IEEE P802.11
Wireless LANs

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| Minutes for REVmd Telecon in Feb and Mar 2019 |
| Date: 2019-02-08 |
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Abstract

802.11md Telecon minutes for February and March 2019 (Feb 1,8,15,22 and March 1)

R0: February 1, 2019

R1: February 8, 2019

R2: February 15, 2019

Meeting announcement:

TGmd will hold 5 teleconferences before the March 2019 session: February 1, 8, 15, 22 and March 1 at 10am Eastern (3 hours) for the purpose of Letter Ballot 236 comment resolution and presentations.

We’ll use the [join.me](http://join.me) bridge:  <https://join.me/ieee802.11>, see <http://grouper.ieee.org/groups/802/11/joinme.html> for more detailed instructions.

Teleconferences are subject to applicable policies and procedures, see below.

•       IEEE Code of Ethics

–  <https://www.ieee.org/about/corporate/governance/p7-8.html>

•       IEEE Standards Association (IEEE-SA) Affiliation FAQ

–  <https://standards.ieee.org/faqs/affiliation.html>

•       Antitrust and Competition Policy

–  <https://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/antitrust.pdf>

•       IEEE-SA Patent Policy

–  <http://standards.ieee.org/develop/policies/bylaws/sect6-7.html>

–  <https://standards.ieee.org/about/sasb/patcom/>

 •       IEEE 802 Working Group Policies &Procedures (29 Jul 2016)

–  <http://www.ieee802.org/PNP/approved/IEEE_802_WG_PandP_v19.pdf>

•       IEEE 802 LMSC Chair's Guidelines (Approved 13 Jul 2018)

–  <https://mentor.ieee.org/802-ec/dcn/17/ec-17-0120-27-0PNP-ieee-802-lmsc-chairs-guidelines.pdf>

•       Participation in IEEE 802 Meetings

–  <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0180-05-00EC-ieee-802-participation-slide.pptx>

•       IEEE 802.11 WG OM: (Approved 10 Nov 2017)

–   <https://mentor.ieee.org/802.11/dcn/14/11-14-0629-22-0000-802-11-operations-manual.docx>

1. **802.11md - REVmd – Telecon, Friday 1 February 2019, 10:00- 12:00 ET**
	1. **Call to Order** at 10:05 ET by the TG Chair, Dorothy STANLEY (HPE)
	2. Thanks Michael MONTEMURRO for taking the intial minutes.
	3. **Attendance:**
		1. Dorothy STANLEY (HPE)
		2. Emily QI (Intel)
		3. Mark RISON (Samsung)
		4. Michael MONEMURRO (Blackberry)
		5. Jon ROSDAHL (Qualcomm)
		6. Joseph LEVY (InterDigital)
		7. Jouni MALINEN (Qualcomm)
		8. Sean COFFEY (Realtek)
		9. Erik LINDSKOG (Samsung)
	4. **Review of Patent Policy**
		1. **Patent Policy:**
			1. Call for essential patents – No comments.
		2. Participation slide: <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0180-05-00EC-ieee-802-participation-slide.pptx>
	5. **Agenda Review – doc 11-19/0246r0**
		1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0246-00-000m-2019-feb-mar-tgmd-teleconference-agendas.docx>
		2. Draft agenda:

1. Call to order, attendance, and patent policy

2. Editor report – Emily QI

3. Comment resolution

a. 2019-02-01

i. PHY/Security CIDs – Mike Montemurro

ii. Editorial CIDs requiring discuaaion – Emily

iii. Available MAC CIDs

iv. Additional available CIDs

4. AOB:

1. March agenda posted, see <https://mentor.ieee.org/802.11/dcn/19/11-19-0221-00-000m-2019-march-tgmd-agenda.pptx> . Are there any requested agenda items?
2. April Ad-hoc: April 2-3-4 – Location venue – Portland

5. Adjourn

* + 1. No objection to updating the agenda see R1
			1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0246-01-000m-2019-feb-mar-tgmd-teleconference-agendas.docx>
		2. Motion to approve Agenda
			1. Move to approve 11-19/246r1 as the teleconference agenda.
			2. Moved: Emily QI Second: Joe LEVY
			3. **Results**: Vote: 5 – Yes; 0 – No; 1 – Abstain – Motion Passes
	1. **Editor’s Report**
		1. Latest comment spreadsheet: 11-18/0611r15
			1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0611-15-000m-revmd-wg-ballot-comments.xls>
		2. Added a new tab with comments approved in January 2019.
			1. CID 2278 – Originally it was accepted. However, there was a problem with a proposed resolution. The change that was implemented was changing the clause from 10.32 to 11.32. The change in draft 2.1 is the correct change. Therefore, the comment resolution needs to be updated to Revised.
			2. No objection to the Editor’s change.
		3. There will be motion in March to revise the resolution.
		4. The MDR will start on Monday. Thanks for all who reviewed the draft that was submitted.
			1. An agenda item will be added to the March meeting to review
	2. **Review Doc 11-19/247r2** Emily QI (Intel)
		1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0247-02-000m-lb236-proposed-resolutions-for-editor-adhoc.doc>
		2. CID 2136:
			1. Recommend that we get feedback from IEEE on definitions that include numbers. IEEE 802.11 is not the only group here.
			2. The issues are: the numbers, the parenthesis, and other characters in the definition.
			3. Emily will investigate with help from editors.
		3. CID 2431:
			1. “retrycounter” is included in the Mesh state machine and should not be changed.
			2. Mark Rison will take an action to add line numbers in the resolution for all specific locations based on the resolution posted in this document and post the update to the reflector.
		4. CID 2473
			1. There’s no real value for the use of sub-field since its used inconsistently throughout the draft.
			2. If we made the change, there’s a chance that we could introduce inconsistencies to the draft.
			3. If a text version of the draft could be produced, then we could possibly use tools to look at whether this could be investigated further.
			4. **ACTION:** Emily to investigate producing an ASCII version of the draft and post in the Members Area of the IEEE 802.11 website.
			5. **ACTION**: Mark R to run tools on ASCII version to verify change.
		5. CID 2488
			1. This comment does not appear to be an Editorial comment.
			2. The Mesh STA changes should not be made because MBSS STA refers to a STA that implements Mesh
			3. Do we really agree that an IBSS STA is a STA that is a member of an IBSS?
			4. A definition of IBSS STA is needed.
			5. All occurrences of IBSS STA refer to a STA operating in an IBSS.
			6. There are 21 instances of “member of an IBSS”
			7. At 241.60, the change would not work.
			8. Leaning to going in the direction of the commenter, but a submission is required.
			9. Assigned to commenter.
		6. CID 2489
			1. The commenter showed all the explicit changes so there is no ambiguity.
			2. Accepted.
			3. Ready for Motion.
		7. CID 2501
			1. This resolution simply adds “cryptographic” to the expansion for the acronym.
			2. The is use “cryptographic” is not necessarily correct for the KDE.
			3. The proposed resolution does not really address the comment.
			4. Adding “cryptographic” to the definition does not seem to be correct.
			5. Revise the comment, removing “cryptographic” from the definition.
			6. Make the two last changes from the proposed resolution
			7. Proposed Resolution: Revised.

Add "The" at the start of the first para of 9.4.2.185.

Change the caption for Table 12-7 to "KDE selectors"At 2619.7 , delete “cryptographic” in the sentence “The additional data may be zero or more element(s) (such as the RSNE) and zero or more key data cryptographic encapsulation(s) (KDEs) (such as GTK(s) or PMKID(s)).

* + - 1. Ready for Motion
		1. CID 2568
			1. Issues with the use of “sometimes” in the proposed resolution.
			2. The resolution will need to be revised for further work on the resolution.
			3. There is agreement on the definition.
			4. Assign to commenter.
	1. **PHY AdHoc CIDs**
		1. Thanks to Joseph LEVY for helping with taking minutes
		2. Addressing "low hanging fruit" PHY comments:
		3. Screen shot of CIDs being reviewed:



* + 1. CID 2457 (PHY)
			1. Review Comment
			2. at 2625.9 - proposed adding the word concatenated, - modified resolution to be: Change "contained in" to "concatenated and contained in" –
			3. No objection, Mark ready for motion.
		2. CID 2452 (PHY)
			1. Review Comment
			2. proposing to change "which may contain the following" to "the following abbreviations are used", proposal was made to change to "where" –
			3. there was no objection, revised comment resolution –
			4. Mark Ready for motion.
		3. CID 2451 (PHY)
			1. Review Comment
			2. - some discussion
			3. - agreed this was related to CID 2452
			4. - hence proposed to use the same resolution.
			5. Proposed Resolution: Revised (PHY: 2019-02-01 15:35:17Z) – At 2625.10, change “which may contain the following” to “where”. Note to the editor; This is the same resolution as for CID 2452.
			6. There were no objections – Mark Ready for motion.
		4. CID 2445 (PHY)
			1. Review Comment
			2. - no agreement on how to proceed
			3. - submission required.
			4. Action Item: Jouni MALINEN and Mark RISON to work offline
		5. CID 2212 (PHY)
			1. Review Comment
			2. - 2632.9 – Note that we put 1322 to address KRACK attacks
			3. Discusion on if all effects were understood at the time.
			4. Mark RISON (Samsung) Posted to the Chat Window the following information:
				1. "Mathy of KRACK fame thinks that a careful inspection of the 802.11 standard reveals that the authenticator may accept any replay counter that was used in the 4-way handshake, not only the latest one [Subclause 12.7.6.5]: “On reception of message 4, the Authenticator verifies that the Key Replay Counter field value is one that it used on this 4-way handshake”
				2. In practice, he found that several APs indeed accept an older replay counter. More precisely, some APs accept replay counters that were used in a message to the client, but were not yet used in a reply from the client. These Aps will accept the older unencrypted message 4, which has the replay counter r+1. As a result, these AP will install the PTK, and will start sending encrypted unicast data frames to the client.
				3. Mathy suggests that something like the following would make it clearer: “On reception of message 4, the Authenticator verifies that the Key Replay Counter field value is one that it used on this 4-way handshake and is strictly larger than that in any other EAPOL-Key frame received thus far during this session.”
			5. After more discussion, the commenter does not remember what motivated the comment, and is ok with the current text.
			6. Proposed Resolution: Reject: The requirement of the request bit being 0 rules out comparison against the other counter.
			7. There were no objections – Mark Ready for motion.
		6. CID 2439 (PHY)
			1. Review Comment
			2. - proposing to add text
			3. Proposed Resolution: Revised: At the cited location, change:

"OCI KDE when Dot11RSNAOperatingChannelValidationActivated on the Authenticator".

 to

"When Dot11RSNAOperatingChannelValidationActivated is true on the Authenticator, OCI KDE".

* + - 1. There were no objections – Mark Ready for motion.
		1. CID 2671 (PHY)
			1. Review Comment
			2. - fixing the reference based on document updates for B27
			3. Proposed Resolution: Accepted
			4. There were no objections – Mark Ready for motion.
			5. Also move foot note from B28 to B27 as B27 is not first IETF RFC.  -
			6. Proposed Resoution: Revised – in addition to the proposed change move foot note from B28 to B27 as B27 is not first IETF RFC
		2. CID 2183 (PHY)
			1. Review Comment
			2. Review location 2942.35 -
			3. Proposed Resolution: Accept –
			4. There were no objections – Mark Ready for motion
		3. CID 2185 (PHY)
			1. Review Comment
			2. Proposed Resolution: Revised: Change "ERP STAs" to "STAs”
			3. There were no objections – Mark Ready for motion.
		4. CID 2101 (PHY)
			1. Review Comment
			2. Proposed Resolution: Accept -
			3. There were no objections – Mark Ready for motion.
		5. CID 2130 (PHY)
			1. Review Comment
			2. After discussion, No agreement reached.
			3. - there is a desire to get PHY experts to review this comment,
			4. Action Item: Emily to craft e-mail text and send to WG reflector for discussion.
		6. CID 2131 (PHY)
			1. Review Comment
			2. This is Same issue as 2130, but in different location, hence to be include in above e-mail for reflector discussion.
		7. CID 2121 (PHY)
			1. Review Comment
			2. Proposed Resolution: Accepted - Note to commenter - in the specification currently has k >= 64.
			3. There were no objections – Mark Ready for motion.
		8. CID 2365 (PHY)
			1. Review Comment
			2. Proposed Resolution: Accepted - Note to the editor the changes are on Page 4128 4 and 16.
			3. There were no objections – Mark Ready for motion.
		9. CID 2122 (PHY)
			1. Review Comment
			2. Action item Mark RISON - with check what was encoded in the ASIIC in the table and propose a resolution.
		10. Time 11:36ET - End of Joe’s notes
	1. **AOB:**
		1. **TGmd Adhoc Location - April 2-4, 2019**
			1. In January, the TG approved an Adhoc meeting for April 2-4 but did not specify a venue.
			2. Received confirmation that Intel can host the meeting in Portland.
			3. A future adhoc meeting can be hosted by Samsung in Cambridge.
			4. Request for Objections to confirming the location of the Adhoc meeting in Portland in April 2019 –
				1. None Given.
	2. **Next Meeting plans**
		1. No additional agenda items for the 8 February teleconference.
	3. **Adjourn at 11:55am ET**
1. **802.11md - REVmd – Telecon, Friday 8 February 2019, 10:00- 12:00 ET**
	1. **Call to Order** at 10:05 ET by the TG Chair, Dorothy STANLEY (HPE)
	2. **Attendance:**
		1. Dorothy STANLEY (HPE)
		2. Jon ROSDAHL (Qualcomm)
		3. Emily QI (Intel)
		4. Edward AU (Huawei)
		5. Jerome HENRY (Cisco)
		6. Mark RISON (Samsung)
		7. Michael MONEMURRO (Blackberry)
		8. Joseph LEVY (InterDigital)
		9. Sean COFFEY (Realtek)
		10. Mark HAMILTON (Ruckus/ARRIS)
		11. Jouni MALINEN (Qualcomm)
		12. Viewer 15
		13. Stephen MCCAAN (Blackberry)
		14. Menzo WENTINK (Qualcomm)
	3. **Review of Patent Policy**
		1. **Patent Policy:**
			1. Call for essential patents – No comments.
		2. Participation slide: <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0180-05-00EC-ieee-802-participation-slide.pptx>
	4. **Agenda Review – doc 11-19/0246r1**
		1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0246-01-000m-2019-feb-mar-tgmd-teleconference-agendas.docx>
		2. Draft agenda:

1. Call to order, attendance, and patent policy

2. Editor report – Emily QI

3. Comment resolution

a. 2019-02-08

* 1. 11-19-0143r3 - "obvious" EDITOR2 ad-hoc comments
	2. 11-19-0245r0 – Editor2 CIDs needing TGmd discussion
	3. Editorial CIDs requiring discussion, 11-19-247r3 – Emily – continued
	4. 11-19-263 - Missing item in 10.24.2.2 – Guido
	5. 11-19-134 - MAC address policy ANQP-element – Stephen McCann
	6. Available GEN CIDs
	7. Available CIDs and presentations

4. AOB:

* 1. March agenda posted, see <https://mentor.ieee.org/802.11/dcn/19/11-19-0221-00-000m-2019-march-tgmd-agenda.pptx> . Are there any requested agenda items?
	2. April Ad-hoc: April 2-3-4 – Location venue – Portland

5. Adjourn

* + 1. Adjustments were made and posted to R1
		2. Time for this call is expected to be 2 hour 15 minutes
		3. No objection to the updated agenda – Mark RISON wanted to be noted he abstained.
	1. **Editor Report:** Emily QI (Intel)
		1. D2.1 posted to members area
		2. MDR started on D2.1 and expect to be done by end of February
	2. **Review doc 11-19/143r3** Edward AU (Huawei)
		1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0143-03-000m-revmd-editor2-lb236-comments.xlsx>
		2. Review the history of the file:

|  |
| --- |
| Move 104 comments with proposed comments to the tab "Motion-EDITOR2-G". |
| Move 5 comments from the tab "Motion-EDITOR2-G" to blank for further discussion. A few comments under the same tab have updated resolution. |
| A few comments under the same tab have updated resolution. |

* + 1. Reqeust to have everyone review the proposed comment resolutions
		2. CID 2040 (EDITOR2)
			1. Review comment
			2. Concern that the equeatoin 25-51 was in two lines and looks like a matrix but should be on one line and a multiplication sign should be added to help clarify the terms in the equations.
			3. Request to confirm that the equation form can be updated.
			4. The proposed image on one line seems to have an alignment issue where the bottom line being moved up, was moved up to the exponent line rather than the main line.
			5. There is only one equal sign, and so we need to confirm the actual equation
			6. Move off out of Motion -EDITOR2-G tab – in R4.
		3. Concern on Mbps in the document, and should be replaced with Mb/s. Will all the instances be addressed? Yes, some of the instances will be addressed by Emily, and others by Edward in the respective submissions.
		4. Reminder to review and give feedback to Edward.
	1. **Review doc 11-19/245r0** Edward AU (Huawei)
		1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0245-00-000m-revmd-lb236-editor2-ad-hoc-related-comment-resolutions.docx>
		2. CID 2326 (EDITOR2)
			1. Review Comment
			2. Proposed Resolution: Revised; Fix the reference by replacing 9.7 with 10.6.
			3. No objection – Mark Ready for Motion
		3. CID 2227 (EDITOR2)
			1. Review Comment
			2. Discussion on the proposed change
			3. Propose to change group address RA to "RA that is a group address" and individually addressed RA to “RA that is individually addressed”
			4. Also, similar isse with destination address (DA) spelled out.
			5. Proposed Resolution: Revised

Replace all six occurrences of "group addressed RA" in this subclause with "RA that is a group address".

Replace all occurences of “individually addressed RA” with “RA that is an individual address” throughout the draft standards, except that in 259.8, replace “An EPD STA, when transmitting an individually addressed RA” with “An EPD STA, when transmitting a MPDU with an RA that is an individual address”.

Replace all occurences of “individually addressed RAs” with “RAs that are individual addresses” throughout the draft standards.

Replace all occurences of “individually addressed destination address” with “destination address that is an individual address” throughout the draft standards.

* + - 1. There may be other related issues, so we will look offline to ensure we have a complete solution.
		1. CID 2528 (EDITOR2)
			1. Review Comment
			2. Would like to get feedback from security experts.
			3. Discussion of the proposed changes and if it is an “identifier” or “identifier field”.
			4. Suggestion “Password Identifier is an element with a well-defined prefix” with Password Identifier element has a well-defined prefix”.
			5. Page 875 SAE item 1, is an example of the issue.
			6. The title of the table 9-43 has fields and elements, but the colum has only fields, and some would like the column to be fields and elements, and others suggested that they all should be fields.
			7. Discussion on this may need to be continued offline.
			8. Discussion on why some have fields and elements.
			9. All the non-element Fields are found at the front as seen on page 873 (Table 9-42). It seems correct upto the 11ai changes at least anyway.
			10. Proposed Resolution: Revised

In 2539.9, replace “Password Identifier is an element with a well-defined prefix” with “Password Identifier element has a well-defined prefix”.

In 874.44, replace “Presence of fields 4 onwards” with “Presence of fields and elements from order 4 onwards”.

* + - 1. This proposal may be best for the comment as presented, but other clean-up will be expected in the future.
			2. Mark ready for Motion
		1. CID 2543 (EDITOR2)
			1. Review Comment
			2. Discussion on the ARP request process.
			3. The orginal sentence may be better, but the reference and capitalization may need to be corrected.
			4. More discussion may need to be done offline and bring back a new proposal.
		2. CID 2625 (EDITOR2)
			1. Review Comment
			2. Proposed resolution: Revised change the equals to “is” and “is not equal to” to “is not” in table 23-1. Resolved in the direction suggested by the commentor.
			3. No objection – Mark ready for Motion
		3. CID 2487 (EDITOR2)
			1. Review comment
			2. Proposed resolution: Revised - Replace “A STA may also use an RTS/CTS exchange for individually addressed frames when it is necessary to distribute the NAV or when it is necessary to establish protection (see 10.28 (Protection mechanisms)). A STA may also use an RTS/CTS exchange for other purposes.” with “A STA may also use an RTS/CTS exchange for individually addressed frames when it is necessary to distribute the NAV, or when it is necessary to establish protection (see 10.28 (Protection mechanisms)), or for other purposes.”
			3. Discussion on the need for “for other purposes” and why the two sentances may be ok. The point that there was an extra “may” and maybe an alternative would be 3 sentances…but the group settled on one sentence.
			4. No objection – Mark Ready for Motion
		4. CID 2563 (EDITOR2)
			1. Review comment
			2. The editorial convention and form is to use the abreviations.
			3. The use of “us” for microseconds is not a good abbreviation use.
			4. There are about 230 instances to correct.
			5. Strawpoll – do you want?

1. microseconds spelled out.

2. 0.001ms

3. 1000 ns

4. us

* + - 1. Results: 8-2-2-7
			2. So, 2 and 3 should not be considered.
			3. Editors to check on other standards to find a consistent useage.
	1. **Review doc 11-19/247r3** Emily QI (Intel)
		1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0247-03-000m-lb236-proposed-resolutions-for-editor-adhoc.doc>
		2. CID 2431 (EDITOR)
			1. Continue discussion from last week.
			2. Discussion on the consistency in the abbreviation of counter vs counter.
			3. Concern on the use of retry counter after the state machine diagram.
			4. Try to identify which changes we can agree to make. This is to avoid a “global change” and instead identify the specific locations to make changes.
			5. When the sentence is “incrementing”, it should be counter not count.
			6. 1727.61 is an example where the counter may be better.
			7. More discussion may be needed on this one.
			8. The incrementing of count seems ok to some, others think that counter is more agreeable, but the point is that the abbreviation that has “C” should have the same meaning of count or counter, and that was the focus of this comment.
		3. CID 2570 (EDITOR)
			1. Review comment
			2. Review Editor’s Style Guide
			3. Recommended Resolution: Reject; Reason In the Editorial Style Guid, we do see a lot of exception of using Hyphenation. Particularly, hyphenated when before a noun. “multi-band” is defined as a multi-band operation reference model to different physical layers and hyphenated when before a noun. It can be an exception of using Hyphenation.
			4. Objection to rejecting the comment.
			5. The use of hyphens is minimized, but the cost to make this change may be too high for the gain that may be achieved.
			6. Strawpoll: regarding CID 2570
1. Reject the comment as proposed
2. Do not reject the comment.
3. abstain
	* + - 1. Results: 6/3/3
			1. Feedback on wny not to reject - Multi-band vs Multiband is a term that it should be without. We have at least one instance of multiband without a hyphen and so we should make it consistent.
			2. p3813.50 in D2.01 has the the only non-hyphenated multiband.
			3. Discusion on the final proposed resolution:
			4. Proposed Resolution: Revised at 3813.5 change “multiband” to “multi-band”. The TG discussed the options of eliminating the hyphen and keeping it. By straw poll the group preferred to reject the proposed change (6-3-3), The one instance of multiband is changed to have consistent usage. The editorial work to remove the hyphen in 570 locations was not viewed as worth the benefit.
			5. Mark Ready for Motion
		1. CID 2677 (EDITOR)
			1. Review the comment
			2. Review the discussion that is captured in R4.
			3. Need to look at when “®” vs “tm” is used on standard vs amendment citations.
			4. Proposed Resolution: Revised. At 151.11, change “IEEE Std 802(R)-2014 IEEE Standards”; to “IEEE Std 802(R) IEEE Standard”.

In other places (excluding instanances at 772.63 and 785.61, 2518.26), change “IEEE Std 802-2014” to “IEEE Std 802”.

* + - 1. Mark Ready for Motion
	1. **Review doc 11-19/0134r3** Stephen MCCAAN (Blackberry)
		1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0134-03-000m-mac-address-policy-anqp-element.docx>
		2. CID 2685 (PHY)
			1. Review changes from last time it was presented in St. Louis.
			2. Discussion on where the MAC Address Policy is defined.
			3. How non-AP STA use their MAC address is fuzzy, so we need to be careful with how we set the address. Maybe need to use the MLME primitive to set it, but not having a complete solution would not be good, so adding the variable dot11StationID without a complete solution should be avoided.
			4. More review and feedback is requested.
	2. **Review the Agenda for upcoming Telecons**
		1. See 11-19/246r2 of the agenda
		2. Adhoc the first week of April will be hosted by Intel.
		3. **Future Agenda Requests**:
			1. Request for those interested in how to extend the RSNA extention element to contact Jouni. – Target March 1 – TWT Security and RSN element extensions – 11-19/114 – Yunsong, Alfred, Jouni
			2. Request for IPv6 clarification from Jerome HENRY
	3. **Adjourned** 12:56 pm
1. **802.11md - REVmd – Telecon, Friday 15 February 2019, 10:00- 12:00 ET**
	1. **Call to Order** at 10:05 ET by the TG Chair, Dorothy STANLEY (HPE)
	2. **Attendance:**
		1. Dorothy STANLEY (HPE)
		2. Jon ROSDAHL (Qualcomm)
		3. Emily QI (Intel)
		4. Edward AU (Huawei)
		5. Osama ABOUL-MAGD (Huawei)
		6. Jerome HENRY (Cisco)
		7. Mark RISON (Samsung)
		8. Michael MONEMURRO (Blackberry)
		9. Joseph LEVY (InterDigital)
		10. Yungsong YANG (Huawei)
		11. Allen Berkema (HP Inc).
		12. Mark HAMILTON (Ruckus/ARRIS)
		13. Jouni MALINEN (Qualcomm)
		14. Viewer 9
		15. Menzo WENTINK (Qualcomm)
		16. Sean COFFEY (Realtek)
	3. **Review of Patent Policy**
		1. **Patent Policy:**
			1. Call for essential patents – No comments.
		2. Participation slide: <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0180-05-00EC-ieee-802-participation-slide.pptx>
	4. **Agenda Review – doc 11-19/0246r2**
		1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0246-02-000m-2019-feb-mar-tgmd-teleconference-agendas.docx>
		2. Draft agenda:

1. Call to order, attendance, and patent policy

2. Editor report – Emily QI

3. Comment resolution

1. **2019-02-15**
2. 11-19-0245 – Editor2 CIDs needing TGmd discussion – continued
3. 11-19-0267 - Resolution for CID 2017 – Edward
4. 11-19-0262 – Additional Editor2 REVmd comments - Edward
5. Editorial CIDs requiring discussion, 11-19-247r3 – Emily – continued
6. 11-19-263 - Missing item in 10.24.2.2 – Guido
7. 11-18-1919- IPv6 clarification – Jerome Henry
8. Available CIDs and presentations

4. AOB:

1. April Ad-hoc: April 2-3-4 – Location venue – Portland

5. Adjourn

* + - 1. Guido was not on call - moved to end of list.
			2. Added 11-19-0274 CIDs 2719 & 2720 Yunsong YANG
			3. Moved to approve Agenda by Emily QI 2nd Jerome HENRY
			4. Approved 11-19/0246r3without Objection – however, Mark RISON asked to be noted as Abstain.
	1. **Editor Report**
		1. MDR is ongoing – plan to close end of February.
	2. **Review doc11-19/245r2** – Edward AU (Huawei)
		1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0245-02-000m-revmd-lb236-editor2-ad-hoc-related-comment-resolutions.docx>
		2. To be addressed today: CIDs 2528, 2227, 2563, 2486, and 2293
		3. CID 2528 (EDITOR2)
			1. Review comment
			2. Review revised proposed resolutions.
			3. CID 2532 (PHY) and CID 2535 (PHY) are being reviewed by Security and will be handled separately and while related to 2526 we will address them separately.
			4. CID 2302 (EDITOR) already addressed.
			5. Discussed the proposed change of vendor specific additions.
			6. See p874.35 for field names. Suggest that actuall field names be used on page 2539 NOTE –
			7. Proposed Resolution: Revised; Incorporate the resolution for CID 2528 in 11-19/245r3 which addresses the comment in the direction of the commentor.
			8. No objection – Mark Ready for Motion.
		4. CID 2535 (PHY)
			1. Basically, it is accepted – mark as accepted with a note to the editor that the changes are also in the resolution of CID 2528.
			2. Proposed resolution: Revised; Incorporate the resolution for CID 2528 in 11-19/245r3 which addresses the comment in the direction of the commentor.
			3. No objection – Mark Ready for Motion
		5. CID 2532 (PHY)
			1. Review comment
			2. There is another “group field” term that is not the same as being addressed in this comment. Need to make sure we keep them separate in resolving the CID.
			3. Page 1521.11 (D2.1) p2672.1 are also examples of the confusing potential references.
			4. om D2.1, P2544.55 and 2544.59, has another "finite cyclic group field"
			5. This CID is assigned to Dan HARKINS.
		6. CID 2545 (PHY)
			1. Proposed Resolution: Proposed resolution: Revised; Incorporate the resolution for CID 2528 in 11-19/245r3 which addresses the comment in the direction of the commentor.
			2. No Objection - Mark Ready for Motion
		7. CID 2227 (EDITOR2)
			1. Review comment
			2. Discussed the proposed resolution.
				1. There was some “data frame” instances that were missed in another editorial comment, so these were added to address these instances.
			3. Proposed Resolution: Revised; At 1777.20, 1777.22, 1777.26, 1777.29, 1777.35, and 1777.37, replace “a group addressed RA” with “an RA that is a group address”.

At 253.33, 253.47, and 2113.18, replace “a group address RA” with “an RA that is a group address”.

At 255.62, replace “a synthetic group address RA” with “an RA that is a synthetic group address”.

At 255.37, replace “an individually addressed RA” with “an RA that is an individual address”.

At 259.8, replace “An EPD STA, when transmitting an individually addressed RA” with “An EPD STA, when transmitting a MPDU with an RA that is an individual address”.

At 299.56 and 299.59, replace “individually addressed RAs” with “RAs that are individual addresses”.

At 310.2, 310.18, 311.6, 2328.46, 2332.18, and 2379.18, replace “an individually addressed destination address” with “a destination address with an individual address”.

At 253.47, 1850.23, 1850.26, 1850.50, 1851.43, and 1851.45, replace “data frame” with “Data frame”

At 790.35, 790.38, 2181.38, and 2182.18, replace “with individually addressed destination AID” with “with a destination AID that is not the broadcast AID”.

* + - 1. No objection – Mark Ready for Motion
		1. CID 2563 (EDITOR2)
			1. Review Comment
			2. Review Proposed resolution and the editor style guidelines.
			3. Proposed Resolution: Revised; At 4161.35, 4161.48, 4161.60, 4162.7, 4162.19, 4162.31, 4162.44, and 4162,56, replace “mW” with “millwatts”.
			4. In Google MIB examples, they write micro-seconds out.
			5. The spelling out of milliwatts, and millieseconds were the points of the comment.
			6. **Straw poll:**
				1. Which option do you prefer?

• Option 1: At 4161.35, 4161.48, 4161.60, 4162.7, 4162.19, 4162.31, 4162.44, and 4162,56, replace “mW” with “milliwatts”.

• Option 2: Change "seconds" to "s", "milliseconds" to "ms", "minutes" to "min", and "hour" to "h", keep using microseconds, and keep using “mW” as milliwatts throughout C.3.

• Option 3: Reject the comment (with a rejection reason that a mix of abbreviations is fine).

* + - * 1. Results: 1-1-10 1 abstain.
				2. The direction would be to reject.
			1. Proposed Resolution: Reject; The task group has considered many options as shown below but there was no consensus in making the changes. A concern, for example, was changing the abbreviation from “hour” to “h” in this context would introduce confusion to the readers.

On February 8, the following 4 options were considered.

• Option 1: Keep using the term “microseconds”

• Option 2: Replace “microseconds” with “0.001 ms”

• Option 3: Replace “microseconds” with “1000 ns”

• Option 4: Replace “microseconds” with “us”.

On February 15, the following 3 options were considered.

• Option 1: At 4161.35, 4161.48, 4161.60, 4162.7, 4162.19, 4162.31, 4162.44, and 4162.56, replace “mW” with “milliwatts”.

• Option 2: Change "seconds" to "s", "milliseconds" to "ms", "minutes" to "min", and "hour" to "h", keep using microseconds, and keep using “mW” as milliwatts throughout C.3.

• Option 3: Reject the comment (with a rejection reason that a mix of abbreviations is fine).

* + - 1. Mark Ready for Motion
		1. CID 2486 (~~EDITOR2~~MAC)
			1. Review comment
			2. Discussion on if this was an Editorial comment or not.
			3. Discussion on the use of “normal control frame”.
			4. Assign to MAC for more work to be done on it.
			5. For field name component, it should not be lower case.
			6. When we discussed this before, we left the lower case “per”.
			7. Emily and Mark HAMILTON agreed to help work on this issue.
			8. Discussion on how extensive the control of the ANA control of field values and field names is. The use of non-capitalization of portions of a field name was also discussed.
			9. More work by MAC to be done.
		2. CID 2293 (EDITOR2)
			1. Review comment
			2. In D1.0, there was 4 issues noted, in D2.1, only 3 still exist.
			3. Checking p3398.18 which seems to have been fixed between drafts.
			4. Checking p3721.18 – no error in D1.0.
			5. Proposed Resolution: Revised

At 2460.49, replace “A source REDS, a destination REDS, and an RDS can establish the types of relay operation as specified in (An example of the fast link adaptation procedure is shown in Link adaptation using the CMMG link measurement(#64)..).” with “A source REDS, a destination REDS, and an RDS can establish the types of relay operation as specified in 10.46.1.”.

At 2463.16, replace “NOTE–As described in (An example of the fast link adaptation procedure is shown in Link adaptation using the CMMG link measurement(#64)..),” with “NOTE–As described in 10.46.3.2.3,”.

At 3724.18, replace “(An example of the fast link adaptation procedure is shown in Link adaptation using the CMMG link measurement(#64)..)” with “10.46”.

* + - 1. No objection Mark ready for Motion
	1. **Review doc 11-19/267r0** Edward AU (Huawei)
		1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0267-00-000m-resolution-for-cid-2017.docx>
		2. CID 2017 ~~(EDITOR2~~ PHY)
			1. Review Comment
			2. Move the CID to PHY so that it can be identified as a technical change.
			3. Discussion on whether to keep the figure 20-1 or not.
			4. The use of “Idx” was questioned.
			5. Proposed Resolution: Revised; Incorporate the changes in 11-19/267r1 < <https://mentor.ieee.org/802.11/dcn/19/11-19-0267-01-000m-resolution-for-cid-2017.docx> > which makes the changes in the direction suggested by the commentor.
			6. No objection – Mark Ready for Motion
			7. NOTE THAT THIS CID should be on a PHY motion tab.
	2. **Review Doc 11-19/247r5** – Emily QI
		1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0247-05-000m-lb236-proposed-resolutions-for-editor-adhoc.doc>
		2. CID 2136 (EDITOR)
			1. Review comment
			2. Discussion of the change notation.
			3. Mark RISON helped with a script to identify the changes.
			4. Proposed Resolution: Revised; Incorporate the changes for CID 2136 in 11-19/247r6 which addresses the comment in the direction of the commentor.
			5. No objection – Mark Ready for Motion
		3. CID 2658 (EDITOR)
			1. Review Comment
			2. Proposed Resoution: Reject. Reason: Clause 3.1 definition will be included in IEEE Standards Dictionary Online. The definition in 3.1 shall follow IEEE Standard Dictionary guide.
			3. No objection – Mark Ready for Motion
		4. CID 2544 (EDITOR)
			1. Review comment
			2. Proposed Resolution: Accept
			3. No objection – Mark Ready for Motion
		5. CID 2137 (EDITOR)
			1. Review comment
			2. Discussion on definitions of GTK and PTK.
			3. Proposed Resoution: Revised; at 182.8, add a definition as follows: “group temporal key (GTK): a temporal key that is used to protect information exchanged in group addressed Data frames.”
			4. No Objection – Mark Ready for Motion
		6. CID 2255 (EDITOR)
			1. Review Comment
			2. Proposed resolution: Reject. **Reason:** the general rule is spell it out first time it is used (which is often Clause 3) and then just use the abbreviation.
			3. No Objection – Mark Ready for Motion
		7. CID 2119 (~~EDITOR~~ MAC)
			1. Review Comment
			2. Discussion on PeerSTAAddress vs STAAddress.
			3. Assign this CID to Stephen MCCAAN and Move to MAC
			4. There is an inconsistent usage of PeerSTAAddress vs STAAddress.
	3. **Review doc 11-18/1919r5** Jerome Henry (Cisco)
		1. <https://mentor.ieee.org/802.11/dcn/18/11-18-1919-05-000m-proxy-nd-discovery-text-proposal.docx>
		2. Abstract:

802.11-2016 11.22.14 describes a WNM STA ARP Proxy, and also adds an IPv6 ARP Proxy.

However, there is no such thing as ARP in IPv6. The equivalent function to IPv4 ARP Proxy is IPv6 ND Service.

This function operates differently from what 11.22.14 describes, as assuming equivalence with IPv4 ARP Proxy is an oversimplification.

This submission proposes a correction to the text, aiming at accurately stating the function description.

A challenge with Ipv6 is its increased complexity compared to IPv4. Designers and implementers may need guidance on what the IPv6 ARP proxy entails, yet the text needs to be as short as possible to stay within 802.11 relevance. This version provides a reduced description so as to fit within the existing note in 11.22.14 (and avoid the need for a specific annex for this short explanation).

* + 1. Proposed change addes 3 references and clarifies how to use.
		2. There are no CIDs that are directly related to this submission.
		3. May be related to CID 2543 (EDITOR2) – can review later.
		4. All the proposed text being added is part of a NOTE.
		5. The Font will be different so that in the Draft it would be apparent where the NOTE starts and ends.
		6. Propose to have a motion to incorporate this submission (11-18/1919r5) in March.
	1. **Review doc 11-19/274** – Yunsong YANG (Huawei)
		1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0274-00-000m-text-proposal-to-resolve-cids-2719-and-2720.doc>
		2. CID 2719 (EDITOR2) and 2720 (PHY)
			1. Review comments
			2. Review the proposed changes that moves text from a level 4 paragraph to a level 5 paragraph inline with the legacy clause that is similar.
			3. Discussion on the movement of the text. Reqeust some more time to review before deciding.
			4. The references will need to be checked manualy to ensure compleness.
			5. The deletion of PN in the AH case.
			6. CID 2719 – Need to ensure that the references are updated.
	2. **Review Agenda**:
		1. Move forward the remaining documents
		2. A few CIDs from Emily and Edward will be revisited next week.
		3. Revisit of Yunsong’s doc as well.
		4. CID 2122 will be discussed.
		5. Update on Comment Assignments from all the AdHoc groups.
	3. **Reminder on next Telecon**
		1. Two more Teleconferences Feb 22 and March 1 before the Plenary in Vancouver.
	4. **Adjourned at 12:53pm**
		+ 1.

**References:**

**February 1, 2019:**

1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0246-00-000m-2019-feb-mar-tgmd-teleconference-agendas.docx>
2. <https://mentor.ieee.org/802.11/dcn/19/11-19-0221-00-000m-2019-march-tgmd-agenda.pptx>
3. <https://mentor.ieee.org/802.11/dcn/18/11-18-0611-15-000m-revmd-wg-ballot-comments.xls>
4. <https://mentor.ieee.org/802.11/dcn/19/11-19-0247-02-000m-lb236-proposed-resolutions-for-editor-adhoc.doc>
5. <https://mentor.ieee.org/802.11/dcn/19/11-19-0247-02-000m-lb236-proposed-resolutions-for-editor-adhoc.doc>

**February 8, 2019**:

1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0246-01-000m-2019-feb-mar-tgmd-teleconference-agendas.docx>
2. <https://mentor.ieee.org/802.11/dcn/19/11-19-0143-03-000m-revmd-editor2-lb236-comments.xlsx>
3. <https://mentor.ieee.org/802.11/dcn/19/11-19-0245-00-000m-revmd-lb236-editor2-ad-hoc-related-comment-resolutions.docx>
4. <https://mentor.ieee.org/802.11/dcn/19/11-19-0247-03-000m-lb236-proposed-resolutions-for-editor-adhoc.doc>
5. <https://mentor.ieee.org/802.11/dcn/19/11-19-0134-03-000m-mac-address-policy-anqp-element.docx>

**February 15, 2019**

1. <https://mentor.ieee.org/802.11/dcn/19/11-19-0246-02-000m-2019-feb-mar-tgmd-teleconference-agendas.docx>
2. <https://mentor.ieee.org/802.11/dcn/19/11-19-0246-03-000m-2019-feb-mar-tgmd-teleconference-agendas.docx>
3. <https://mentor.ieee.org/802.11/dcn/19/11-19-0245-02-000m-revmd-lb236-editor2-ad-hoc-related-comment-resolutions.docx>
4. <https://mentor.ieee.org/802.11/dcn/19/11-19-0267-00-000m-resolution-for-cid-2017.docx>
5. <https://mentor.ieee.org/802.11/dcn/19/11-19-0247-05-000m-lb236-proposed-resolutions-for-editor-adhoc.doc>
6. <https://mentor.ieee.org/802.11/dcn/18/11-18-1919-05-000m-proxy-nd-discovery-text-proposal.docx>
7. <https://mentor.ieee.org/802.11/dcn/19/11-19-0274-00-000m-text-proposal-to-resolve-cids-2719-and-2720.doc>