IEEE P802.11
Wireless LANs

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| IEEE 802.11ba Task GroupMeeting Minutes for March Meeting,Vancouver, BC, Canada |
| Date: 2019-03-15 |
| Author(s): |
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Abstract

Rev 0: Meeting Minutes for the IEEE 802.11ba TG sessions held in Vancouver, BC, Canada, March 10-15, 2019.

**Monday, March 11 2019, 1:30-3:30 pm**

**Meeting Agenda:**

The meeting agenda is shown below, and published in the agenda document:

<https://mentor.ieee.org/802.11/dcn/19/11-19-0242-02-00ba-2019-march-tgba-agenda.pptx>

* Call meeting to order
* Call for submissions
* Review agenda and approval
* IEEE 802 and 802.11 IPR Policy and procedure
* Participation in IEEE 802 Meetings
* **Motion**: January 2019 meeting (doc: IEEE 802.11-19/226r0) and teleconference minutes (doc: IEEE 802.11-19/334r0) approval
* Summary from January 2019 Meeting
* Comment assignments (if any)
* Discussion on TGba ad-hoc meeting in April
* Presentations on comment resolution
* Recess

**Chair Minyoung Park (Intel) calls the meeting to order at 1.30 pm.** (about45 persons in the room.)

Minyoung presents the slide about Meeting protocol (slide 4).

Minyoung reminds about recording attendance (slide 5) and goes through slide 6 “Attendance, Voting & Document Status”.

Minyoung presents the schedule for the week (slide 7).

Minyoung presents the slide “Main agenda items for the week”. The main agenda items are shown below.

* Comment assignments on TGba D2.0 letter ballot
* Comment resolution
* Review TG timeline

Minyoung goes through the list of submissions.

Minyoung asks if there is any submission missing.

Minyoung receives one comment proposing to that the documents related to CIDs 2699 and 2698 are moved from Others to MAC.

Minyoung receives a request to more the presentation of 11-19/0351 to a later time to allow for some time to discuss with the commenters before presenting the proposed resolutions.

Minyoung proposes to use the seven time slots as follows: 2 for PHY, 3 for MAC and 1 for Architecture/Others. The last time slot will be used for motions and practical matters.

Minyoung goes through the agenda (slide 13) and asks if there are any questions or comments.

**Question/Comment (Q):** To the agenda, can you add which sessions will have what topic?
**Answer (A):** I can add PHY, MAC, Others. But note that this is preliminary and will be updated based on how much time actually is needed for the different presentations.

**Motion to approve the agenda**

**Move:** Leif Wilhelmsson

**Second:** Rui Yang

Motion passed by unanimous consent.

Minyoung goes through the slides “Participants have a duty to inform the IEEE” (slide 15) and “Ways to inform IEEE” (slide 16).

Minyoung makes a Call for Potentially Essential Patents. No potentially essential patents reported and no questions asked.

Minyoung goes through “Other Guidelines for IEEE WG meetings” (slide 17) and “Patent-related information” (slide 18).

Minyoung reads through “Participation in IEEE 802 Meetings” (slide 19), and encourages people to read through the references on slides 20-22.

Minyoung goes through the Summary from January 2019 Meeting and Teleconference Calls, shown below.

* Completed comment resolution on TGba Draft 1.0
* TG approved TGba CA document (11-18/1069r1)
* TGba approved to generate TGba Draft 2.0 and start 30 day initial WG letter ballot
	+ LB passed with 82.4% approval
	+ Received 827 comments (technical 582 incl. 101 copy/paste comments)
* Reviewed TG timeline
* Agenda: doc:11-18/2109r10

**Motion:** Approve TGba minutes of January 2019 meeting [doc: IEEE 802.11-19/226r0] and teleconference call [doc: IEEE 802.11-19/334r0]

**Move:** Po-Kai Huang

**Second:** Eunsung Park

Motion passed by unanimous consent.

Discussion on TGba ad-hoc meeting before May meeting

* Minyoung proposes to have a 2-day ad-hoc meeting in April in the Bay area (to avoid overlap with other task groups (e.g. TGax and TGaz))
	+ Intel can host the meeting and the available dates are shown below
	+ Option 1: April 10-11 (Wednesday/Thursday)
	+ Option 2: April 11-12 (Thursday/Friday)
	+ Option 3: April 25-26 (Thursday/Friday)
* Suggested that people think about the dates so that we can discuss at Thursday.
* Suggested to also have a SP to see how many people would be able to attend.

**Presentation of comment resolution**

Technical Editor Po-Kai Huang (Intel) informs the TG that he has received a lot of requests off-line and has updated the excel sheet accordingly.

**Presentations:**

**11-19/0340, “TGba D2.0 Comment Resolutions for Sec. 31.2.5.2, 31.2.5.3 and 31.2.5.4” Rui Cao (Marvell):** The following CIDs are discussed: 2666, 2667, 2668.

All CIDs are accepted and there is no discussion on any of them.

11-19/0340r0 including the CIDs 2666,2667, and 2668 is ready for motion.

**11-19/0382r0, “Proposed spec text for CID 2062” Rui Yang (Interdigital):**

CID 2062 is addressed. Essentially the purpose is to have a requirement that limits the bandwidth of the transmitted signal.

The resolution is supported by document 11-19/381r0.

**Q:** Have you verified that the required BW can be met with current hardware.

**A:** This refers to the baseband, so I don’t expect this to be a problem.

**Q:** How is the 3dB BW measured? Do we want a reference?

**A:** Maximum BW as is illustrated in the figures corresponding to the examples.

Based on the discussion about BW definition, it is decided to try to have some more off-line discussion

**11-19/0408r1 “TGba D2.0 Comment Resolutions for WUR Data Field” Eunsung Park (LGE):** CIDs 2155, 2424, 2491, 2564, 2632 are addressed.

CID 2155: Some discussion about whether the reason for rejection is correct. Based on feedback from PHY people the reason is correct.

CID 2424: No discussion.

CID 2491: Proposed resolution is Accept

**Q:** This as been discussed many times and it has been agreed not to mandate exactly how things are generated. You are basically revoking that decision.

Based on this comment and some discussion following it is agreed to remove CID 2491 from the list to of CIDs to me motioned.

CID 2564: Rejected (invalid comment)

**Q:** Is this a valid problem as such?

**A:** It may be. I need to check with the commenter too.

CID 2632: No comment

11-19/0408r2 including 2155, 2424, ~~2491~~, 2564, 2632 is ready for motion.

**11-19/0409r1” TGba D2.0 Comment Resolutions for WUR PHY FDMA and Padding”, Eunsung Park (LGE):** CIDs 2372, 2373, 2479, 2517, 2628, 2629, 2671, 2679 are addressed.

CID 2372: No discussion.

CID 2373: No discussion.

CID 2479: No discussion.

CID 2517:

**Q:** I don’t think there is a definition of sub-channel.

**A:** The history of sub-channel was that we in the last meeting discussed preamble puncturing in case of FDMA.

CID 2628:

**Q:** Just a note that we are here discussing the baseband signal, so it may be OK to actually talk about zero energy.

CID 2629: No discussion.

CID 2671: No discussion.

CID 2679: No discussion.

Document 11-19/0409r2 including 2372, 2373, 2479, 2517, ~~2628, 2629~~, 2671, 2679 will be ready for motion.

**11-19/0423r0, “PHY Misclassification Issue”, Steve Shellhammer (Qualcomm):**

The contribution is concerned with that a WUR PPDU may be classified as a VHT PPDU and therefore can result in unspecified behavior at the VHT STA.

**Q:** It seems it will detect a packet?

**A:** It will detect a packet, so it will not transmit on top of WUR.

**Q:** I believe we thought about this when creating the BPSK mark, so it will just cause another CRC failure.

**The meeting is recessed at 3.32 pm.**

**Monday, March 11 2019, 4:00-6:00 pm**

**Meeting Agenda:**

The meeting agenda is shown below, and published in the agenda document:

<https://mentor.ieee.org/802.11/dcn/19/11-19-0242-03-00ba-2019-march-tgba-agenda.pptx>

* Call meeting to order
* IEEE 802 and 802.11 IPR Policy and procedure
* Presentations on comment resolutions
* Recess

**Chair Minyoung Park (Intel) calls the meeting to order at 4.00 pm.** (About 40 persons in the room.)

Minyoung makes a Call for Potentially Essential Patents. No potentially essential patents reported and no questions asked.

**Presentations:**

**11-19/328r0 “Comment Resolution on clause 9.4.2.293 WUR Discovery element” Rojan Chitrakar (Panasonic):**  CIDs 2383, 2786, 2806 are addressed.

CID 2383: No discussion.

CID 2786: No discussion.

CID 2806: Discussion about whether 65s really is long enough, which is the background to the suggestion to have less fine granularity in order to increase the maximum range for the same number of bits.

**Straw Poll:** Is 65s long enough?

**Result:** Y/N/A: 7/1/6

11-18/0328r0 including CIDs 2383, 2786, and 2808 is ready for motion.

**11-19/329r1 “Comment Resolution on clause 30.11 WUR Discovery” Rojan Chitrakar (Panasonic)** CIDs: 2047, 2513, 2514, 2651, 2701, 2750, 2751 are addressed.

CID 2047: No discussion.

CID 2513:

**Q:** The comment may be rejected as it is asking a question rather than providing a proposed solution.

**Q:** I believe the scanning time should be “no less than” a certain value. It now says “no longer than”

**A:** Basically, it is left to the STA for implementation. How to do the scanning is up to the STA, since it does not impact other STAs.

**A:** I will defer this CID as it seems to need some more discussion.

CID 2514: No discussion.

CID 2651:

**Q:** We currently get a lot of comments related to the 4.9 GHz band.

CID 2701: No discussion.

CID 2750: No discussion.

CID 2751:

Q: My main concern relates to the definition of WUR mode.

The document 11-19/0329r2 including CIDs 2047, ~~2513~~, 2514, 2651, 2701, 2750, 2751 will be ready for motion.

**11-19/0330r2, “11ba D2.0 Comment Resolution for Group ID”, Lei Huang (Panasonic):**

CIDs 2044, 2166, 2205, 2465, 2743, 2744, 2818 are addressed.

CID 2166: No discussion.

CID 2744: No discussion.

CID 2818: No discussion.

CID 2205:

**Q:** I propose to change the wording in the resolution so that 9.10 is not mentioned.

**A:** Agreed.

CID 2743: No discussion.

CID 2465: No discussion.

CID 2044:

**Q:** I suggest to change “agree in principle” to “There is no requirement that the AP must assign consecutive group IDs to the same STA as long as group IDs a

**A:** Agreed.

The document 11-19/0330r3 including CIDs: 2044, 2166, 2205, 2465, 2743, 2744, 2818 will be ready for motion.

**11-19/0345r0 “CR for CID 2699”, Xiaofei Wang (Interdigital):** This is a ppt presentation giving the background document 11-190344r0.

**Q:** You propose an offset of TBTT. I think we can achieve the same thing in a way where the offset does not need to be updated all the time.

**A:** Good comment, I think we can work on this.

**Q:** We have discussed this a lot, how much does this really help the STA. For me the value of this is still unclear.

**A:** I also am also uncertain about the benefit.

**Q:** Would it not be easier to obtain this information through the main radio?

**11-19/0344r0 “Proposed Spec Text for CR for CID 2699”, Xiaofei Wang (Interdigital)**

This is the corresponding spec text to 11-19/0345r0

Run out of time.

**The meeting is recessed at 6.00pm.**

**Tuesday, March 12 2019, 1:30-3:30 pm**

**Meeting Agenda:**

The meeting agenda is shown below, and published in the agenda document:

<https://mentor.ieee.org/802.11/dcn/19/11-19-0242-04-00ba-2019-march-tgba-agenda.pptx>

* Call meeting to order
* IEEE 802 and 802.11 IPR Policy and procedure
* Presentations on comment resolutions
* Recess

**Chair Minyoung Park (Intel) calls the meeting to order at 1.30 pm.** (About 20 persons in the room.)

Minyoung reminds about attendance.

Minyoung makes a Call for Potentially Essential Patents. No potentially essential patents reported and no questions asked.

Two additional presentation has been added to the agenda.

**Presentations:**

**11-19/0327r1 “Comment Resolution for Clause 6.3 MLME SAP” Rojan Chitrakar (Panasonic):** CIDs 2189, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2592, 2593, 2594, 2595, 2612, 2655, 2694, 2713, 2714, 2715, 2764, 2765, 2794, 2795, 2796, 2797 are addressed.

CID 2189: No discussion.

CID 2252: No discussion.

CID 2253: Some discussion on the use of the term WUR BSS, which is replaced by WUR operation.

CID 2254: No discussion.

CID 2255: Discussion about that it is not about association request but rather association response frame received from the AP.

CID 2256: Deferred.

CID 2257: Deferred.

CID 2258: No discussion.

CID 2376: No discussion.

CID 2377: Discussion whether the WUR capability is needed for a STA in order to determine whether it wants to associate with an AP.

CID 2378: Briefly mentioned that this is the same resolution as for CID 2255. The CID is removed from the list

CID 2379: Deferred.

CID 2380: Deferred.

CID 2381: Discussion whether it is necessary to pass down the entire element. Based on this discussion the resolution is updated.

CID 2382: No discussion.

CID 2592: Deferred.

CID 2593: Deferred.

CID 2594: No discussion.

CID 2595: No discussion.

CID 2612: Based on some discussion the resolution is changed to Revised, from originally having been Accepted.

CID 2655: Deferred.

CID 2694: Deferred

CID 2713: No discussion.

CID 2714: No discussion.

CID 2715: No discussion.

CID 2764: No discussion.

CID 2765: No discussion.

CID 2794: Deferred.

CID 2795: No discussion.

CID 2796: Deferred.

CID 2797: No discussion.

11-19/0327r2 with CIDs 2189, 2252, 2253, 2254, 2255, 2258, 2376, 2377, 2381, 2382, 2594, 2595, 2612, 2713, 2714, 2715, 2764, 2765, 2795, 2797 (20 CIDs) will be ready for motion.

**11-19/0361r2 “Spec Text for CR for CID 2696, 2697 and 2752” Xiaofei Wang (Intedigital):**

CID 2696:

**Q:** The comment is actually invalid. The comment should be about the draft and the problem, rather than issues with an earlier resolution.

**Q:** I don’t agree with the problem and the remedy. I don’t think the STA can determine things go wrong if it does not receive a packet.

**A:** Actually, it is not necessarily like this. It is possible to make an estimate although not with 100% certainty.

Run out of time.

**The meeting is recessed at 3.35pm.**

**Tuesday, March 12 2019, 4:00-6:00 pm**

**Meeting Agenda:**

The meeting agenda is shown below, and published in the agenda document:

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* Call meeting to order
* IEEE 802 and 802.11 IPR Policy and procedure
* Presentations on comment resolutions
* Recess

**Chair Minyoung Park (Intel) calls the meeting to order at 4.00 pm.** (About 23 persons in the room.)

Minyoung reminds about attendance.

Minyoung makes a Call for Potentially Essential Patents. No potentially essential patents reported and no questions asked.

**Presentations:**

**11-19/0423r1, “PHY Misclassification issue” Steve Shellhammer (Qualcomm):** The contribution presents an issue related to that a WUR packet erroneously may be detected as being an 11ac packet, i.e., the BPSK Mark is not sufficient for spoofing. (11-19/0423r0 was on Monday)

**Q:** What is the problem with spoofing in the usual way? The CRC will not check.

**A:** The problem is that implementations on the market use missed CRC to set certain parameters, so this will have secondary effects.

**Q:** I believe it OK to leave it as it is. I don’t think there is a problem that needs to be addressed.

**Q:** You are proposing to add another symbol to the packet? How would an 802.11ax receiver treat such a packet?

A: As an 802.11a packet.

**Q:** I believe it would be good if you would be able to point out some more detail on the actual problem.

**A:** I can try to obtain some more information from our product people.

**Q:** I checked with a small company, and they don’t see this is a big problem as the number of wake-up packets is relatively small. Also, they believe it is possible to abort the reception quite early.

**A:** I believe the overhead is only 1 symbol is so low that it can be justified.

**Q:** I believe this is simply an implementation problem.

**11-19/0424r0, “Comment Resolutions on BPSK-Mark Comments” Steve Shellhammer (Qualcomm):** CIDs 2085, 2110, 2563, 2652, 2660, 2669 are addressed.

CID 2085: No discussion.

CID 2669: No discussion.

CID 2110: No discussion.

CID 2563: No discussion.

CID 2652: No discussion.

CID 2660: No discussion

After the resolutions for the CIDs had been presented, some general discussion on the need for an update of the BPSK-Mark took place.

**Q:** Do you have any simulation results for the proposal?

**A:** No. But as far as the WUR is concerned this should have no impact. For the spoofing part, I believe one may not have to simulate but instead it suffices to look at how a receiver works to assess the severity of the problem.

**Q:** The problem you describe is for the case of high SNR?

**A:** Yes, I believe this is the case.

**Q:** For high SNR is seems possible to distinguish a packet based on the syncword.

**A:** Recall this is legacy devices, if one would do the design today it would of course be possible to do another design which would solve the problem.

Based on the discussions, the last four CIDs will be deferred. Steve will make a new document covering CIDs 2085 and 2669 which will be ready for motion. (This document is 11-19/0480r0)

**11-19/0351r2, “CR for TX/RX Specification D2.0”, Leif Wilhelmsson (Ericsson):**

CIDs 2003, 2004, 2005, ~~2016, 2095, 2111, 2112~~, 2515, 2516 are covered. 2016,2095,2111, 2012, which could be reject on formal grounds will instead be worked on further with the commenters.

CID 2003: The original resolution was revise, and change the length of the WUR PSDU from 6 octets to 22 octets. After discussion within the TG, it was decided to reject the comment.

CID 2004: No discussion.

CID 2005: No discussion.

CID 2515: No discussion.

CID 2516: No discussion.

11-19/0351r3 including CIDs 2003, 2004, 2005, 2515, 2516 will be ready for motion.

**11-19/0361r4, “Spec Text for CR for CID 2696, 2697 and 2752”, Xiaofei Wang (Interdigital):**

This is a continuation of the presentation from the PM1 session.

CID 2697:

Q: I believe there are two additional conditions that must be fulfilled in order for this to be considered. The STA needs to be able to support HDR and FDMA.

Run out of time.

**The meeting is recessed at 6.00 pm.**

**Wednesday, March 13 2019, 8:00-10:00 am**

**Meeting Agenda:**

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* Call meeting to order
* IEEE 802 and 802.11 IPR Policy and procedure
* Presentations on comment resolutions
* Recess

**Chair Minyoung Park (Intel) calls the meeting to order at 8.00 am.** (About 20 persons in the room.)

Minyoung reminds about attendance.

Minyoung makes a Call for Potentially Essential Patents. No potentially essential patents reported and no questions asked.

**Presentations:**

**11-19/0352r0 “Comment Resolution on clause 30.9.2 and 30.9.3 Protected WUR frames” Rojan Chitrakar (Panasonic):** CIDs: 2558, 2562, 2584, 2585, 2586,2638, 2639 are addressed.

CID 2558: No discussion.

CID 2562: No discussion.

CID 2584: No discussion.

CID 2485: Minor editorial comment and the document will be updated to r1.

CID 2486: No discussion.

CID 2638: No discussion.

CID 2639: No discussion.

11-19/0352r1 containing CIDs 2558, 2562, 2584, 2585, 2586, 2638, 2639 will be ready for motion.

**11-19/0383r2 “11ba D2.0 MAC Comment Resolution for WUR Beacon and Synchronization Part I” Po-Kai Huang (Intel):** The contribution addresses CIDs2208, 2409, 2410, 2431, 2432, 2468, 2523, 2129, 2268, 2233, 2413, 2209, 2210, 2212, 2738, 2819, 2269, 2604, 2605, 2261, 2722, 2723, 2724, 2425, 2035, 2725

CID 2208: No discussion.

CID 2409: No discussion.

CID 2410: No discussion.

CID 2431: No discussion.

CID 2432: No discussion.

CID 2468: No discussion.

CID 2523: No discussion.

CID 2129: No discussion.

CID 2268: No discussion.

CID 2233: No discussion.

CID 2413: No discussion.

CID 2209: No discussion.

CID 2210: No discussion.

CID 2212: No discussion.

CID 2738: No discussion.

CID 2819: No discussion.

CID 2269 Editorial comment related to how to write when the modulo operation is used to make sure the text is consistent throughout the document.

CID 2604 Some discussion on the wording with the commenter. The text proposed in the resolution is slightly updated without changing the spirit of the resolution.

CID 2605: No discussion.

CID 2261: No discussion.

CID 2722: No discussion.

CID 2723: No discussion.

CID 2724: No discussion.

CID 2425: No discussion.

CID 2035: No discussion.

CID 2725: No discussion.

11-19/0383r3 containing the CIDs above will be ready for motion.

**11-19/0442r0 “11ba D2.0 MAC Comment Resolution for Wake up Operation” Po-Kai Huang (Intel):** CIDs 2054, 2749, 2172, 2611, 2226, 2235, 2236, 2143, 2160, 2163, 2173, 2685, 2686, 2783, 2174, 2227, 2689are addressed.

CID 2054: No discussion.

CID 2749: No discussion.

CID 2172: No discussion.

CID 2611: No discussion.

CID 2226: No discussion.

CID 2235: No discussion.

CID 2236: No discussion.

CID 2143: No discussion.

CID 2160: No discussion.

CID 2163: No discussion.

CID 2173: No discussion.

CID 2685 Some discussion about the comment. Po-Kai believes that with a reference to the figure things should be clear. After some further discussion in the group, it is decided to defer the resolution of this CID.

CID 2686 No discussion.

CID 2783 No discussion.

CID 2174 No discussion.

CID 2227 No discussion.

CID 2689 No discussion.

11-19/0442r1 containing the CIDs 2054, 2749, 2172, 2611, 2226, 2235, 2236, 2143, 2160, 2163, 2173, ~~2685,~~ 2686, 2783, 2174, 2227, 2689 will be ready for motion

**11-19/0399r0 “Proposed resolution for Subclause 9.10.3.2” Kaiying Lv (ZTE):**

CIDs 2127, 2168, 2169, 2182, 2387, 2389, 2390, 2391, 2427, 2460, 2461, 2520, 2521, 2597, 2598, 2681 are addressed.

CID 2127: Discussion on the proposed resolution and as a result it is deferred.

CID 2168: The resolution is changed to rejected.

CID 2169: Deferred.

CID 2182: Additional instruction to the editor added. The proposed resolution Accept remains.

CID 2387: The text is updated slightly based on discussion in the TG.

Run out of time.

**The meeting is recessed at 10.02 am.**

**Wednesday, March 13 2019, 1:30-3:30 pm**

**Meeting Agenda:**

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* Call meeting to order
* IEEE 802 and 802.11 IPR Policy and procedure
* Presentations on comment resolutions
* Recess

**Chair Minyoung Park (Intel) calls the meeting to order at 1.30 pm.** (About 15 persons in the room.)

Minyoung reminds about attendance.

Minyoung makes a Call for Potentially Essential Patents. No potentially essential patents reported and no questions asked.

**Presentations:**

**11-19/0361r6, “Spec Text for CR for CID 2696, 2697 and 2752”, Xiaofei Wang (Interdigital):**

This is a continuation of the presentation from PM2 Tuesday.

CID 2752: No discussion.

11-19/0361r6 with CIDs 2696,2697, and 2752 is ready for motion.

**11-19/0410r1 “Comment resolutions for Clause 1, Clause 3, Clause 4” Minyoung Park (Intel):**

CIDs 2011, 2014, 2082, 2134, 2148, 2158, 2161, 2191, 2192, 2193, 2194, 2197, 2230, 2237, 2239, 2240, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2502, 2503, 2504, 2566, 2575, 2650, 2707, 2708, 2709, 2710, 2712, 2761, 2394, 2177, 2179

CID 2011: No discussion.

CID 2014: No discussion.

CID 2082: No discussion.

CID 2134: No discussion.

CID 2177: No discussion.

CID 2179: No discussion.

CID 2148: No discussion.

CID 2158: No discussion.

CID 2161: No discussion.

CID 2191: No discussion.

CID 2192: No discussion.

CID 2193: No discussion.

CID 2194: No discussion.

CID 2197: No discussion.

CID 2230: No discussion.

CID 2237: No discussion.

CID 2239: No discussion.

CID 2240: No discussion.

CID 2244: No discussion.

CID 2245: No discussion.

CID 2246: No discussion.

CID 2247: Some discussion, the resolution is slightly updated based on this.

CID 2248: No discussion.

CID 2249: No discussion.

CID 2250: No discussion.

CID 2251: No discussion.

CID 2502: No discussion.

CID 2503: No discussion.

CID 2504: Some discussion about that a future AP way support 6 GHz, but currently the WUR operation is defined for 2.4 and 5 GHz only. The inconsistency coming from that there is only one AP. The resolution updated to talk about transmission and reception of a signal rather than the AP as such.

CID 2566: No discussion.

CID 2575: No discussion.

CID 2650: No discussion.

CID 2707: No discussion.

CID 2708: No discussion.

CID 2709: No discussion.

CID 2710: No discussion.

CID 2712 No discussion.

CID 2761: No discussion.

CID 2394: The resolution is slightly updated based on some discussion within the TG.

11-19/0410r2 containing the 39 CIDs above will be ready for motion.

**11-19/0352r1 “Comment Resolution on clause 30.9.2 and 30.9.3 Protected WUR frames” Rojan Chitrakar (Panasonic):** CIDs: 2558, 2562, 2584, 2585, 2586,2638, 2639 are addressed.

r0 has been presented in the Wednesday AM1 session.

CID 2639: Changed to accept.

11-19/0352r1 containing the CIDs 2558, 2562, 2584, 2585, 2586,2638, 2639 is ready for motion.

**11-19/327r5 “Comment Resolution for Clause 6.3 MLME SAP” Rojan Chitrakar (Panasonic)**

This revision addresses some of the previously deferred CIDs.

CID 2256: No discussion.

CID 2257: No discussion.

CID 2378: No discussion.

CID 2379: No discussion.

CID 2380: No discussion.

CID 2592: No discussion.

CID 2593: No discussion.

CID 2655: No discussion.

CID 2694: No discussion.

CID 2794: No discussion.

CID 2796: No discussion.

CID 2513: No discussion.

11-19/327r6 containing the CIDs above in addition to those already resolved will be ready for motion.

**11-19/0443r0 “11ba MAC Comment Resolution on WUR Wake-up frame” Jeongki Kim (LGE):** CID 2162 is addressed.

CID 2162: No discussion

Run out of time.

**The meeting is recessed at 3.31 pm.**

**Thursday, March 14 2019, 1:30-3:30 pm**

**Meeting Agenda:**

The ad-hoc meeting agenda is shown below, and published in the agenda document:

<https://mentor.ieee.org/802.11/dcn/19/11-19-0242-07-00ba-2019-march-tgba-agenda.pptx>

* Call meeting to order
* IEEE 802 and 802.11 IPR Policy and procedure
* **Motions: Comment resolutions**
* TGba ad-hoc meeting in April - motion
* TG timeline discussion
* Goal for May 2019 F2F meeting
* Teleconference call schedule
* Presentations
* Adjourn

**Chair Minyoung Park (Intel) calls the meeting to order at 1.30 pm.** (about28 persons in the room.)

Minyoung reminds about recording attendance.

Minyoung goes through the agenda. No questions on the agenda.

Minyoung makes a Call for Potentially Essential Patents. No potentially essential patents reported and no questions asked.

**Motions:**

The complete set of motions for this meeting can also be found in document 11-19/0242r7.

**Motion #2001:** Move to accept the comment resolutions in [11-19/0340r0] for the CIDs listed below:

- CIDs: 2666, 2667, 2668.

**Move:** Rui Cao

**Second:**Po-Kai Huang

**Result:** Motion passed by unanimous consent.

**Motion #2002:** Move to accept the comment resolutions in [11-19/00383r3] for the CIDs listed below:

- CIDs: 2208, 2409, 2410, 2431, 2432, 2468, 2523, 2129, 2268, 2233, 2413, 2209, 2210, 2212, 2738, 2819, 2269, 2604, 2605, 2261, 2722, 2723, 2724, 2425, 2035, 2725

**Move:** Po-Kai Huang

**Second:**Leif Wilhelmsson

**Result:** Motion passed by unanimous consent.

**Motion #2003:** Move to accept the comment resolutions in [11-19/0442r1] for the CIDs listed below:

- CIDs: 2054, 2749, 2172, 2611, 2226, 2235, 2236, 2143, 2160, 2163, 2173, 2686, 2783, 2174, 2227, 2689

**Move:** Po-Kai Huang

**Second:**Leif Wilhelmsson

**Result:** Motion passed by unanimous consent.

**Motion #2004:** Move to accept the comment resolutions in [11-19/0317r1] for the CIDs listed in [11-19/0317r1] :

**Move:** Po-Kai Huang

**Second:**Leif Wilhelmsson

**Result:** Motion passed by unanimous consent.

**Motion #2005:** Move to accept the comment resolutions in [11-19/0328r0] for the CIDs listed below:

- CIDs: 2383, 2786, 2806

**Move:** Rojan Chitrakar

**Second:**Lei Huang

**Result:** Motion passed by unanimous consent.

**Motion #2006:** Move to accept the comment resolutions in [11-19/0329r2] for the CIDs listed below:

- CIDs: 2047, 2514, 2651, 2701, 2750, 2751

**Move:** Rojan Chitrakar

**Second:**Lei Huang

**Result:** Motion passed by unanimous consent.

**Motion #2007:** Move to accept the comment resolutions in [11-19/0327r2] for the CIDs listed below:

* CIDs: 2189, 2252, 2253, 2254, 2255, 2258, 2376, 2377, 2381, 2382, 2594, 2595, 2612, 2713, 2714, 2715, 2764, 2765, 2795, 2797

**Move:** Rojan Chitrakar

**Second:**Lei Huang

**Result:** Motion passed by unanimous consent.

**Motion #2008:** Move to accept the comment resolutions in [11-19/0327r6] for the CIDs listed below:

* CIDs: 2256, 2257, 2378, 2379, 2380, 2593, 2655, 2794, 2796, 2592, 2694, 2513

**Move:** Rojan Chitrakar

**Second:**Lei Huang

**Result:** Motion passed by unanimous consent.

**Motion #2009:** Move to accept the comment resolutions in [11-19/0352r1] for the CIDs listed below:

- CIDs: 2558, 2562, 2584, 2585, 2586, 2638, 2639

**Move:** Rojan Chitrakar

**Second:** Lei Huang

**Result:** Motion passed by unanimous consent.

**Motion #2010:** Move to accept the comment resolutions in 11-19/361r6 for the CIDs listed below:

- CIDs: 2696, 2697 and 2752

**Move:** Xiaofei Wang

**Second:** Rojan Chitrakar

**Result:** Motion passed by unanimous consent.

**Motion #2011:** Move to accept the comment resolutions in 802.11-19/480r0 for the CIDs listed below:

- CIDs: 2085 and 2669

**Move:** Steve Shellhammer

**Second:** Leif Wilhelmsson

**Result:** Motion passed by unanimous consent.

**Motion #2012:** Move to accept the comment resolutions in 11-19/0351r4 for the CIDs listed below:

- CIDs: 2003, 2004, 2005, 2515, 2516

**Move:** Leif Wilhelmsson

**Second:** Steve Shellhammer

**Result:** Motion passed by unanimous consent.

**Motion #2013:** Move to accept the comment resolutions in [11-19/0330r3] for the CIDs listed below:

- CIDs: 2044, 2166, 2205, 2465, 2743, 2744, 2818

**Move:** Lei Huang

**Second:** Rojan Chitrakar

**Result:** Motion passed by unanimous consent.

**Motion #2014:** Move to accept the comment resolutions in [802.11-19/408r4] for the CIDs below:

- 2155, 2564, 2632

**Move:** Eunsung Park

**Second:** Junghoon Suh

**Result:** Motion passed by unanimous consent.

**Motion #2015:** Move to accept the comment resolutions in [802.11-19/409r4] for the CIDs below:

- 2372, 2373, 2479, 2517, 2671

**Move:** Eunsung Park

**Second:** Rui Yang

**Result:** Motion passed by unanimous consent.

**Motion #2016:** Move to accept the comment resolutions in [802.11-19/410r2] for the CIDs below:

* 2011, 2014, 2082, 2134, 2148, 2158, 2161, 2191, 2192, 2193, 2194, 2197, 2230, 2237, 2239, 2240, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2502, 2503, 2504, 2566, 2575, 2650, 2707, 2708, 2709, 2710, 2712, 2761, 2394, 2177, 2179

**Move:** Minyoung Park

**Second:** Peter Loc

**Result:** Motion passed by unanimous consent.

**Discussion on TGba ad-hoc meeting before the May meeting**

**Q:** Would it not be possible to replace this ad-hoc meeting by conference calls.

**A:** Usually, the presence in conference calls is quite bad.

The suggested dates are April 10-11 (Wednesday-Thursday) with possibility to call in.

Intel can host the meeting.

Suggested to start at 10am on Wednesday.

**Motion Ad-hoc meeting in April**

Approve a TGba ad-hoc meeting on [April 10-11, 2019] at the Bay area for the purpose of comment resolution

**Move:** Yunsong Yang

**Second:** Xiaofei Wang

**Results:** 8/0/5, motion passes

**TGba Draft 2.0 available on IEEE-SA Store**

Minyoung asks if any member in the group sees an issue with this.

**Q:** No objection, but to me it seems would make sense to wait until D3.0.

**Q:** What is the general procedure?

**A:** As soon as a draft is approved, it is made available for purchase.

**Q:** I also believe it makes sense to wait until 3.0.

**TGba Timeline discussion**

The TGba timeline is left unchanged, but a few more milestones are added as shown below.

* **2017**
	+ **January**: TGba formation meeting
* **2018**
	+ **January**: TGba Draft 0.1
	+ **September**: TGba Draft 1.0
	+ **November**: Comment resolution on TGba Draft1.0
* **2019:**
	+ **January**: TGba Draft 2.0
	+ **March**: Comment resolution on D2.0
	+ **May**: TGba Draft 3.0 – WG Recirculation LB
	+ **July**: Comment resolution on D3.0, MDR/MEC done
	+ **September**: TGba Draft 4.0, Formation of sponsor ballot pool
	+ **November**: TGba Draft 5.0, Sponsor ballot
* **2020:**
	+ **September**: RevCom

**Goals for May 2019**

* Complete the comment resolution on LB237 (D2.0)
* Publish D3.0
* Start WG recirculation letter ballot

**Teleconference Call Schedule:**

Proposed schedule (Mondays, 1.5 hour each):

* March 25th, 10:00 ET
* April 22nd, 17:00 ET
* April 29th, 23:00 ET

**Q:** Does the Chair plan to use a separate document for book keeping of the motions or do you plan to just use the agenda document? I believe it may be an advantage to have a separate document.

**A:** I can create a new document.

**Presentations:**

**11-19/0399r1” Proposed resolution for Subclause 9.10.3.2” Kaiying Lv (ZTE)**

This is a continuation of the presentation of 11-19/0399r0.

CID: 2127:

Q: I believe the first note is obvious, and I don’t really understand why we add this. If you want to make things clearer, it is better to refer to 30.4.3 WUR Group ID directly.

Q: In the second note, this is actually not a note in my opinion and you cannot have “shall” in a note.

Q: I don’t believe the second sentence in the second note is correct.

After some more discussion it is decided to defer the resolution for this CID.

CID 2168: No discussion.

CID 2169: No discussion.

CID 2182: No discussion.

CID 2387: After some discussion the resolution is changed to reject. The rational for rejection being that the information is available in the text. There was a rather lengthy discussion about what part of the spec.

Run out of time

**The meeting is adjourned 3.32 pm.**