-cids-assigned-to-abhishek.pptx>
      2. Summary of Document:
         1. The comments are classified into the following broad categories:
         2. Spec clarification in 11.1.3.8

1289, 1290, 1291, 1292, 1296, 1295, 1297 🡺 to be discussed by TGax

* + - 1. Insufficient information w.r.t. to completeness of nonTxBSSID profile list

CIDs 1293 & 1294 🡺 proposed resolution in doc 11-18/0675r0

* + - 1. Conditional inheritance of certain elements

CID 1298 🡺 proposed resolution in doc 11-18/0675r0

* + - 1. Editorial/Typo in 9.4.2.21.10

CID 1299 🡺 resolved in this presentation

* + - 1. MAC Address representation

CIDs 1287, 1288, 1300 🡺 needs discussion

* + 1. Review slide deck, and then will look at document 11-18/675 for the CID resolutions.
    2. 11ax are wanting to use multiple BSSID features, but we need to address the REVmd Comments in regards to the current revision, not with 11ax.
    3. While the comments may be discussed with 11ax Task Group, but the proposed resolution from REVmd is not approved by TGax.
    4. Note that feedback and reviewers are individuals not companies.
    5. Discussion that we do not make changes that will cause non-compliance with existing material.
    6. There is a document that has been approved by the TGax task group:
    7. Review document: 11-18/368r1
       1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0368-01-00ax-multiple-bssid.docx>
       2. Review of the document led to some more discussion.
       3. This document has not been adopted, but is under discussion.
       4. Question on the TIM element
          1. Trying to keep it consistent with the FMS
          2. TIM Field vs TIM element may also be an issue.
          3. There should not be a TIM element in the Nonstransmitted BSSID Profile
       5. Noting it was not posted, we paused to get the r1 of the document posted.
       6. We will need to have the 60GHz folks (ad, or ay) ensure that the changes do not adversely affect that operation.
       7. Question on what version of the standard ax should be based on.
          1. It is currently planned to come before REVmd.
          2. The currently approved amendments need to be taken into account.
          3. There was concern that modifications of the same clauses be accounted for.
       8. Multiple BSSIDs changes in 11ax are independent of REVmd.
       9. It can have a discussion in both places, but the resolution or acceptance of the proposed changes is independent.
       10. Changes that are approved in 11ax may not need to be made in REVmd, but if the current CIDs in REVmd are addressed in 11ax, then the CID should be withdrawn.
       11. Would like to ask for the Multiple BSSID CIDs be deferred until after the May Interim to allow 11ax to discuss, and if they adopt the changes, then the REVmd CIDs could be withdrawn.
       12. Question on the paragraph that seems to loose the STA operation definition.
           1. The thought is that it will be addressed to put back in the appropriate place, and the new text provides a better definition of the profile and then a new sentence needs to be added to describe the non-AP STA side.
           2. The merging of the Full with the Partial action needs to be described, and will need to be added back in.
       13. Two levels of Partiality. Currently the AP can advertise all or some of the non-transmitted BSSIDs. Nothing identifies if the list is complete or partial. Within a profile, it allows the definition to be partial or complete. Within a profile, we want to have a complete profile in 11ax. The removal of the partials within a profile.
       14. The Advertisement of the list of the BSSIDs is a different issue.
       15. Return to presentation of the changes being proposed to 11ax next month.
       16. Question on the use of satisfying the conditions in table 9-27.
           1. This is because that table has all conditions for the definitions of the various elements that have to be satisfied to be included.
           2. Could we just put things in the Nontransmitted Profile that are unique to the that BSSID when not in the Transmitted BSSID
       17. The plan is to present in 11ax and then come back to REVmd and discuss the plan going forward.
    8. Return to 11-18/674r1:
    9. Review the conflicting information that currently exists in 11md.
    10. A non-AP STA does not now if the list is complete or not, so if a new bit in the Extended Capabilities element can be defined to signal the full size or the partial list to the non-AP STA.
    11. MaxBSSID Indicator gives the information to construct the TIM.
    12. Discussion on the limitations of the TIM and the Beacon for notifying of the partial or full list.
    13. Resolution Summary from slide 8:
        1. Add a bit to Extended Capabilities element so that an AP can indicate if the list of nonTxBSSID profile is complete.
        2. Define a new element which an AP can advertise in Beacon/Probe Response frames to indicate the count of active BSSIDs in the set.
        3. With the above two pieces of information, a non-AP STA can determine if it has received information about all the active nonTxBSSIDs on the device.
    14. The proposed changes are noted in 11-18/675r0:
        1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0675-00-000m-lb232-cids-1293-1294-1298.docx>
    15. The discussion bounced back and forth from the two documents.
    16. Discussion on the Multiple BSSID-indexed element.
    17. Clause 11 had text that seemed to indicate a complete indication of all the BSSIDs would be identified om the Multiple BSSID-indexed element.
    18. Discussion on this may be an interpretation issue that does imply all the ids are in the elements.
    19. Discussion on if the profile definition is what is broken rather than add a new capability bit. If the AP is advertising a partial profile, then I end up having to scan multiple beacons to get all the information.
    20. Multiple BSSID will always put more burden on the STA.
    21. The partial thing was trying to reduce the Beacon overhead, and the new proposal is to maximize the Beacon size, to reduce the number of Beacon.
    22. System trade-offs need to be weighed.
    23. Discussion on the beacon overhead and number of beacons are needed.
    24. Assertion that there is an Index and an SSID for every BSSID in every Beacon. The Profile has the minimum set of information.
    25. Trying to identify what is actually there and the benefits of the changes discussed. We could use ANQP to avoid the Multiple BSSID in general.
    26. We may want to look at the use cases to identify the problem we are really trying to solve.
    27. We will schedule Wednesday PM1 for more discussion on Multiple BSSID.
    28. Conditional Inheritance:
        1. Review slide 12 of 11-18/674r1
        2. Discussion on how to indicate which elements are not included in the inheritance.
        3. Discussion on the use of the null element and the position that it would appear in the beacons. How is this better to use than the capability bits…now some may not have a bit, then this may be a good way to indicate this feature not being supported.
        4. Need something that is not in the extended capabilities field and is inherited by the NonTransmitted BSSID profile.
        5. For publishing of major features, we agree, but for certain MAC features, there are different level of support that may be chose per BSSID.
  1. We are at time – Ask to continue the discussion on Thursday at 1pm-3pm
     1. We will move Jon’s discussion to after.
  2. **Recess at 3:07pm**

1. **802.11md – REVmd AdHoc Ft. Lauderdale, Wednesday April 11, 3:30-5:30pm (PM2)**
   1. 802.11 Status Workshop
   2. Thanks to SR Technologies for hosting our meetings this week.
2. **802.11md – REVmd AdHoc Ft. Lauderdale, Thursday April 12, 9:30am – 11:30am (AM1)**
   1. **Called to order** by the chair, Dorothy STANLEY (HPE) at 9:31am
   2. **Attendance:**
      1. In person:
         1. Jon ROSDAHL (Qualcomm)
         2. Dorothy STANLEY (HPE)
         3. Mark HAMILTON (Ruckus/ARRIS)
         4. Michael MONTEMURRO (Blackberry)
         5. Graham SMITH (SR Technology)
         6. Joseph LEVY (Interdigital)
         7. Edward AU (Huawei)
      2. Remotely on the Bridge:
         1. Emily QI (Intel)
         2. Menzo WENTINK (Qualcomm
   3. **Review Patent Policy**
      1. No issues noted.
   4. **Review Agenda**
      1. Draft Agenda for the day reviewed.
      2. <https://mentor.ieee.org/802.11/dcn/18/11-18-0626-06-000m-2018-april-agendas-for-teleconferences-and-ad-hoc-meeting.docx>
      3. Draft Agenda for AM1:
3. 11-18/654, 11-18/656 - Graham SMITH
4. 11-18-670 - Mike MONTEMURRO
5. Clause 5 CIDs: 1527, 1559, 1561
   * 1. Agenda Adjustments made see 11-18/626r7 for approved agenda changes.
        1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0626-07-000m-2018-april-agendas-for-teleconferences-and-ad-hoc-meeting.docx>
     2. No objection to the updated Agenda for the remainder of AdHoc (Today).
   1. **Review Document 11-18/654r0** – Graham SMITH
      1. < <https://mentor.ieee.org/802.11/dcn/18/11-18-0654-01-000m-resolution-for-cids-1000-1147.docx> >
      2. CID 1147 (MAC)
         1. Review Comment
         2. This was discussed on the April 6th Telecon. (See 11-18/612r0: section 1.7.4)
         3. Review discussion in 11-18/654r0
         4. See 11-18/656r0 for CID 1356 which deletes a sentence in the paragraph under discussion.
         5. Frame exchange sequence discussed.
         6. Look to add “Frame exchange including an” to help clarify the circumstance.
         7. Maybe the suggested change from CID 1356 would be a better direction.
         8. Remove the last two sentences and put in the proposed sentence.
         9. Discussion on the use of PS-Poll and the use of RTS/CTS.
         10. Value of the duration can be the issue.
         11. Maybe state that RTS/CTS not be used with PS-Poll.
         12. Discussion on the paragraph changes.
         13. Delete the last sentence of the 2nd paragraph – dot11RTSThreshold restriction.
         14. The threshold will only apply to data and management frames.
         15. The final changes to two paragraphs will be captured in 11-18/654r2.
         16. Proposed Resolution CID 1147 (MAC): REVISED (MAC: 2018-04-12 14:13:22Z): Incorporate the changes shown in 11-18/654r2, for CID 1147. These changes clarify the applicable use of RTS/CTS
         17. Update the resolution for CID 1356 (MAC): REVISED (MAC: 2018-04-12 14:13:22Z): Incorporate the changes shown in 11-18/654r2, for CID 1147. These changes clarify the applicable use of RTS/CTS
         18. These will be in 11-18/656r1 (CID 1356) and 11-18/654r2 (CID 1147)
         19. No Objection – Mark Both CIDs Ready for Motion
      3. CID 1358 (MAC)
         1. Review comment
         2. Discussion on the possible changes, or just delete the whole paragraph
         3. The confusion on the use of per STA or peer STA.
         4. The need for this cited paragraph may need to just reference to 10.3.5 may be sufficient.
         5. Change the paragraph to be “The use of RTS/CTS mechanism is described in 10.3.5.” and delete the rest of the paragraph.
         6. Another alternative would be to change it as “The use of RTS/CTS mechanism under control of dot11RTSThreshold is described in 10.3.5.”
         7. If we delete the later part of the paragraph, do we need to delete the Note below as well? – No, it applies to all the other paragraphs also.
         8. Proposed Resolution: REVISED (MAC: 2018-04-12 14:33:27Z): Replace the first sentence of the paragraph with, "The use of the RTS/CTS mechanism under control of dot11RTSThreshold is described in 10.3.5." Delete the second and third sentences (the remainder of the paragraph).
         9. This is included in 11-18/626r1 (CID 1358)
   2. **Review doc 11-18-670** - Mike MONTEMURRO
      1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0670-00-000m-lb232-revmd-phy-sec-comments.xls>
      2. CID 1264 (PHY)
         1. Review Comment
         2. This is a requested change to a TKIP clause that is not updated.
         3. Proposed Resolution: REJECTED; TKIP has been deprecated and the task group has determined that they are not making any changes to clauses associated with obsolete/deprecated features.
         4. No objection – Mark Ready for Motion
      3. CID 1552 (PHY)
         1. Review comment
         2. Proposed Resolution: Accept; Note to editor to fix spelling of association.
         3. No objection – Mark Ready for Motion
      4. CID 1546 (PHY)
         1. Review comment
         2. Proposed Resolution: Accept
         3. No objection – Mark Ready for Motion
   3. Mike had to leave at this point, and we returned to Graham for next topic.
   4. **Review document 11-18/666r2** Graham SMITH
      1. < <https://mentor.ieee.org/802.11/dcn/18/11-18-0666-02-000m-resolution-for-ps-related-comments.docx> >
      2. CID 1469 (MAC)
         1. Review comment
         2. Review discussion
         3. The least harmful solution may be to ignore the bit. There has been a variety of solutions implemented, and so no matter the choice, we may end up making some devices non-compliant.
         4. Two options- 1. Reject, or 2. Put in all the places to put the ignore.
            1. 9.3.3.1 and in the PowerManagement Bit (732.51) area as well.
         5. While the commenter’s suggestion fixes 9.3.3.1, there may be other locations needed to be fixed up.
         6. Discussion on the use of the PM Bit in S1G, or DMG, or legacy.
         7. More investigation may need to be done.
         8. Straw Poll:
            1. A) Reject the comment
            2. B) Make a change in direction
            3. C) No opinion
            4. Result: 4-2-1
         9. Not strong consensus to make the change.
         10. Proposed Resolution: Rejected; Evidence exists that APs do not ignore the PM bit in PS-Polls and hence adding that requirement could make existing implementations non-compliant. Note that Figure 9-22 does not have a (0) for the PM bit.
         11. No objection – Mark Ready for Motion
      3. CID 1477 (MAC)
         1. Review Comment
         2. Review discussion
         3. Propose to reject the CID.
         4. 11ax will need to send a trigger frame and the response may be to go to sleep, but that is an 11ax issue/problem.
         5. Proposed Resolution: REJECTED (MAC: 2018-04-12 15:10:19Z): If a STA wants to change PM mode, there are much simpler ways of doing it than using an RD exchange.
         6. No objection – Mark Ready for Motion.
      4. Changes and updated resolutions posted to 11-18/666r2
   5. Mike returned about 11:05am
   6. **Review Submission: 11-18-670** - Mike MONTEMURRO
      1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0670-00-000m-lb232-revmd-phy-sec-comments.xls>
      2. CID 1324 (PHY)
         1. Review comment
         2. Proposed resolution: REJECTED (PHY: 2018-04-12 15:14:38Z) The term “FILS Shared Key” is unambiguous.
         3. No Objection – Mark Ready for Motion
      3. CID 1547 (PHY)
         1. Review comment
         2. Proposed Resolution: Accept
         3. No objection – Mark Ready for Motion
      4. CID 1549 (PHY)
         1. Review comment
         2. Proposed Resolution: Accept
         3. No objection – Mark Ready for Motion
      5. CID 1550 (PHY)
         1. Review comment
         2. Proposed Resolution: Accept
         3. No objection – Mark Ready for Motion
      6. CID 1551 (PHY)
         1. Review comment
         2. Proposed Resolution: Accept
         3. No objection – Mark Ready for Motion
      7. CID 1260 (PHY)
         1. Review comment
         2. Proposed Resolution: Accept
         3. No objection – Mark Ready for Motion
      8. CID 1246 (PHY)
         1. Review comment
         2. Discussion on control variables that should be read-write vs read-only.
         3. These are from S1G and it looks like a copy-paste error.
         4. The question is if the MAX-ACCESS is wrong, or is the TYPE wrong
         5. (Control Variable or not), and then the cut-paste error would be propagated similarly.
         6. Review p3860.57 for example. Unsure if this is changeable by an external entity.
         7. Need to get an S1G expert who is aware of the MIB rules.
         8. ACTION ITEM #8: Dorothy to email to YoungHo and let him know that he has been assigned the CID 1246 and to get his feedback on the CID and contact Mark HAMILTON if he has a question. – CID 1246 (PHY)
      9. CID 1521 (PHY)
         1. Review comment
         2. Review 3992.29 for context.
         3. Changing only one “These frames” seems to be unnecessary.
         4. Discussion on if the change to “These Data Frames require acknowledgment” is a good thing or not.
         5. The location is a specific exchange sequence acknowledgement definition, not a whole list of all possible acknowledgement required frame exchanges.
      10. Out of time (past time actually)
      11. **Recess at 11:44am**
6. **802.11md – REVmd AdHoc Ft. Lauderdale, Thursday April 12, 1pm – 3pm** **(PM1)**
   1. **Called to order** by the chair, Dorothy STANLEY (HPE) at 1:03pm
   2. **Attendance:**
      1. In person:
         1. Jon ROSDAHL (Qualcomm)
         2. Dorothy STANLEY (HPE)
         3. Mark HAMILTON (Ruckus/ARRIS)
         4. Michael MONTEMURRO (Blackberry)
         5. Graham SMITH (SR Technology)
         6. Joseph LEVY (Interdigital)
         7. Edward AU (Huawei)
      2. Remotely on the Bridge:
         1. Emily QI (Intel)
         2. Menzo WENTINK (Qualcomm)
         3. Youhan KIM (Qualcomm)
   3. **Review Patent Policy**
      1. No issues noted.
   4. **Review document 11-18/658r1** – non-trivial editorial CIDs Emily QI
      1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0658-01-000m-lb232-proposed-resolutions-for-editor-ad-hoc.doc>
      2. CID 1091 (EDITOR):
         1. Are the two bullets for Type Value=1 an “OR” relationship? There is potentially confusion about the “Either” and which “or” it applies to. After discussion, agreed we cannot delete the “Either”, as it makes it clear it cannot be both. Suggestion to put the or (currently at the end of the first bullet), to its own line. Alternate suggestion, to reverse the order, so we have “Both A1 and A2..., or <cr> Either A1 or A2…” Agreed to this.
         2. Proposed Resolution: REVISED (EDITOR: 2018-04-13 22:12:29Z)

Incorporate the proposed resolution under CID 1091 in doc: <https://mentor.ieee.org/802.11/dcn/18/11-18-0658-02-000m-lb232-proposed-resolutions-for-editor-ad-hoc.doc>.

* + - 1. No objection – Mark Ready for motion.
    1. CID 1104 (EDITOR):
       1. Agree, this text covers the agreement from yesterday.
       2. Also covered CID 1283.
       3. Reviewed the changes for this CID, and also agreed to delete the Editor’s Note.
       4. Both the CIDs are REVISED (as shown).
       5. Proposed Resolution CID 1104: REVISED (EDITOR: 2018-04-13 21:46:47Z)

At 915.48 Change “Reserved for elements using the Element ID Extension field” to “Reserved”.

At 914.50, change “Reserved for elements using the Element ID Extension field” to “Reserved”.;

* + - 1. Proposed Resolution: CID 1283: REVISED (EDITOR: 2018-04-13 22:08:14Z)

At 915.37, Add a new row: “Reserved”, “255”, “15-32”.

At 915.44, Add a new row: “Reserved”, “255”, “35-43”.

At 915.48, change “15-32, 35–255” to “45-255”.

Delete Editor’s Note.

* + - 1. No Objection - Mark Ready for motion.
    1. CID 1226 (EDITOR):
       1. Agree with replacing the “\*” with a “(see NOTE)”. But, put that at the end of the sentence.
       2. Proposed Resolution: REVISED (EDITOR: 2018-04-13 21:44:40Z)-

Delete cited “\*”.

At 1302.54, add: “(see NOTE)”.

* + - 1. No Objection – Mark Ready for motion.
    1. CID 1229 (EDITOR):
       1. Agree, the link doesn’t seem to work anymore.
       2. Discussion about which Wi-Fi Alliance table would be a good substitute. Or, maybe we don’t need to explain where the Table contents came from, as the Table stands on its own. That (removing the NOTE) will avoid the ongoing maintenance of this link. Agreed.
       3. Proposed Resolution: REVISED (EDITOR: 2018-04-13 21:45:16Z)- Delete the cited footnote and footnote number.

Since the Device type is defined in Table 9-199, there is no need to keep the footnote.

* + - 1. No Objection – Mark Ready for motion.
    1. CID 1239 (EDITOR):
       1. Reviewed commenter’s Proposed Change. Seems okay.
       2. Proposed Resolution; ACCEPTED (EDITOR: 2018-04-13 21:44:18Z)
       3. No Objection – Mark Ready for Motion.
    2. CID 1250 (EDITOR):
       1. Reviewed commenter’s Proposed Change.
       2. Need to replace “are” with “is”. Other wordsmithing, to clarify that the training requires a sequence of these.
       3. Suggest, “A physical layer (PHY) protocol data unit (PPDU) that is used in the beam refinement procedure.”
       4. Noted that another comment suggests changing BRP packet (and similar) to BRP PPDU. That will probably be assigned back to the commenter, but we agree with the intent.
       5. After review, and seeing that BRP is in the acronym list, agreed we don’t need a clause 3 definition of it.
       6. Proposed Resolution: REJECTED (EDITOR: 2018-04-13 21:56:05Z)
       7. Reason: “BRP” is defined in 189.19. “BRP packet” is defined in 20.9.2.2. No further definition is required.
       8. No objection – Mark Ready for motion.
    3. CID 1280 (EDITOR):
       1. Agree in principle.
       2. Appear to be 15 occurrences of the “SC” from 11ah.
       3. Agree to delete the acronym that 11ah added for “SC”.
       4. For this CID, that is all we have to do. It looks like there may be further work to clean up the usage of “Sequence Control” and “SC” in 11ah, but that is beyond this comment, and a submission is required to fix those (carefully). Look at 802.11-2016 P1971L1 for an example of how to refer to this as a field (without implying the acronym).
       5. Discuss deleting the acronym definition.
       6. Proposed Resolution: REVISED (EDITOR: 2018-04-13 21:52:21Z) At 197.49, delete “SC sequence counter”.
       7. No Objection - Mark Ready for motion.
       8. ACTION ITEM #9: Mark Hamilton to look at the uses of “Sequence Control” and “SC” brought in by 11ah, especially (exclusively?) in clause 12.
    4. CID 1362 (EDITOR):
       1. Reviewed Proposed Change. Looks okay.
       2. Proposed Resolution: ACCEPTED (EDITOR: 2018-04-13 22:00:30Z).
       3. No Objection - Mark Ready for motion.
    5. CID 1379 (EDITOR):
       1. Agreed that a submission would be required to sort out uses such as “HLP packet”.
       2. Assign back to the commenter (Mark RISON), and mark as Submission Required.
    6. CID 1342 (EDITOR):
       1. There are both spellings of this field name, with the adjectives in different order.
       2. Agreed to use “Compressed Beamforming Feedback Matrix” order.
       3. Can easily globally replace these throughout the draft.
       4. Proposed Resolution: REVISED (EDITOR: 2018-04-13 21:48:01Z)
       5. Change "Compressed Feedback Beamforming Matrix” to "Compressed Beamforming Feedback Matrix" throughout the draft.
       6. No Objection – Mark Ready for motion.
    7. CID 1345 (EDITOR):
       1. Reviewed the draft text.
       2. Proposed Resolution: ACCEPTED (EDITOR: 2018-04-13 21:50:55Z)
       3. No Objection – Mark Ready for motion.
    8. CID 1360 (EDITOR):
       1. Reviewed the draft text. Agreed.
       2. Proposed Resolution: ACCEPTED (EDITOR: 2018-04-13 21:51:48Z).
       3. No Objection – Mark Ready for motion.
    9. CID 1389 (EDITOR):
       1. Reviewed Editor’s proposal, to change all “the negotiated akm” and “the akm negotiated” to “the negotiated AKM”. Agreed.
       2. Disagree about changing “when” to “if”
       3. Proposed Resolution: REVISED (EDITOR: 2018-04-13 21:58:32Z)

Change “the negotiated akm” to “the negotiated AKM” thoughtout.

Change “the akm negotiated” and “the AKM negotiated” to “the negotiated AKM” thoughtout.

* + - 1. Mark Ready for motion.
    1. CID 1408 (EDITOR):
       1. Reviewed. No objections.
       2. Proposed Resolution: ACCEPTED (EDITOR: 2018-04-13 21:58:14Z).
       3. No Objections Mark Ready for motion.
    2. CID 1416 (EDITOR):
       1. Only change is to reference to the first one (9-194) in the latter location.
       2. Proposed Resolution: REVISED (EDITOR: 2018-04-13 21:45:47Z)-

At 967.28, change “The format of the Maximum Age subelement is defined in Figure 9-213 (Format of Maximum Age subelement)” to “The format of the Maximum Age subelement is defined in Figure 9-194 (Format of Maximum Age subelement).

Remove Figure 9-213.

* + - 1. No Objection – Mark Ready for motion.
    1. CID 1433 (EDITOR):
       1. Reviewed, and reviewed prior similar comment. Agreed to same rejection reason.
       2. Proposed Resolution: REJECTED (EDITOR: 2018-04-13 21:57:52Z)
       3. Reject Reason: There is no rule on whether ResultCode should include underscores or not. Both uderscore and space are used for ResultCode in the document. No need to change them. The current usage creates no confusion.
       4. No Objection – Mark Ready for motion.
    2. CID 1444 (EDITOR):
       1. Review comment
       2. Move to MAC, Assign to Mark HAMILTON, Mark Submission Required.
    3. CID 1451 (EDITOR):
       1. Reviewed each of the three occurrences. These are fine.
       2. Proposed Resolution: ACCEPTED (EDITOR: 2018-04-13 21:56:49Z)

Note to editor: 3 locations: 733.23, 3458.12, 3458.27

* + - 1. No Objection – Mark Ready for motion.
    1. CID 1486 (EDITOR):
       1. Reviewed the prior rejection of CID 169.
       2. Discussion that this change is not necessary, but it does help clarify the Standard. No objections to the Proposed Change.
       3. Proposed Resolution: ACCEPTED (EDITOR: 2018-04-13 21:56:41Z)
       4. No Objection -- Ready for motion.
  1. **Recessed at 3:15pm**

1. **802.11md – REVmd AdHoc Ft. Lauderdale, Thursday April 12, 3:30pm – 5pm (PM2)**
   1. **Called to order** by the chair, Dorothy STANLEY (HPE) at 3:40pm
   2. **Attendance:**
      1. In person:
         1. Jon ROSDAHL (Qualcomm)
         2. Dorothy STANLEY (HPE)
         3. Mark HAMILTON (Ruckus/ARRIS)
         4. Michael MONTEMURRO (Blackberry)
         5. Graham SMITH (SR Technology)
         6. Joseph LEVY (Interdigital)
         7. Edward AU (Huawei)
      2. Remotely on the Bridge:
         1. Emily QI (Intel)
         2. Youhan Kim (Qualcomm)
         3. Abhishek Patil (Qualcomm)
         4. Youhan KIM (Qualcomm)
   3. **Review Patent Policy**
      1. No issues
   4. **Agenda Review**
2. 11-18-670 - Mike MONTEMURRO
3. 11-18/676 - Edward AU -
4. 11-18/674r1 – multiple BSSID CIDs - Abhishek PATIL (Qualcomm)
5. GEN CIDs – assignments & Selected CIDs**.** - Jon ROSDAHL
6. Plans for May meeting
   * 1. Changes to the agenda were made. Pulling what did not have time in the last meeting slot to now, and reordered for efficiency. Moved other items to the Telecon.
     2. No objection to the updated agenda – see 11-18/626r8
        1. < <https://mentor.ieee.org/802.11/dcn/18/11-18-0626-08-000m-2018-april-agendas-for-teleconferences-and-ad-hoc-meeting.docx> >
   1. **Review Document 11-18-670** - Mike MONTEMURRO
      1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0670-00-000m-lb232-revmd-phy-sec-comments.xls>
      2. CID 1521 (PHY)
         1. Review proposed change
         2. Discussion on the point we ended up with the discussion just prior to lunch. Deleting the comment text was proposed, rather than adding “Data”.
         3. There is not enough consensus to make a change at this time.
         4. Proposed Resolution: Rejected – the current text is unambiguous and accurate. The cited text is a comment and additional precision is not necessary.
         5. No objection – Mark Ready for Motion
   2. **Review document 11-18/676 – Comment resolution on PPM** - Edward AU -
      1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0676-00-000m-comment-resolution-on-ppm.docx>
      2. Review Status of the 24 CIDs that are described in the document.
      3. We had determined that we were not going to accept these comments on the Telecon, and Edward was asked to find a reject reason.
      4. List of CIDS: CIDs 1196, 1197, 1198, 1199, 1200, 1201, 1202, 1203, 1204, 1205, 1206, 1207, 1208, 1209, 1210, 1211, 1212, 1213, 1214, 1215, 1216, 1217, 1218, and 1219.
      5. Proposed Resolution for the list of CIDs: Rejected; There are many elements of convention that are not addressed in the IEEE-SA Style guide and IEEE Std SI 10 where we benefit from consistency in IEEE 802.11.

There are also elements of style in IEEE 802.11 that fail to comply with the IEEE-SA Style guide. The fact that IEEE 802.11 amendments have been through IEEE-SA publication editing and approved multiple times shows that strict consistency to the IEEE-SA Style Guide and IEEE Std SI 10 is not a requirement of the IEEE-SA standards development process.

* + 1. No objection – Mark all CIDs Ready for Motion
  1. **Review Document 11-18/674r1** – multiple BSSID CIDs - Abhishek Patil (Qualcomm)
     1. Resume review of 674, but with r2 – starting on slide 16
     2. <https://mentor.ieee.org/802.11/dcn/18/11-18-0674-02-000m-lb232-cids-assigned-to-abhishek.pptx>
     3. Review submission
     4. CID 1299 (MAC)
        1. Slide 17
        2. The reference should be 9.4.2.45 rather than 9.4.2.25.
        3. Proposed resolution: Accept
        4. No objection Mark Ready for Motion
     5. MAC Address Representation
        1. Slide 19 Mac Address Representation
        2. Inconsistency noted on slide 20
        3. Issue 1:
           1. Discussion on the Canonical representation and how to describe the MAC address bits.
           2. Discussion on if the way things are implemented are right or wrong? Have they followed the spec and wrong, or as MAC addresses are historically defined? Not in MSB or LSB definition.
           3. For Multiple BSSIDs, we need to make it clear in the standard to remove the ambiguity and resolve the technical issue with calling out the MSB vs LSB.
           4. We need to be consistent in the encoding MAC addresses in the standard.
        4. Issue 2:
           1. We do not want the I/G bit that does not change.
           2. We need to be consistent and if it is LSB, then this causes a problem.
           3. The issue is getting an integer from the MAC address, and being able to increment it to allow for a new address.
           4. There are some examples for creating an integer from the MAC address in an annex.
        5. Issue 3:
           1. Review slide 25
           2. Review the description that is currently there.
           3. Finding a definition of finding Min/Max addresses and unsigned integer definition and operations defined clearly.
           4. Discussion on the possible Implementation may be using addresses.
           5. Discussion on the use of Addresses and if we could find consistent tools and definition of how to manipulate addresses.
        6. We may want to work with RAC to ensure we are compliant with the address allocation schemes. But not until after April to allow the Current RAC discussion with 802.11 to complete.
        7. ACTION ITEM #10: Dorothy to look at the 11v and 11k amendments for some information for how MAC Addresses were encoding for TIM and report back. – Topic MAC Addressing
        8. This Topic will be on the REVmd Wednesday PM1 agenda in May.
  2. **GEN CIDs – assignments & Selected CIDs.** - Jon ROSDAHL
     1. Jon Rosdahl presenting GEN CIDs (from his database):
     2. Thanks to Mark HAMILTON for helping with the minutes not only today, but at various times throughout the week.
     3. CID 1144 (GEN):
        1. Proposed Resolution: REJECTED (GEN: 2018-04-12 20:36:01Z) 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.
        2. No objections. Ready for motion.
     4. CID 1524 (GEN):
        1. Need to see how extensive this is, to consider exact changes. Might put it in 9.2.2, also, instead of 1.4.
        2. Needs more work. Bring back.
     5. CID 1501 (GEN):
        1. Review CID 189, from the CC. Agreed to document 11-17/987r10 at that time. It seems we made a change to some areas, but may have missed others.
        2. Submission Required.
        3. Assign to Graham.
     6. CID 1428 (GEN):
        1. The Tables referenced by this text are for PHY implementation characteristics. There are expectations in PLME-CHARACTERISTICS that these are “static” for the duration of an instantiation of a STA.
        2. Proposed Resolution: REJECTED (GEN: 2018-04-12 21:00:03Z) The "Static" characteristics are constant for a given PHY instantiation. It is important to indicate the unchanging nature of these characteristics. No objection Mark Ready for motion.
     7. CID 1419 (GEN):
        1. Generally, agree. Need to find the actual locations and confirm each one.
        2. Bring back with details.
     8. CID 1277 (GEN):
        1. Believe Annex G does define frame exchange sequence.
        2. Proposed Resolution: REJECTED (GEN: 2018-04-12 21:08:02Z) The description in Annex G is sufficient, and the only purpose of Annex G is to give this definition. No objection Mark Ready for motion.
     9. CID 1548 (GEN):
        1. Agreed about the concerns raised here.
        2. Assign to the commenter, to participate in or follow the discussions in ARC SC and bring back an appropriate submission.
     10. CID 1330 (GEN):
         1. The stream of bits being fed into the STBC block is also referred to as a spatial stream. See Figure 19-3, for example.
         2. Proposed Resolution: REJECTED (GEN: 2018-04-12 21:18:05Z) Refer to Figure 19-3 for an example that shows that the spatial stream can be a stream of bits. Bits are converted to modulation symbols which are then sent out on different antenna.
         3. Mark Ready for motion.
     11. CID 1439 (GEN):
         1. Assign to Menzo (as it is TDLS related).
     12. CID 1541 (GEN):
         1. An AP contains a STA, so, by convention, a FILS AP is an AP that contains a FILS STA, just like a FILS non-AP STA is a non-AP STA that is a FILS STA. To do otherwise, will create an exponential explosion of definitions.
         2. Proposed Resolution: REJECTED (GEN: 2018-04-12 21:26:26Z) by definition at 141.24, an AP comprises a STA and a DSAF. By convention the standard does not provide a separate definition for each AP and STA type. A FILS AP is an AP that contains a FILS STA.
         3. No objection Mark Ready for motion.
     13. CID 1116 (GEN):
         1. This could be setting a precedent for “unstacking” all the adjectives.
         2. Is there a difference between modes that change dynamically?
         3. Generally, agree with adjectives for PHY support. Not sure about the others.
         4. Will bring back for further discussion.
     14. CID 1108 (GEN):
         1. Assign to Yongho Seok.
     15. CID 1561 (GEN):
         1. Reviewed cited text.
         2. Agreed with proposed change
         3. Proposed Resolution: Accept.
         4. No objection - Mark Ready for motion.
     16. Out of time – Continue later.
  3. Chair thanks all the attendees, and those who worked on resolutions.
     1. Special thanks to Edward and Emily.
  4. Out next meeting is a teleconference on April 26.
  5. **Adjourned 5pm ET**

**References:**

**Tuesday AM1:**

1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0626-03-000m-2018-april-agendas-for-teleconferences-and-ad-hoc-meeting.docx>
2. <https://mentor.ieee.org/802.11/dcn/18/11-18-0626-04-000m-2018-april-agendas-for-teleconferences-and-ad-hoc-meeting.docx>
3. <https://mentor.ieee.org/802.11/dcn/17/11-17-1137-10-000m-resolutions-for-obsolete-blockack.docx>
4. <https://mentor.ieee.org/802.11/dcn/18/11-18-0480-01-000m-peerkey-deletion-cleanup.docx>
5. <https://mentor.ieee.org/802.11/dcn/18/11-18-0619-00-000m-revmd-editor2-lb232-comments.xlsx>

**Tuesday PM1:**

1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0673-00-000m-erp-rates.pptx>
2. <https://mentor.ieee.org/802.11/dcn/18/11-18-0677-00-000m-speak-only-when-spoken-to-mode.pptx>

**Tuesday PM2:**

1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0670-00-000m-lb232-revmd-phy-sec-comments.xls>
2. <https://mentor.ieee.org/802.11/dcn/18/11-18-0669-00-000m-revmd-mac-comments-assigned-to-hamilton.docx>

**Wednesday AM1:**

1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0658-00-000m-lb232-proposed-resolutions-for-editor-ad-hoc.doc>
2. <https://mentor.ieee.org/802.11/dcn/18/11-18-0672-00-000m-resolutions-for-block-ack-related-comments.docx>
3. <https://mentor.ieee.org/802.11/dcn/18/11-18-0672-01-000m-resolutions-for-block-ack-related-comments.docx>
4. <https://mentor.ieee.org/802.11/dcn/18/11-18-0666-00-000m-resolution-for-ps-related-comments.docx>

**Wednesday PM1:**

1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0674-01-000m-lb232-cids-assigned-to-abhishek.pptx>
2. <https://mentor.ieee.org/802.11/dcn/18/11-18-0368-01-00ax-multiple-bssid.docx>
3. <https://mentor.ieee.org/802.11/dcn/18/11-18-0675-00-000m-lb232-cids-1293-1294-1298.docx>

**Wednesday PM2:**

1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0626-06-000m-2018-april-agendas-for-teleconferences-and-ad-hoc-meeting.docx>
2. <https://mentor.ieee.org/802.11/dcn/18/11-18-0626-07-000m-2018-april-agendas-for-teleconferences-and-ad-hoc-meeting.docx>
3. <https://mentor.ieee.org/802.11/dcn/18/11-18-0654-01-000m-resolution-for-cids-1000-1147.docx>
4. <https://mentor.ieee.org/802.11/dcn/18/11-18-0670-00-000m-lb232-revmd-phy-sec-comments.xls>
5. <https://mentor.ieee.org/802.11/dcn/18/11-18-0666-02-000m-resolution-for-ps-related-comments.docx>
6. <https://mentor.ieee.org/802.11/dcn/18/11-18-0670-00-000m-lb232-revmd-phy-sec-comments.xls>

**Thursday PM1:**

1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0658-01-000m-lb232-proposed-resolutions-for-editor-ad-hoc.doc>
2. <https://mentor.ieee.org/802.11/dcn/18/11-18-0658-02-000m-lb232-proposed-resolutions-for-editor-ad-hoc.doc>

**Thursday PM2:**

1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0626-08-000m-2018-april-agendas-for-teleconferences-and-ad-hoc-meeting.docx>
2. <https://mentor.ieee.org/802.11/dcn/18/11-18-0670-00-000m-lb232-revmd-phy-sec-comments.xls>
3. <https://mentor.ieee.org/802.11/dcn/18/11-18-0676-00-000m-comment-resolution-on-ppm.docx>
4. <https://mentor.ieee.org/802.11/dcn/18/11-18-0674-02-000m-lb232-cids-assigned-to-abhishek.pptx>
5. <https://mentor.ieee.org/802.11/dcn/18/11-18-0614-00-000m-revmd-lb232-gen-comments.xls>

**ACTION ITEM List:**

ACTION ITEM #1: Mike M to contact Yongho Seok for clarification on 11ah use. CID 1377 (GEN) – Topic HT-delayed BA

ACTION ITEM #2: Dorothy to send to reflector request to consider obsoleting, and discuss in May – CID 1378 - PSMP

ACTION ITEM #3: Dorothy will email the reflector with a request for comments about making these obsolete. Note that Dual CTS and Dual Beacon are deprecated in 802.11-2016. – CID 1412 (MAC)

ACTION ITEM #4: Mark HAMILTON - Prepare a submission on the 3 CIDs (1329, 1587,1621) to outline the question. Do we want to allow 2.4, or preclude or do we want to limit to only 5Ghz or allow adding 6Ghz band… and what about 11ax – Note that CID 1621 is only reference as Peter E is preparing a submission on this one. – See **CIDs 1329, 1236**

ACTION ITEM #5: Mike to circulate on reflector and bring back later.

Topic: PN and replay detection on a receiver for CCMP and GCMP. – CID 1019 (PHY)

ACTION ITEM #6: Mike to circulate on reflector and bring back later. Topic: EAPOL-key frames, key descriptor version – CID 1148 (PHY)

ACTION ITEM #7: Menzo to check with Alfred -: Potential issue for S1G NDP Announcement Frame. – CID 1115 (EDITOR)

ACTION ITEM #8: Dorothy to email to YoungHo and let him know that he has been assigned the CID 1246 and to get his feedback on the CID and contact Mark HAMILTON if he has a question. – CID 1246 (PHY)

ACTION ITEM #9: Mark Hamilton to look at the uses of “Sequence Control” and “SC” brought in by 11ah, especially (exclusively?) in clause 12.

ACTION ITEM #10: Dorothy to look at the 11v and 11k amendments for some information for how MAC Addresses were encoding for TIM and report back. – Topic MAC Addressing