IEEE P802.11  
Wireless LANs

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| IEEE 802.11 TGax  March 2018 Rosemont Meeting Minutes | | | | |
| Date: 2018-04-01 | | | | |
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Abstract

TGax meeting minutes from the IEEE 802.11 Rosemont session, March 5th – 9th, 2018.

Minutes/motions from the ad hoc groups are contained in the following documents:

* PHY Ad Hoc
  + <https://mentor.ieee.org/802.11/dcn/18/11-18-0594-00-00ax-march-2018-tgax-rosemont-phy-ad-hoc-minutes.docx>
* MAC Ad Hoc
  + <https://mentor.ieee.org/802.11/dcn/18/11-18-0537-00-00ax-march-2018-mac-ad-hoc-meeting-minutes.pptx>
* MAC & MU Ad Hoc
  + <https://mentor.ieee.org/802.11/dcn/18/11-18-0566-00-00ax-mac-mu-ad-hoc-meeting-minutes-for-march-2018.docx>
* SR Ad Hoc
  + <https://mentor.ieee.org/802.11/dcn/18/11-18-0526-02-00ax-spatial-reuse-ad-hoc-group-march-2018-agenda.pptx>

**IEEE 802.11 Task Group ax**

**March 2018 Rosemont Meeting**

**Hyatt Regency O’Hare, Rosemont, IL, USA**

**March 5th – 9th, 2018**

**TGax Chair Osama Aboul-Magd (Huawei Technologies)**

**Vice Chair Simone Merlin (Qualcomm)**

**Vice Chair Ron Porat (Broadcom)**

**TGax Secretary Yasuhiko Inoue (NTT)**

**TGax Technical Editor Robert Stacy (Intel)**

**Monday, March 5th, 2018, AM1 TGax ad hoc session (8:00-10:00)**

1. The meeting called to order by Osama Aboul-Magd (Huawei Technologies), the chair of the TGax, @8:00
   1. Introduction of front table.
2. **Announcement**
   1. Agenda Doc.11-18/0286r1 on the server. Rev. 2 is the working document.
   2. Meeting Protocol: Chair asked to state name and affiliation when speaking for the first time.
   3. Attendance reminder.
      1. The attendance server: https://imat.ieee.org/
3. **Agenda for Monday AM1 (TGax ad hoc session)**
   1. Call meeting to order
   2. Ad Hoc Meeting - No Motions
   3. IEEE-SA IPR policy and Procedure
   4. Call for submissions
   5. Set the ad hoc groups agendas
   6. Presentations and Comment Resolution – requiring joint discussion of PHY and MAC
      1. 11-18/0107, “LB230 CR 20MHz only STA on Secondary Channel,” Yongho Seok (MediaTek)
      2. 11-18/0312, “Comment resolutions for 27.6.3,” Alfred Asterjadhi (Qualcomm)
      3. 11-18/0378, “Comment resolutions for 9.3.1.20 Part 2,” Alfred Asterjadhi (Qualcomm)
      4. 11-18/0397, “CR for 6GHz,” Laurent Cariou (Intel)
      5. 11-18/0446, “CR on CID 12699, 13220,” Zhou Lan (Broadcom)
      6. 11-18/0483, “Corrections to “Number Of HE-LTF Symbols And Midamble Periodicity” subfield,” Sigurd Schelstraete (Quantenna) – not CR submission
      7. 11-18/0496, “Disallowed Sub channels,” Matthew Fischer (Broadcom)
   7. Adjourn
4. **The chair reviewed the mandatory 5 slides of P&P.**
   1. Participants have a duty to inform the IEEE
   2. Ways to inform IEEE
      1. Call for potentially essential patents.
         1. Chair asked if anyone is aware of potentially essential patents.
         2. No potentially essential patents reported.
   3. Other Guidelines for IEEE WG Meetings.
   4. Patent-related information
   5. Participation in IEEE 802 Meetings
5. **General Flow of the meeting**
   1. Slides 13 and 14 of the 18/0286r2 contain general flow of the meeting.
   2. There are ten meeting slots planed for TGax. 5 out of 10 slots are ad hoc sessions.
   3. Ad hoc sessions:

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|  | Monday | | Tuesday | | Wednesday | | Thursday |
| AM1 | TGax  (full ad hoc) | | TGax  (Ad Hoc) | TGax  (Ad Hoc) | TGax  (full session) | |  |
| AM2 |  | | TGax  (Ad Hoc) | TGax  (Ad Hoc) |  | | TGax  (full session) |
| PM1 | TGax  (full session) | |  |  |  |  |  |
| PM2 |  |  | TGax  (Ad Hoc) | TGax  (Ad Hoc) | TGax  (Ad Hoc) | TGax  (Ad Hoc) | TGax  (full session) |
| PM3 |  | | TGax  (Ad Hoc) | TGax  (Ad Hoc) |  | |  |

1. **Call for submissions**
   1. Initial version of submission list (including the ones discussed in the TGax ad hoc last week) is attached to the slide 16 of the agenda file.
   2. Submission List
      1. MAC/MU submissions
         1. 11-17-1860, “Resolution for CID 11002,” Abhishek Patil (Qualcomm)
         2. 11-18-0012, “Comment resolutions for 27.15.2, Alfred Asterjadhi (Qualcomm)
         3. 11-18-0029, “Default UORA Parameters,” Matthew Fischer (Broadcom)
         4. 11-18-0044, “Comment resolutions for 27.7 and 27.7.1,” Alfred Asterjadhi (Qualcomm)
         5. 11-18-0055, “CR for CID 14324,” Zhou Lan (Broadcom)
         6. 11-18-0056, “CR for CID 14328,” Zhou Lan (Broadcom)
         7. 11-18-0075, “11ax D2.0 Comment Resolution 27.5.3.2.2,” Liwen Chu (Marvell)
         8. 11-18-0078, “11ax D2.0 Comment Resolution 27.6.4,” Liwen Chu (Marvell)
         9. 11-18-0088, “CR CID 14349,” Zhou Lan (Broadcom)
         10. 11-18-0149, “CR for NDP feedback report – part 1,” Laurent Cariou (Intel)
         11. 11-18-0161, “CR of CID 13754,” Zhou Lan (Broadcom)
         12. 11-18-0185, “CR of CID 13754,” Zhou Lan (Broadcom)
         13. 11-18-0200, “Decouple Channel Width Capabilities between VHT and HE PHY Mode,” Huizhao Wang (Quantenna)
         14. 11-18-0218, “Fragment Flushing BlockAckReq,” Matthew Fischer (Broadcom)
         15. 11-18-0241, “Comment resolutions for Misc CIDs,” Alfred Asterjadhi (Qualcomm)
         16. 11-18-0312, “Comment resolutions for 27.6.3,” Alfred Asterjadhi (Qualcomm)
         17. 11-18-0337, “Comment resolutions for 10.43” Alfred Asterjadhi
         18. 11-18-0338, “Comment resolutions for 27.16.1,” Alfred Asterjadhi (Qualcomm)
         19. 11-18-0343, “Comment resolutions for CID 13744,” Alfred Asterjadhi (Qualcomm)
         20. 11-18-0360, “CIDs related to Random Access – Part 2,” Abhishek Patil (Qualcomm)
         21. 11-18-0361, “visio file for fig 10-1,” Abhishek Patil (Qualcomm)
         22. 11-18-0362, “CIDs in 10.2.6,” Abhishek Patil (Qualcomm)
         23. 11-18-0363, “Resolution for CID 13136,” Abhishek Patil (Qualcomm)
         24. 11-18-0364, “CID 11001,” Abhishek Patil (Qualcomm)
         25. 11-18-0365, “CIDs related to BSS Color – Part 1,” Abhishek Patil (Qualcomm)
         26. 11-18-0366, “Resolutions to various CIDs in Trigger Frame format,” Abhishek Patil (Qualcomm)
         27. 11-18-0367, “Resolutions to CIDs in 27.5.3.3,” Abhishek Patil (Qualcomm)
         28. 11-18-0368, “Address inconsistencies & ambiguities in 11.1.3.8 (Multiple BSSID topic),” Abhishek Patil (Qualcomm)
         29. 11-18-0369, “Resolutions to various CIDs in clause 9,” Abhishek Patil (Qualcomm)
         30. 11-18-0370, “Comment resolutions for 27.7.5,” Alfred Asterjadhi (Qualcomm)
         31. 11-18-0371, “Comment resolutions for 27.7.4,” Alfred Asterjadhi (Qualcomm)
         32. 11-18-0372, “Comment resolutions for 9.4.2.200 part 2,” Alfred Asterjadhi (Qualcomm)
         33. 11-18-0373, “Comment resolutions for 27.7.3.4,” Alfred Asterjadhi (Qualcomm)
         34. 11-18-0379, “Comment resolutions for 9.3.3.X,” Alfred Asterjadhi (Qualcomm)
         35. 11-18-0380, “Comment resolutions for some CIDs in 9.4.2.237,” Alfred Asterjadhi (Qualcomm)
         36. 11-18-0390, “CIDs related to 27.5.1,” Pascal Viger (Canon Research)
         37. 11-18-0423, “11ax D2.0 Comment Resolution CID14318,” Liwen Chu (Marvell)
         38. 11-18-0425, “11ax D2.0 Comment Resolution 9.7.1,” Liwen Chu (Marvell)
         39. 11-18-0426, “11ax D2.0 Comment Resolution 9.7.3,” Liwen Chu (Marvell)
         40. 11-18-0427, “11ax D2.0 Comment Resolution 27.10.2,” Liwen Chu (Marvell)
         41. 11-18-0428, “11ax D2.0 Comment Resolution 27.10.2,” Liwen Chu (Marvell)
         42. 11-18-0429, “11ax D2.0 Comment Resolution 27.5.3.2.4 remaining CIDs,” Liwen Chu (Marvell)
         43. 11-18-0432, “LB230 CR on Fragmentation-Part 4,” Ming Gan (Huawei)
         44. 11-18-0433, “LB230 CR on Fragmentation-Part 2,” Ming Gan (Huawei)
         45. 11-18-0443, “11ax D1.0 MAC Comment Resolution for 9.4.2.24,” Chao-Chun Wang (MediaTek)
         46. 11-18-0444, “11ax D2.0 MAC Comment Resolution for 27.16.4,” Chao-Chun Wang (MediaTek)
         47. 11-18-0445, “11ax D2.0 MAC Comment Resolution for 27.16.4,” Chao-Chun Wang (MediaTek)
         48. 11-18-0455, “LB230 CR TXOP duration-based RTS/CTS,” Yongho Seok (MediaTek)
         49. 11-18-0512, “11ax D2.0 Comment Resolution for CID 14207,” Yunbo Li (Huawei)
      2. SR submissions – 5 submissions
         1. 11-18-0026, “CR SRG and SRP,” Matthew Fischer (Broadcom)
         2. 11-18-0106, “LB230 CR Spatial Reuse Operation on Secondary Channel,” Yongho Seok (MediaTek)
         3. 11-18-0225, “CR Spatial Reuse Group Management CID 12044 12304,” Matthew Fischer (Broadcom)
         4. 11-18-0391, “CID 11775 Should be re-considered,” Graham Smith (SR Technologies)
         5. 11-18-0456, “LB 230 CR TXVECTOR Parameter BSS COLOR,” Yongho Seok (MediaTek)
      3. PHY submissions
         1. 11-18-0059, “PPE Threshold Field,” Hongyuan Zhang (Marvell)
         2. 11-18-0110, “11ax Comment Resolutions for PHY Preamble,” Yan Zhang (Marvell)
         3. 11-18-0111, “11ax Comment Resolutions for PHY Data field,” Yan Zhang (Marvell)
         4. 11-18-0136, “Comment Resolutions for Clause 28.2.2 (TXVECTOR and RXVECTOR parameters) Part 1,” Bo Sun (ZTE)
         5. 11-18-0150, “CR for CIDs related to HE ER SU PPDU,” Tianyu Wu (MediaTek)
         6. 11-18-0151, “CR for PHY PPDU formats,” Tianyu Wu (MediaTek)
         7. 11-18-0162, “LB230 CR on CID 12060 and 13047,” Ming Gan (Huawei)
         8. 11-18-0324, “CR on HE-SIG-B part 3,” Yujin Noh (Newracom)
         9. 11-18-0349, “Comment Resolutions on Clause 28.3.3 (OFDMA and SU Tone Allocation),” Jung Hoon Suh (Huawei)
         10. 11-18-0352, “CR for HE-SIG-B,” Tianyu Wu (MediaTek)
         11. 11-18-0359, “PHY Comment Resolution on 1024 QAM,” Ron Porat (Broadcom)
         12. 11-18-0404, “Comment Resolutions on PHY INTRODUCTION Part 4,” Lochan Verma (Qualcomm)
         13. 11-18-0409, “Comment Resolutions on PHY INTRODUCTION Part 5,” Lochan Verma (Qualcomm)
         14. 11-18-0463, “Proposed Changes to D2.2 Clause 28.3.20, 28.3.21,” Xiaogang Chen (Intel)
         15. 11-18-0469, “PHY Comment Resolution on Packet Extension,” Ron Porat (Broadcom)
         16. 11-18-0475, “Comment resolution on CIDs on Clause 28.3 Part 2,” Jianhan Liu (MediaTek)
         17. 11-18-0476, “Comment resolution on CIDs on Clause 28.3.18.1 for signal leakage to preamble punctured channels,” Jianhan Liu (MediaTek)
         18. 11-18-0478, “Comment resolution on CID 11896,” Jianhan Liu (MediaTek)
         19. 11-18-0483, “Corrections to “Number Of HE-LTF Symbols And Midamble Periodicity” subfield,” Sigurd Schelstraete (Quantenna)
         20. 11-18-0508, “D2.0 PHY Comment Resolution – Part 2,” Youhan Kim (Qualcomm)
   3. **Ad Hoc meeting scheduling**
      1. Ad Hoc slot assignment
         1. MAC/MU … 5, PHY … 3, SR … 1.
      2. Chair asked if there are any objections to approve the TGax schedule as follow.
         1. There are no objections. The TGax schedule is approved.

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|  | Monday | Tuesday | | | Wednesday | | Thursday |
| AM1 | TGax  (full session) |  | TGax  (MAC/MU) | | TGax  (full session) | |  |
| AM2 |  | TGax  (PHY) | TGax  (MAC/MU) | |  | | TGax  (full session) |
| PM1 | TGax  (full session) |  | | |  |  |  |
| PM2 |  | TGax  (PHY) | TGax  (MAC/MU) | | TGax  (PHY) | TGax  (MAC/MU) | TGax  (full session) |
| PM3 |  | TGax  (SR) | | TGax  (MAC/MU) |  | |  |

1. **Presentations**
   1. **Laurent Cariou (Intel) presented “CR for 6GHz,” based on the submission 11-18-0397-00.**
      1. Summary
         1. Resolutions for the following CIDs on 6 GHz band operation and related text are proposed.
            1. CIDs: 12153, 11960, 12302, 12959, 12961, 13797, 13798 (7 CIDs)
      2. Discussion
         1. A member asked for the possibility of WLANs to be allowed to operate in 6 GHz band and discussed the need for behavior limit set for this band.
         2. Some members discussed about the figure of proposed channelization such as potential interoperability issue with the HT and VHT operation related to CCFS, upper limit of the frequency, etc.
         3. Another member also commented about the related capabilities with this.
      3. Next Step
         1. Laurent to have offline discussions with interested participants.
   2. **Sigurd Schelstraete (Quantenna Communications) presented “Corrections to “Number Of HE-LTF Symbols And Midamble Periodicity” subfield,” based on the submission 11-18-0483-01.**
      1. Summary
         1. This is bug fix to the IEEE 802.11ax D2.0.
         2. Issues with the description of the “Number Of HE-LTF Symbols And Midamble Periodicity” subfield in the Common field of the Trigger frame are discussed.
         3. Modifications to existing text are proposed.
      2. Discussion
         1. A member commented that we do not need this kind of PHY restriction based on the discussion with other members.
         2. Another member suggested more discussion in PHY ad hoc.
         3. A member suggested inclusion of related text in HE LTF section while some other members said clause 27 would be the right place to describe this feature.
      3. Next Step
         1. Sigurd to have offline discussion.
2. **AoB**
   1. No submission fits in 20 minutes.
3. **Adjournment**
   1. TGax ad hoc meeting adjourned @ 9:39 AM.

**Monday, March 5th, 2018, PM1 TGax full session (13:30-15:30)**

1. The meeting called to order by Osama Aboul-Magd (Huawei Technologies), the chair of the TGax, @13:30 (local time).
   1. Introduction of front table.
   2. Agenda Doc.11-18/0286r2 on the server. Rev. 3 is the working document.
   3. Meeting Protocol: Chair asked to state name and affiliation when speaking for the first time.
   4. Attendance reminder.
      1. The attendance server: https://imat.ieee.org/
2. **Agenda for Monday PM1 (TGax ad hoc session)**
   1. Call meeting to order
   2. IEEE-SA IPR policy and Procedure
   3. Summary from January 2018 meeting
   4. TG motions
      1. Approve TG meeting and Telecon minutes since November 2017 meeting.
   5. Timeline
   6. May ad hoc Meeting
   7. Room assignment for the ad hoc meetings
   8. Editor Report – Robert Stacey
   9. Presentations and Comment Resolution
   10. Recess
3. **The chair reviewed the mandatory 5 slides of P&P.**
   1. Participants have a duty to inform the IEEE
   2. Ways to inform IEEE
      1. Call for potentially essential patents.
         1. Chair asked if anyone is aware of potentially essential patents.
         2. No potentially essential patents reported.
   3. Other Guidelines for IEEE WG Meetings.
   4. Patent-related information
   5. Participation in IEEE 802 Meetings
4. **Summary from January 2018 Meeting**
   1. Continued with the comment resolution.
   2. Resolution of over 700 CIDs passed motions
   3. The TG Technical Editor produced draft D2.2.
   4. Over 1500 technical CIDs are still open before the start of the ad hoc meeting last week..
   5. No teleconferences – all teleconferences were cancelled.
   6. Ad hoc meeting last week in the Bay area – Resolutions of about 250 CIDs are ready for motion.
      1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0287-04-00ax-tgax-march-ad-hoc-meeting-agenda.pptx>
      2. <https://mentor.ieee.org/802.11/dcn/18/11-18-0474-02-00ax-tgax-mar-2018-ad-hoc-meeting-agenda-phy.pptx>
   7. There are 1500 – 1600 CIDs to be resolved.
5. **TG Motions**
   1. **Motion: Approve TGax minutes of meetings and teleconferences from January 2018 Interim meeting to today:** 
      * [**https://mentor.ieee.org/802.11/dcn/18/11-18-0213-00-00ax-tgax-january-2018-irvine-meeting-minutes.docx**](https://mentor.ieee.org/802.11/dcn/18/11-18-0213-00-00ax-tgax-january-2018-irvine-meeting-minutes.docx)
      * [**https://mentor.ieee.org/802.11/dcn/18/11-18-0119-00-00ax-minutes-of-tgax-january-2018-ad-hoc-meeting-mac-mu-sr.docx**](https://mentor.ieee.org/802.11/dcn/18/11-18-0119-00-00ax-minutes-of-tgax-january-2018-ad-hoc-meeting-mac-mu-sr.docx)
      * [**https://mentor.ieee.org/802.11/dcn/18/11-18-0239-00-00ax-minutes-of-the-tgax-spatial-reuse-ad-hoc-group-meeting.docx**](https://mentor.ieee.org/802.11/dcn/18/11-18-0239-00-00ax-minutes-of-the-tgax-spatial-reuse-ad-hoc-group-meeting.docx)
      * [**https://mentor.ieee.org/802.11/dcn/18/11-18-0245-00-00ax-minutes-of-the-tgax-mac-mu-ad-hoc-meeting.docx**](https://mentor.ieee.org/802.11/dcn/18/11-18-0245-00-00ax-minutes-of-the-tgax-mac-mu-ad-hoc-meeting.docx)
      * [**https://mentor.ieee.org/802.11/dcn/18/11-18-0255-00-00ax-jan-2018-tgax-irvine-phy-ad-hoc-minutes.docx**](https://mentor.ieee.org/802.11/dcn/18/11-18-0255-00-00ax-jan-2018-tgax-irvine-phy-ad-hoc-minutes.docx)
      1. **Moved: Bin Tian, Second: Allan Jones.**
      2. Discussion: No discussion.
      3. **Result: The motion was accepted with no objection.**
6. **Timeline**
   1. Slide 24 of the agenda document contains the current timeline.
      1. **May 2014: start of the TG**
      2. **Nov. 2014: First draft of the TG SFD was approved**
      3. **Jan. 2016: proposed TG draft**
      4. **March 2016: Draft D0.1 was approved and CC started**
      5. **November 2016: Draft 1.0 and WG letter ballot – Failed (57.77%)**
         1. **LB-225: opened Dec. 1st 2016 and closed March 8th 2017**
      6. **September 2017: Draft 2.0 and WG letter ballot – Failed (62.84%)**
         1. **LB-230: opened Oct 5th and closed Nov 4th, 2017**
      7. **May 2018: Draft 3.0 and WG letter Ballot**
      8. **July 2018: MDR (Mandatory Document Review)**
      9. **February 2019: Formation of SB pool**
      10. **May 2019: Sponsor Ballot**
      11. **December 2019: RevCom**
   2. No changes to the current timeline.
   3. The next milestone is to conduct WG Letter Ballot on D3.0 after the May 2018 meeting.
7. **Ad Hoc meeting in May**
   1. Date: May 2nd , 3rd, and 4th, 2018.
   2. Venue: Renne, France
   3. Stephane Baron and his colleagues kindly to host the meeting.
8. **Rooms for the ad hoc sessions**
   1. GRAND BALLROOM D&E – PHY or SR
   2. GRAND BALLROOM C – MAC/MU
9. **Editor’s Report**
   1. Doc. 17/1687r2.
   2. Draft 2.2 is on the members’ only area of the 802.11 web site.
10. **Presentations**
    1. **Zhou Lan (Broadcom Ltd.) presented “CR for CID 14324, 12310,” based on the submission 11-18-0055-03.**
       1. Summary
          1. Resolutions for comments related to TGax D2.2 with the CIDs 14324 and 12310 and modifications to the related text are proposed.
          2. CIDs 14324 and 12310: relevant to the Buffer Status Report.
          3. The point is harmonization of A-Control with QoS Control BSR by replacing per AC queue size report in A-Control with per TID queue size report.
       2. Discussion
          1. A member mentioned that the benefit of the proposed scheme is not clear enough.
          2. A member has a counter proposal.
          3. It was agreed to hear the related presentation and conduct straw polls.
       3. **Kiseon Ryu (LG Electronics) presented “CR for CID 11499 and 14324,” based on the submission 11-18-0454-00.**
          1. Summary
             1. Kiseon proposes another scheme as the resolution for CID 14324.
          2. Discussion – No discussion.
       4. **Straw Poll #1 (18/0055r3): Do you agree to harmonize A-control with QoS control BSR by replacing per AC queue size report in A-Control with per TID queue size report?**
          1. **Discussion: A member mentioned it is still not clear what the benefit of the proposal is.**
          2. **Result: Y/N/A = 39/13/14.**
       5. **Straw Poll #2 (18/0454r1): Do you accept resolution to CIDs 11499 and 14324 in 18/0454r1?**
          1. **Result: Y/N/A = 12/14/30.**
       6. **Motion (CR Motion #509): Move to harmonize A-control with QoS control BSR by replacing per AC queue size report in A-Control with per TID queue size report and accept the resolutions to CIDs 14324 and 12310 in doc 11-18/0055r3.**
          1. **Moved by Zhou Lan, Seconded by Laurent Cariou.**
          2. **Discussion:**
             1. **A member identifies implementation issues.**
             2. Some other members are supportive for this proposal.
          3. **Result: Y/N/A = 38/20/7, motion fails.**
    2. **Yongho Seok (MediaTek) presented “LB230 CR 20MHz only STA on Secondary Channel,” based on the submission 11-18-0107-02.**
       1. Summary
          1. Resolutions for comments on 20 MHz-only STA on Secondary Channel received during LB230 are proposed.
             1. Relevant CIDs: 11834, 11837, 14005 (3 CIDs).
       2. Discussion
          1. One of the participant is very much concerned to allow 20 MHz-only STA to operate on the secondary channel.
          2. Q: Is it required for the 20 MHz-only STA to operate any 20 MHz channel in the BSS? 🡪 Yes.
          3. Another member discussed CCA related issue.
          4. Some other people are concerned about the power saving feature of a STA.
       3. **Straw Polls: (Just to get the feel of this group) Which option do you prefer to support the feature (HE Subchannel Selective transmission operation)?**
          1. **Option 1: 20 MHz only STA**
          2. **Option 2: 20 MHz only STA and 20 MHz operation STA**
          3. **Option 3: 20MHz only STA and 20MHz/80MHz operation STA**
          4. **Option 4: None of the above**
          5. **Discussion:**
             1. **Some people are not supportive for inclusion of 80 MHz STAs since it requires additional signaling.**
             2. **Some other people said that it makes little sense if 80 MHz STAs are not considered.**
             3. **People discussed dependency of TWT on PHY.**
          6. **Result: Option 1/Option 2/Option 3/Option 4 = 36/28/7/16.**
11. **AoB**
    1. 5 minutes left. Any other businesses? 🡪 None.
12. **TGax meeting recessed @ 15:25.**

The next TGax full session is AM1 on Wednesday, March 7th.

**Tuesday, March 6th, 2018, AM1 TGax Ad Hoc Sessions (8:00-10:00)**

* Ad hoc #2: MAC – Grand Ballroom B
  + Agenda: 11-18-0545.

**Tuesday, March 6th, 2018, AM2 TGax Ad Hoc Sessions (10:30-12:30)**

* Ad hoc #1: PHY – Grand Ballroom D & E.
  + Agenda: 11-18-0535.
* Ad hoc #2: MAC/MU – Grand Ballroom B
  + Agenda: 11-18-0545.

**Tuesday, March 6th, 2018, PM2 TGax Ad Hoc Sessions (16:00-18:00)**

* Ad hoc #1: PHY – Grand Ballroom D & E.
  + Agenda: 11-18-535.
* Ad hoc #2: MAC – Grand Ballroom B
  + Agenda: 11-18-0545.

**Tuesday, March 6th 2018, PM3 TGax ad hoc Session (19:30-21:30)**

* Ad hoc #1: SR – Grand Ballroom D & E.
  + Agenda: 11-18-0526
* Ad hoc #2: MAC – Grand Ballroom B
  + Agenda: 11-18-0545

**Wednesday, March 7th 2018, AM1 TGax full Sessions (8:00-10:00)**

1. **The meeting called to order by Osama Aboul-Magd (Huawei Technologies), the chairperson of the TGax, @8:02 AM**
   1. Agenda 18/0199r3 is on the server.
   2. Rev. 4 is the working document.
2. **Announcement**
   1. Chair reminded that we are still operating under IEEE 802 and 802.11 Policies and Procedures.
   2. Chair asked to state name and affiliation when addressing for the first time in the session.
   3. Chair asked to put cellphone mute.
3. **Agenda Setting**
   1. Proposed agenda for this session
      1. Call Meeting to order
      2. IEEE-SA IPR Policy and procedure.
      3. Progress from the ad hoc groups
      4. ARC feedback on 11-18-0362-01
      5. Presentation and comment resolution
         1. 11-18/0107
         2. others
      6. Recess
   2. Chair asked if there any comments or suggestions on the proposed agenda. No response.
      1. The agenda for Wednesday AM1 is approved.
4. **Progress from ad hoc groups**
   1. Report from the ad hoc groups:
      1. SR: 5 CIDs are resolved. 4 submissions need more discussion and 1 withdrawn.
      2. MAC/MU: One submission with 120 CIDs passed..
5. **ARC feedback on 11-18-0362-01**
   1. Basically, ARC SC does not have any comment or feedback.
6. **Presentations**
   1. **Yongho Seok (MediaTek) presented “LB230 CR 20MHz only STA on Secondary Channel,” based on the submission 11-18-0107-03.**
      1. Summary
         1. The document 11-18-0107 is updated (r3 is on the server now).
         2. The point is the operation is limited to 20 MHz-only STAs.
      2. Discussion – No disucssion
      3. **Straw Poll: Do you accept resolutions to CIDs 11834, 11837, 14005 in doc 11-18/0107r3?**
         1. **Discussion: No discussion.**
         2. **Result: No objection. 🡪 To be coverted to a motion.**
   2. **Zhou Lan (Broadcom Ltd.) presented “CR on CID 12699, 13220,” based on the submission 11-17-0446-00.**
      1. Summary
         1. Resolutions for comments related to TGax D2.2 with the CIDs 12699 and 13220 are proposed.
            1. CIDs 12699 and 13220 relate to CQI-only channel feedback.
         2. The point is that the CQI-only feedback should be allowed for non-TB sounding sequence.
      2. Discussion
         1. A member commented that CQI feedback is not useful for SU cases.
         2. Some other members are concerned after discussion in the MAC ad hoc since sequential feedback is not efficient.
         3. One of the participant commented that TB and non-TB CQI may be separated.
      3. Next Step
         1. Need more offline discussion.
   3. **Sigurd Schelestraete (Quantenna Communications) presented “Corrections to “Number Of HE-LTF Symbols And Midamble Periodicity” subfield,” based on the submission 11-18-0483-02.**
      1. Summary
         1. The document 18/483 is revisited.
         2. New text is proposed.
      2. Discussion
         1. No discussion.
      3. **Straw Poll: Do you accept the added text and resolutions to CIDs; 13329, 11539, 11540, 11541 in doc 11-18/0482r2?**
         1. **Discussion: No discussion.**
         2. **Result: No objection. 🡪 To be converted to a motion.**
   4. **Huizhao Wang (Quantenna Communications) presented “Decouple Channel Width Capabilities between VHT and HE PHY Mode,” based on the submission 11-18-0200-04.**
      1. Summary
         1. It is recommended to decouple the channel width capabilities advertised in VHT and HE Capabilities elements in 11ax Draft 2.0.
         2. This proposal is not related to any CIDs.
      2. Discussion
         1. A member commented that the MCS Nss field for HE should be the same. 🡪 There is no inconsistency.
         2. Another member mentioned that he/she sees no reason to decouple this capability between VHT and HE.
         3. There was a comment that this proposal adds one more dimension for management of STA PHY.
      3. **Straw Poll: Do you agree to decouple VHT and HE channel width capabilities advertisements in VHT and HE Capabilities elements, and the resultion text presented in this contribution?**
         1. **Discussion: No discussion.**
         2. **Result: Y/N/A = 16/12/36.**
   5. **Youhan Kim (Qualcomm) presented “D2.0 PHY Comment Resolution – Part 2,” based on the submission 11-18-0508-00.**
      1. Summary
         1. Resolutions for the following comments from the letter ballot on P802.11ax D2.0:
            1. CIDs: 11723, 14049, 13067, 13066, 13399, 14054, 13302, 13304, 13432, 14058, 14160, 12760, 13435, 11441, 13642, 13592, 13442, 14061, 13632, 13593, 11168, 13594, 13443, 13595.
         2. Related to OFDMA PHY spec.
      2. Discussion
         1. The proposed text related to CID 11441 was updated based on the discussion. 🡪 The document becomes r1.
      3. **Straw Poll: Do you accept resolutions to CIDs; 11723, 14049, 13067, 13066, 13399, 14054, 13302, 13304, 13432, 14058, 14160, 12760, 13435, 11441, 13642, 13592, 13442, 14061, 13632, 13593, 11168, 13594, 13443, 13595 in doc 11-18/0508r1?**
         1. **Discussion: No discussion.**
         2. **Result: No objection.**
   6. **Ron Porat (Broadcom Ltd.) presented “PHY Comment Resolution (CR Packet Extension),” based on the submission 11-18-0469-00.**
      1. Summary
         1. Resolutions for CIDs 13342, 13401, 11898, 13338, 13340, 13341, 13343, 13344 related to Packet Extension are proposed.
         2. Basically, this is clarification of packet extension in relation to DCM.
      2. Discussion
         1. A member asked where the proposed text is. 🡪 The document was updated to r1.
      3. **Straw Poll: Do you accept resolutions to CIDs; 13342, 13401, 11898, 13338, 13340, 13341, 13343, 13344 in doc 11-18/0469r1?**
         1. **Discussion: No discussion.**
         2. **Result: No objection.**
   7. **Alfred Asterjadhi (Qualcomm) presented “Comment resolutions for 9.3.1.20 Part 2,” based on the submission 11-18-0378-01.**
      1. Summary
         1. Resolutions for multiple comments related to TGax D2.0 with the following CIDs are proposed.
            1. CIDs: 11950, 11951, 11952, 11953, 12767 (5 CIDs).
         2. Clarifications on NDPA in HT/VHT presence, and signalling TA for 20 MHz NDPA requirement are proposed.
      2. Discussion
         1. No discussion.
      3. **Straw Poll: Do you accept resolutions to CIDs;** **11950, 11951, 11952, 11953, 12767 in doc 11-18/0378r1?**
         1. **Discussion: No discussion.**
         2. **Result: No objection.**
7. **AoB**
8. **Recess**
   1. **There will be TGax ad hoc meetings this afternoon.**
   2. **Chair will send out an email.**

**Wednesday, March 7th 2018, PM2 TGax Ad Hoc Sessions (16:00-18:00)**

* Ad Hoc #1: PHY – GRAND BALLROOM D&E
  + Agenda: 11-18-0535.
* Ad Hoc #2: MAC – GRAND BALLROOM B
  + Agenda: 11-18-0545.

**Thursday, March 8th, 2018, AM1 TGax full Session (8:00-10:00)**

1. **The meeting called to order by Osama Aboul-Magd (Huawei Technologies), the chairperson of the TGax, @8:05.**
   1. Agenda 18/0286r5 is on the server. Rev. 6 is the working document.
2. **Announcement/Reminder**
   1. Chair reminded IEEE 802 and 802.11 IPR P&P.
   2. Chair asked people to state name and affiliation when addressing for the first time in the session.
   3. Chair reminded people to do attendance.
3. **Agenda for this session**
   1. Thursday AM1 and PM1
      1. Call Meeting to order
      2. Agenda Setting
      3. IEEE-SA IPR Policy and procedure.
      4. Ad hoc meeting motion
      5. Teleconference schduling
      6. TG Motions
      7. Presentations
         1. 11-18/0106 – Yongho Seok
         2. 11-18/0397 – Laurent Cariou
         3. 11-18/0161 – Zhou Lan
         4. 11-18/0056 – Zhou Lan
         5. 11-18/0044 – Alfred Asterjadhi - deferred
         6. 11-17/1766r1 – Jae Seung Lee
      8. Goals for May 2018
      9. Adjourn
   2. Chair asked if there are any modifications to the agenda.
   3. Agenda approved without objections.
4. **Ad hoc meeting motion**
   1. **Motion: Authorize TGax to hold an ad-hoc meeting on May 2-4, 2018 in Rennes, France, for the purpose of working on comment resolution excluding PHY comments.**
      1. **Moved by Bin Tian, Seconded by Yasu Inoue**
      2. **Discussion:**
      3. **Result: Y/N/A = 23/0/1, motion passes.**
5. **Teleconference scheduling**
   1. TGax teleconference:
      1. March 22, April 5, April 19 10:00 – 12:00 ET
      2. March 29, April 12, April 26 20:00 – 22:00 ET
      3. May 17 10:00 – 12:00 ET
   2. TGax PHY calls:
      1. May 2 and May 3 20:00 – 22:00 ET
      2. May 4 10:00 – 12:00 ET
         1. Wednesday, Thursday, 5:00pm~7:00pm PT, two hours each
         2. Friday, 7:00am~9:00am, PT, two hours each.
         3. Ron will setup the CCs.
6. **Motions**
   1. **CR Motions**
      1. **CR Motion #510 (PHY): Move to accept comment resolution to the following 14 CIDs as in 11-18/0151r1.**
         1. **CID 11423, 11440, 11566, 11721, 11892, 12062, 13015, 13311, 13445, 13596, 13767, 14065, 14201**
         2. **Moved by Tianyu Wu, Seconded by Ron Porat.**
         3. **Discussion: No discussion.**
         4. **Result: Motion was accepted with no objection.**
      2. **CR Motion #511 (PHY): Move to accept comment resolution to the following 35 CIDs as in 11-18/0136r4.**
         1. **CID 14014, 14016, 14017, 14018, 14019, 11696, 14020, 14021, 14022, 14023, 14024, 14025, 13421, 14026, 13422, 14027, 12836, 13950, 14028, 14029, 14030, 14031, 14032, 14033, 13424, 11565, 14034, 13423, 13425, 14035, 14036, 14037, 12794, 12793, 13426.**
         2. **Moved by Bo Sun, Seconded by Ron Porat.**
         3. **Discussion: No discussion.**
         4. **Result: Motion was accepted with no objection.**
      3. **CR Motion #512 (PHY): Move to accept comment resolution to the following 10 CIDs as in 11-18/0352r1.**
         1. **CID 13468, 13469, 13474, 13478, 13643, 14081, 14082, 14171, 11725, and 13635.**
         2. **Moved by Tianyu Wu, Seconded by Ron Porat.**
         3. **Discussion: No discussion.**
         4. **Result: Motion was accepted with no objection.**
      4. **CR Motion #513 (PHY): Move to accept the added text and resolutions to CIDs; 13329, 11539, 11540, 11541 in doc 11-18/0483r2.**
         1. **Moved by Robert Stacy, Seconded by Ron Porat.**
         2. **Discussion: No discussion.**
         3. **Result: Motion was accepted with no objection.**
      5. **CR Motion #514 (PHY): Move to accept resolutions to CIDs; 11723, 14049, 13067, 13066, 13399, 14054, 13302, 13304, 13432, 14058, 14160, 12760, 13435, 11441, 13642, 13592, 13442, 14061, 13632, 13593, 11168, 13594, 13443, 13595 in doc 11-18/0508r1.**
         1. **Moved by Youhan Kim, Seconded by Ron Porat.**
         2. **Discussion: No discussion.**
         3. **Result: Motion was accepted with no objection.**
      6. **CR Motion #515 (PHY): Move to accept resolutions to CIDs; 13342, 13401, 11898, 13338, 13340, 13341, 13343, 13344 in doc 11-18/0469r1.**
         1. **Moved by Ron Porat, Seconded by Yasu Inoue.**
         2. **Discussion: No discussion.**
         3. **Result: Motion was accepted with no objection.**
      7. **CR Motion #516 (PHY): Move to accept resolutions to CIDs 13361, 13362 and 11385 in doc 11-18/0109r3.**
         1. **Moved by Yan Zhang, Seconded by Ron Porat.**
         2. **Discussion: No discussion.**
         3. **Result: Motion was accepted with no objection.**
      8. **CR Motion #517 (PHY): Move to accept the proposed comment resolution to the following 106 CIDs as in 11-18/0110r6.**
         1. **CID 11404, 11597, 11598, 11599, 11600, 11601, 11602, 11603, 11604, 11605, 11606, 11607, 11608, 11609, 14066, 11610, 11611, 11612, 11613, 11614, 11615, 11616, 11617, 11618, 14067, 11619, 11620, 11621, 11622, 11623, 11624, 11625, 11626, 11627, 12880, 13455, 14068, 11403, 11404, 11518, 11628, 11629, 11630, 11631, 11632, 11633, 11635, 13456, 14069, 11517, 11519, 11520, 11521, 11522, 11523, 11524, 11525, 11526, 11527, 11639, 11640, 11641, 14073, 14174, 14175, 11528, 11529, 12565, 13471, 13472, 14074, 11413, 11414, 11533, 11534, 11535, 11642, 11643, 11644, 11645, 11646, 11647, 11648, 13363, 13367, 13773, 13479, 13480, 13481, 13634, 11415, 11416, 11417, 11649, 11650, 11651, 11652, 11653, 11656, 11657, 13372, 13373, 13484, 13602, 13606, 13774.**
         2. **Moved by Yan Zhang, Seconded by Ron Porat.**
         3. **Discussion: No discussion.**
         4. **Result: Motion was accepted with no objection.**
      9. **CR Motion #518 (PHY): Move to accept the proposed comment resolution to the following 34 CIDs as in 11-18/0111r1.**
         1. **CID 11659, 13485, 11660, 11661, 11662, 11663, 13374, 13396, 12652, 12871, 13375, 13376, 13391, 13392, 13393, 13394, 13395, 13397, 13487, 14181, 14182, 14184, 13488, 14185, 13490, 11664, 13491, 11665, 11666, 11667, 11668, 11669, 13493, 13378.**
         2. **Moved by Yan Zhang, Seconded by Ron Porat.**
         3. **Discussion: No discussion.**
         4. **Result: Motion was accepted with no objection.**
      10. **CR Motion #519 (PHY): Move to accept the proposed comment resolution to the following 4 CIDs as in 11-18/0151r1.**
          1. **CID 13597, 13598, 13599, 13600.**
          2. **Moved by Tianyu Wu, Seconded by Ron Porat.**
          3. **Discussion: No discussion.**
          4. **Result: Motion was accepted with no objection.**
      11. **CR Motion #520 (PHY): Move to accept the proposed comment resolution to the following 4 CIDs as in 11-18/0324r1.**
          1. **CID 13368, 11408, 11410, 13370.**
          2. **Moved by Yujin Noh, Seconded by Ron Porat.**
          3. **Discussion: No discussion.**
          4. **Result: Motion was accepted with no objection.**
      12. **CR Motion #521 (PHY): Move to accept resolution to CID 13877 in doc 11-18/0404r2.**
          1. **Moved by Youhan Kim, Seconded by Ron Porat.**
          2. **Discussion: No discussion.**
          3. **Result: Motion was accepted with no objection.**
      13. **CR Motion #522 (PHY): Move to accept the proposed comment resolution to the following 4 CIDs as in 11-18/0359r2.**
          1. **CID 13402, 13404, 13452, 13489.**
          2. **Moved by Ron Porat, Seconded by Youhan Kim.**
          3. **Discussion: No discussion.**
          4. **Result: Motion was accepted with no objection.**
      14. **CR Motion #523 (PHY): Move to accept the proposed comment resolution to the following 31 CIDs as in 11-18/0404r1.**
          1. **CID 11903, 13874, 11905, 12667, 11906, 12063, 12420, 12423, 12424, 12555, 12556, 12616, 12617, 13542, 13543, 12658, 12669, 12675, 12676, 13336, 13337, 12755, 12814, 13102, 13335, 13544, 13627, 13875, 13876, 14212, 14225.**
          2. **Moved by Youhan Kim, Seconded by Ron Porat.**
          3. **Discussion: No discussion.**
          4. **Result: Motion was accepted with no objection.**
          5. **Note: CID 12063 belongs to MU adhoc**
      15. **CR Motion #524 (PHY): Move to accept the proposed comment resolution to the following 5 CIDs as in 11-18/0409r1.**
          1. **CID 11904, 12659, 11900, 11901, 13403.**
          2. **Moved by Youhan Kim, Seconded by Ron Porat.**
          3. **Discussion: No discussion.**
          4. **Result: Motion was accepted with no objection.**
      16. **CR Motion #525 (PHY): Move to accept the proposed comment resolution to the following 2 CIDs as in 11-18/0349r2.**
          1. **CID 13630, 14051.**
          2. **Moved by Youhan Kim, Seconded by Ron Porat.**
          3. **Discussion: No discussion.**
          4. **Result: Motion was accepted with no objection.**
      17. **CR Motion #526 (PHY): Move to accept the proposed comment resolution to the following CID as in 11-18/0478r1.**
          1. **CID 11896.**
          2. **Moved by Ron Porat, Seconded by Yongho Seok.**
          3. **Discussion: No discussion.**
          4. **Result: Motion was accepted with no objection.**
      18. **CR Motion #527 (PHY): Move to accept the proposed comment resolution to the following 2 CIDs as in 11-18/0476r1.**
          1. **CID 11358, 13200.**
          2. **Moved by Ron Porat, Seconded by Yongho Seok.**
          3. **Discussion: No discussion.**
          4. **Result: Motion was accepted with no objection.**
      19. **CR Motion #528 (PHY): Move to accept the proposed comment resolution to the following 2 CIDs as in 11-18/0162r3.**
          1. **CID 12060 13047.**
          2. **Moved by Ming Gan, Seconded by Ron Porat.**
          3. **Discussion: No discussion. Vote count is requested.**
          4. **Result: Y/N/A = 10/0/17, motion passes.**
      20. **CR Motion #529 (PHY): Move to accept the proposed comment resolution to the following 22 CIDs as in 11-18/0463r2.**
          1. **CID 11392, 11393, 11394, 11395, 11396, 11397, 11398, 11443, 11717, 12562, 12563, 12603, 12800, 12877, 13018, 13019, 13380, 13381, 13501, 14089, 14046, 13349.**
          2. **Moved by Xiaogang Chen, Seconded by Ron Porat.**
          3. **Discussion: No discussion.**
          4. **Result: Motion was accepted with no objection.**
          5. **Note 1 – CID 11394/11396/11397/11398/12603 belong to EDITOR ad hoc**
          6. **Note 2 – CID 13349 has been resolved in 11-18/0024r1 and corresponding motion 451 passed. This motion requests re-open CID 13349 and apply proposed resolution.**
      21. **CR Motion #530 (PHY): Move to accept the proposed comment resolution to the following 16 CIDs as in 11-18/0475r2.**
          1. **CID 12311, 12319, 12320, 12321, 12322, 12323, 12582, 12967, 13120, 13500, 13765, 14088, 14202, 14203, 14204, 14205.**
          2. **Moved by Ron Porat, Seconded by Yongho Seok.**
          3. **Discussion: No discussion.**
          4. **Result: Motion was accepted with no objection.**
      22. **CR Motion #531 (MAC): Move to accept resolutions to CIDs, 11073, 11475, 11489, 11793, 11797, 12088, 12572, 13007, 14102, 14103, 14104, 14236, 13300, 13059, 13058, 11075 in doc 11-18/0353r1.**
          1. **Moved by Po-Kai Huang, Seconded by Laurent Cariou.**
          2. **Discussion: No discussion.**
          3. **Result: Motion was accepted with no objection.**
      23. **CR Motion #532 (MAC): Move to accept resolution to CID 13744 in doc 11-18/0343r0.**
          1. **Moved by Alfred Asterjadhi, Seconded by Abhishek Patil.**
          2. **Discussion: No discussion.**
          3. **Result: Motion was accepted with no objection.**
      24. **CR Motion #533 (MAC): Move to accept resolutions to CIDs; 11950, 11951. 11952, 11953, and 12767 in doc 11-18/0378r1.**
          1. **Moved by Alfred Asterjadhi, Seconded by Abhishek Patil.**
          2. **Discussion: No discussion.**
          3. **Result: Motion was accepted with no objection.**
      25. **CR Motion #534 (MAC): Move to accept resolutions to CIDs; 12568, 13848, 11922, 12208, 12566, 12567, 11253, 11254, 11025, 11026, 13183, 13184, 11515 (13 CIDs) in doc 11-18/0443r3.**
          1. **Moved by Yongho Seok, Seconded by Yasu Chao-Chun Wang.**
          2. **Discussion: No discussion.**
          3. **Result: Motion was accepted with no objection.**
      26. **CR Motion #535 (MAC): Move to accept resolution to CIDs 14141 in doc 11-18/0431r0.**
          1. **Moved by Yunbo Li, Seconded by Ming Gan.**
          2. **Discussion: No discussion.**
          3. **Result: Motion was accepted with no objection.**
      27. **CR Motion #536 (MAC): Move to accept resolutions to CIDs; 12426, 11547, 12427, 13010, 11867, 12552, 12548 in doc 11-18/0365r1.**
          1. **Moved by Abhishek Patil, Seconded by Alfred Asterjadhi.**
          2. **Discussion: No discussion.**
          3. **Result: Motion was accepted with no objection.**
      28. **CR Motion #537 (MAC): Move to accept resolutions to CIDs; 13042 and 13073 in doc 11-18/0362r1.**
          1. **Moved by Abhishek Patil, Seconded by Alfred Asterjadhi.**
          2. **Discussion: No discussion.**
          3. **Result: Motion was accepted with no objection.**
      29. **CR Motion #538 (MAC): Move to accept resolutions to CIDs; 11514, 14349, 11924, 11372, 11538, 13539, 12720, 11539, 12806, 11541, 12873, 13332, 13085, 11915, 11981, 11738, 13846, 11982, 12377, 12355, 13334, 12378 in doc 11-18/0366r2.**
          1. **Moved by Abhishek Patil, Seconded by Alfred Asterjadhi.**
          2. **Discussion: No discussion.**
          3. **Result: Motion was accepted with no objection.**
      30. **CR Motion #539 (MAC): Move to accept resolutions to CIDs; 12101, 11380, 11870, 12212 , 11161, 11361 ,11871, 12042 ,13528 , 13529 (10 CIDs) in doc 11-18/0444r2.**
          1. **Moved by Chao-Chun Wang, Seconded by Alfred Asterjadhi.**
          2. **Discussion: No discussion.**
          3. **Result: Motion was accepted with no objection.**
      31. **CR Motion #540 (MAC): Move to accept resolution to CIDs 11317, 11318, 11319, 11730, 13144, 12507 in doc 11-18/0367r1.**
          1. **Moved by Abhishek Patil, Seconded by George Cherian.**
          2. **Discussion: No discussion.**
          3. **Result: Motion was accepted with no objection.**
      32. **CR Motion #541 (MAC): Move to accept resolutions to CIDs 11175, 12859, 11009, 11010, 11373, 11012, 11017, 11018, 11024, 11970, 13755, 12987 in doc 11-18/0369r4.**
          1. **Moved by Abhishek Patil, Seconded by Alfred Asterjadhi.**
          2. **Discussion: No discussion.**
          3. **Result: Motion was accepted with no objection.**
      33. **CR Motion #542 (MAC): Move to accept resolutions to CIDs; 13651, 11034, 13097, 13197 in doc 11-18/0360r2.**
          1. **Moved by Abhishek Patil, Seconded by George Cherian.**
          2. **Discussion: No discussion.**
          3. **Result: Motion was accepted with no objection.**
      34. **CR Motion #543 (MAC): Move to accept resolutions to CIDs 11742, 11023, 11876, 13141 in doc 11-17/1859r4.**
          1. **Moved by Abhishek Patil, Seconded by Alfred Asterjadhi.**
          2. **Discussion: No discussion.**
          3. **Result: Motion was accepted with no objection.**
      35. **CR Motion #544 (MAC): Move to accept resolutions to CIDs; 13889 13888 13892 13893 13166 13167 13169 13113 12466 12468 13894 12009 12469 13168 13114 12470 13895 12471 13896 11673 11674 12011 12472 13898 13897 12473 (26 CIDs) in doc 11-18/0433r1.**
          1. **Moved by Ming Gan, Seconded by Zhou Lan.**
          2. **Discussion: No discussion.**
          3. **Result: Motion was accepted with no objection.**
      36. **CR Motion #545 (MAC): Move to accept resolutions to CIDs; 13051 12393 13816 12386 13050 12414 12415 12416 12166 12167 12231 12233 13100 11173 11857 12759 12168 12235 12777 12130 12257 12131 12260 (23 CIDs) in doc 11-18/0432r1.**
          1. **Moved by Ming Gan, Seconded by Zhou Lan.**
          2. **Discussion: No discussion.**
          3. **Result: Motion was accepted with no objection.**
      37. **CR Motion #546 (MAC): Move to accept resolutions to CIDs 11027, 11061, 11375, 11376, 11988, 12452, 12453, 12098 (8 CIDs) in doc 11-18/0337r1.**
          1. **Moved by Alfred Asterjadhi, Seconded by Abhishek Patil.**
          2. **Discussion: No discussion.**
          3. **Result: Motion was accepted with no objection.**
      38. **CR Motion #547 (MAC): Move to accept resolutions to CIDs 12581, 13836 ( 2 CIDs) in doc 11-18/0338r2.**
          1. **Moved by Alfred Asterjadhi, Seconded by Abhishek Patil.**
          2. **Discussion: No discussion.**
          3. **Result: Motion was accepted with no objection.**
      39. **CR Motion #548 (MAC): Move to accept resolutions to CIDs 11854, 12539, 13793, 13926, 13927 (6 CIDs) in doc 11-18/0370r2.**
          1. **Moved by Alfred Asterjadhi, Seconded by Abhishek Patil.**
          2. **Discussion: No discussion.**
          3. **Result: Motion was accepted with no objection.**
      40. **CR Motion #549 (MAC): Move to accept resolutions to CIDs  12228, 12531, 11041, 11350, 11351, 11352, 11853, 12538, 13792 (9 CIDs) in doc 11-18/0371r2.**
          1. **Moved by Alfred Asterjadhi, Seconded by Abhishek Patil.**
          2. **Discussion: No discussion.**
          3. **Result: Motion was accepted with no objection.**
      41. **CR Motion #550 (MAC): Move to accept resolution of the CID 11835 in doc 11-18/0372r1.**
          1. **Moved by Alfred Asterjadhi, Seconded by Abhishek Patil.**
          2. **Discussion:** 
             1. **A member mentioned that r2 of this document is on the server. It is confirmed that the motion is based on 18/372r1.**
          3. **Result: Motion was accepted with no objection.**
      42. **CR Motion #551 (MAC): Move to accept resolutions to CIDs 11849, 11850, 11852, 12095, 12305, 12528, 12529, 12530, 12246, 12531, 13040, 13791 (11 CIDs) in doc 11-18/0373r0.**
          1. **Moved by Alfred Asterjadhi, Seconded by Abhishek Patil.**
          2. **Discussion: No discussion.**
          3. **Result: Motion was accepted with no objection.**
      43. **CR Motion #552 (MAC): Move to accept resolutions to CIDs 11918, 12381, 12382, 12383, 12384, 12385, 12431 (7 CIDs) in doc 11-18/0379r2.**
          1. **Moved by Alfred Asterjadhi, Seconded by Abhishek Patil.**
          2. **Discussion: No discussion.**
          3. **Result: Motion was accepted with no objection.**
      44. **CR Motion #553 (MAC): Move to accept resolutions to CIDs 12429 and 11736 in doc 11-18/0467r1.**
          1. **Moved by Laurent Cariou, Seconded by Alfred Asterjadhi.**
          2. **Discussion: No discussion.**
          3. **Result: Motion was accepted with no objection.**
      45. **CR Motion #554 (MAC): Move to accept resolutions to following CIDs in doc 11-18/0027r4 (120 CIDs).**

**CIDs: 11092, 11740, 11757, 11758, 11759, 11760, 11761, 11762, 11763, 11810, 12143, 12486, 12487, 12488, 12489, 12630, 12631, 12826, 12827, 12828, 12829, 12831, 12832, 12887, 12888, 12889, 12891, 12892, 12893, 12894, 12895, 12896, 12897, 12898, 12899, 12900, 12902, 12904, 12905, 12906, 12907, 12908, 12909, 12911, 13517, 13518, 13519, 13520, 13734, 13735, 13736, 13737, 13738, 13739, 13740, 13741, 13742, 13743, 11086, 11089, 11091, 11754, 11755, 11756, 11807, 12015, 12285, 12478, 12479, 12481, 12482, 12483, 12484, 12485, 12491, 12636, 12721, 12739, 12745, 12750, 12820, 12821, 12822, 12823, 12847, 12866, 12867, 12910, 12912, 12913, 12914, 13022, 13023, 13036, 13150, 13189, 13252, 13254, 13255, 13256, 13257, 13258, 13260, 13262, 13263, 13264, 13265, 13266, 13269, 13270, 13272, 13276, 13278, 13279, 13515, 13516, 13521, 13663, 13664, 13665.**

* + - 1. **Moved by George Cherian, Seconded by Abhishek Patil.**
      2. **Discussion: No discussion.**
      3. **Result: Motion was accepted with no objection.**
    1. **CR Motion #555 (MAC): Move to accept resolutions to following CIDs in doc 11-18/0380r1 (4 CIDs).**

**CIDs: 11015, 11860, 13410, 13411..**

* + - 1. **Moved by George Cherian, Seconded by Abhishek Patil.**
      2. **Discussion: No discussion.**
      3. **Result: Motion was accepted with no objection.**
    1. **CR Motion #556 (MAC): Move to accept resolutions to following CIDs in doc 11-18/0423r1 (1 CID).**

**CIDs: 14318.**

* + - 1. **Moved by Liwen Chu, Seconded by Yongho Seok.**
      2. **Discussion: No discussion.**
      3. **Result: Motion was accepted with no objection.**
    1. **CR Motion #557 (MAC): Move to accept resolutions to following CIDs in doc 11-18/078r4 (2 CIDs).**

**CIDs: 12508, 13292.**

* + - 1. **Moved by Liwen Chu, Seconded by Alfred Asterjadhi.**
      2. **Discussion: No discussion.**
      3. **Result: Motion was accepted with no objection.**
    1. **CR Motion #558 (MAC): Move to accept resolutions to following CIDs in doc 11-18/0455r2 (9 CIDs).**

**CIDs: 11483, 11789, 11790, 11791, 12087, 13053, 13055, 13188, 14228.**

* + - 1. **Moved by Yongho Seok, Seconded by Alfred Asterjadhi.**
      2. **Discussion: No discussion.**
      3. **Result: Motion was accepted with no objection.**
    1. **CR Motion #559 (MAC): Move to accept resolutions to following CIDs in doc 11-18/0369r5 (1 CID).**

* + - 1. **Moved by Abhishek Patil, Seconded by Alfred Asterjadhi.**
      2. **Discussion: No discussion.**
      3. **Result: Motion was accepted with no objection.**
    1. **CR Motion #560 (MAC): Move to accept resolutions to following CIDs in doc 11-18/0363r1 (1 CID).**

**CID: 13136.**

* + - 1. **Moved by Abhishek Patil, Seconded by Alfred Asterjadhi.**
      2. **Discussion: No discussion.**
      3. **Result: Motion was accepted with no objection.**
    1. **CR Motion #561 (MAC): Move to accept resolutions to following CIDs in doc 11-18/0546r0 (10 CIDs).**

**CIDs: 11096, 14109, 13281, 13970, 12608, 13972, 12499, 11313, 12504, 11315.**

* + - 1. **Moved by Abhishek Patil, Seconded by Alfred Asterjadhi.**
      2. **Discussion: No discussion.**
      3. **Result: Motion was accepted with no objection.**
    1. **CR Motion #562 (MAC): Move to accept resolutions to following CIDs in doc 11-18/0429r0 (3 CIDs).**
       1. **CID: 11316, 12505, 12506.**
       2. **Moved by Liwen Chu, Seconded by Yongho Seok.**
       3. **Discussion: No discussion.**
       4. **Result: Motion was accepted with no objection.**
    2. **CR Motion #563 (MAC): Move to accept resolutions to following CIDs in doc 11-18/0557r1 (1 CID).**

**CID: 11682.**

* + - 1. **Moved by Jarkko Kneckt, Seconded by Alfred Asterjadhi.**
      2. **Discussion: No discussion.**
      3. **Result: Motion was accepted with no objection.**
    1. **CR Motion #564 (MAC): Move to accept resolutions to following CIDs in doc 11-18/0075r3 ( 9 CIDs).**

**CIDs: 11030, 11100, 11312, 11697, 12591, 13194, 13195, 13828, 13971.**

* + - 1. **Moved by Liwen Chu, Seconded by Yasu Inoue.**
      2. **Discussion: No discussion.**
      3. **Result: Motion was accepted with no objection.**
    1. **CR Motion #565 (MAC): Move to accept resolutions to following CIDs in doc 11-18/0149r3 (27 CIDs).**

**CIDs: 11894, 12388, 13863, 12380, 13540, 11542, 14197, 13646, 11886, 11471, 14268, 13199, 14130, 12298, 13412, 13547, 14198, 12297, 13768, 12296, 11552, 12063, 11553, 14270, 11554, 11555, 14132.**

* + - 1. **Moved by Po-Kai Huang, Seconded by Robert Stacy.**
      2. **Discussion: No discussion.**
      3. **Result: Motion was accepted with no objection.**
    1. **CR Motion #566 (MAC): Move to accept resolutions to CIDs 11834, 11837, 14005, and 14339 in doc 11-18/0107r3.**
       1. **Moved by Yongho Seok, Seconded by Jarkko Kneckt.**
       2. **Discussion: No discussion.**
       3. **Result: Motion was accepted with no objection.**
    2. **CR Motion #567 (MAC): Move to accept resolutions to following CIDs in doc 11-18/0446r3 (2 CIDs).**
       1. **CIDs: 12699, 13220.**
       2. **Moved by Zhou Lan, Seconded by Jarkko Kneckt.**
       3. **Discussion: No discussion.**
       4. **Result: Motion was accepted with no objection.**
    3. **CR Motion #568 (MAC): Move to accept resolutions to following CIDs in doc 11-18/0512r4 (1 CID).**
       1. **CID: 14207.**
       2. **Moved by Yunbo Li, Seconded by Ross Jian Yu.**
       3. **Discussion: No discussion.**
       4. **Result: Motion was accepted with no objection.**
    4. **CR Motion #569 (MAC): Move to accept resolutions to following CIDs in doc 11-18/0012r3 (29 CIDs).**
       1. **CIDs: 11261, 11495, 11504, 11563, 11687, 11689, 11690, 11902, 12003, 12061, 12532, 12533, 12553, 12554, 12627, 12649, 12650, 12656, 12865, 13639, 13947, 13948, 14123, 14329, 14124, 14126, 12099, 12100, 13640**
       2. **Moved by Alfred Asterjadhi, Seconded by Abhishek Patil.**
       3. **Discussion: No discussion.**
       4. **Result: Motion was accepted with no objection.**
    5. **CR Motion #570 (MAC): Move to accept resolutions to following CIDs in doc 11-18/0527r2 (15 CIDs).**
       1. **CIDs: 12511, 12668, 13203, 13204, 13205, 13206, 13209, 13210, 13212, 13213, 13214, 13215, 13216, 13217, 14271.**
       2. **Moved by Robert Stacy, Seconded by Po-Kai Huang.**
       3. **Discussion: No discussion.**
       4. **Result: Motion was accepted with no objection.**
    6. **CR Motion #571 (MAC): Move to accept resolutions to following CIDs in doc 11-18/0312r1 (33 CIDs).**
       1. **CIDs: 11432, 11433, 11766, 11767, 11768, 12513, 12515, 12516, 12697, 12698, 12699, 12779, 13218, 13219, 13222, 13223, 13224, 13225, 13226, 13227, 13228, 13287, 13288, 13289, 13290, 13291, 13550, 13553, 13556, 13712, 13776, 14274 (33 CIDs)**
       2. **Moved by Alfred Asterjadhi, Seconded by Abhishek Patil.**
       3. **Discussion: No discussion.**
       4. **Result: Motion was accepted with no objection.**
    7. **CR Motion #572 (SR): Move to accept the resolutions provided in 11-18/0525r1 for the comments with CIDs 12988, 13843, 13849, 14220, and 14306.**

* + - 1. **Moved by James Wang, Seconded by Bin Tian.**
      2. **Discussion: No discussion.**
      3. **Result: Motion was accepted with no objection.**
  1. **PHY Motion**
     1. **PHY Motion #205: Move to accept the spec text modification as proposed in 11-18/0059r1.**
        1. **Moved by Hongyuan Zhang, Seconded by Bo Sun..**
        2. **Discussion: No discussion.**
        3. **Result: Motion was accepted with no objection.**

1. **AoB**
   1. We have 7 minutes.
   2. Presentations to be given in PM1 are reviewed.
2. **Recess @ 15:28 until 16:00.**

**Thursday, March 8th, 2018, PM1 TGax full Session (13:30-15:30)**

1. **The meeting called to order by Osama Aboul-Magd (Huawei Technologies), the chairperson of the TGax, @13:30.**
   1. Agenda 18/0286r5 is on the server. Rev. 6 is the working document.
2. **Agenda for today has been approved during the AM1 session.**
   1. Thursday AM1 and PM1
      1. Call Meeting to order
      2. Agenda Setting
      3. IEEE-SA IPR Policy and procedure.
      4. Ad hoc meeting motion
      5. Teleconference schduling
      6. TG Motions
      7. Presentations
         1. 11-18/0106 – Yongho Seok
         2. 11-18/0397 – Laurent Cariou
         3. 11-18/0161 – Zhou Lan
         4. 11-18/0056 – Zhou Lan
         5. 11-18/0044 – Alfred Asterjadhi - deferred
         6. 11-17/1766r1 – Jae Seung Lee
      8. Goals for May 2018
      9. Adjourn
3. **Announcement/Reminder**
   1. Chair reminded IEEE 802 and 802.11 IPR P&P.
   2. Chair asked people to state name and affiliation when addressing for the first time in the session.
   3. Chair reminded people to do attendance.
4. **Presentations**
   1. **Yongho Seok (MediaTek) presented “LB230 CR Spatial Reuse Operation on Secondary Channel,” based on the submission 11-18-0106-01.**
      1. Summary
         1. Resolutions for the following comments on the spatial reuse operation on the secondary channel received from TGax LB230 are proposed.
            1. Relevant CIDs: 13514, 13954, 13955, 13956, 13957, 13958, 13959, 13960, 13961, 13962, 13963, 13964 (12 CID).
         2. Spec text for the OBSS\_PD-based SR operation is clarified. The proposed change is based on TGax Draft 2.2.
      2. Discussion – No discussion.
      3. **CR Motion #573 (SR): Move to accept resolutions to CIDs 13514, 13954, 13955, 13956, 13957, 13958, 13959, 13960, 13961, 13962, 13963, 13964 (12 CID) in doc 11-18/0106r1.**
         1. **Moved by Yongho Seok, Seconded by Bin Tian.**
         2. **Discussion: No discussion.**
         3. **Result: Motion was accepted with no objection.**
   2. **Laurent Cariou (Intel) presented “CR for 6GHz,” based on the submission 11-18-0397-01.**
      1. Summary
         1. Laurent updated the document based on the comments received on Monday.
      2. Discussion
         1. A member requested to remove frequency channel above 7.125 GHz to be consistent with the PAR. Laurent accepted the request and modified the document 🡪 r2.
      3. **CR Motion #574: Move to accept resolutions to CIDs 12153, 11960, 12302, 12959, 12961, 13797, 13798 in doc 11-18/0397r2.**
         1. **Moved by Laurent Cariou, Seconded by Yasu Inoue.**
         2. **Discussion: No discussion.**
         3. **Result: Motion was accepted with no objection.**
   3. **Zhou Lan (Broadcom Ltd.) presented “CR of CID 13754,” based on the submission 11-18-0161-05..**
      1. Summary
         1. Resolution with proposed changes to TGax D2.0 for CIDs from the WG LB for TGax related to CID 13754 on A-Control subfield.
         2. Two options are considered:
            1. Option 1: Using all zero to indicate this a control that can be ignored.

Pros: No need to burn one reserved value.

Cons: Need to change the definition of the current HE TB PPDU Length field.

* + - * 1. Option 2: Using all ones to indicate this a control that can be ignored.

Pros: No need to burn one reserved value. Value 15 can be still used in the future for other purpose assuming all one setting will be an invalid setting for control ID 15.

Cons:

* + 1. Discussion:
       1. People had different opinions. Some seemed to be okay with option 1 while some other people preferred option 2. There are still some other people who are confused.
    2. Straw Poll: Which option do you support?
       1. Option 1: 17
       2. Option 2: 25
    3. **CR Motion #575 (MAC): Move to accept resolutions to CID 13754 in doc 11-18/0161r7.**
       1. **Moved by Zhou Lan, Seconded by Ron Porat.**
       2. **Discussion:** 
          1. **A member suggested some edits on the proposed text.**
          2. **Some members are still not happy with the proposal.**
       3. **Result: Motion was accepted with no objection.**
  1. **Jae Seung Lee (ETRI) presented “,” based on the submission 11-17-1766r2.**
     1. Summary
        1. Resolutions for following CIDs that are related to MLME SAP (Clause 6):
           1. CIDs: 11362, 11363, 11907, 11908, 11926, 11927, 11928, 12351,13845, 11929, 11930, 11931, 11109, 12335, 12336, and 1110.
        2. Jae Seung updated the document considering the comments received for r0 of this document.
     2. Discussion
        1. . Clarification of baseline documents was discussed – 802.11-2016 as amended by 802.11ah, 802.11ai, to be amended by 802.11aj, 802.11ak and 802.11aq.
     3. **CR Motion #576 (MAC): Move to accept resolutions to CIDs 11362, 11363, 11907, 11908, 11926, 11927, 11928, 12351,13845, 11929, 11930, 11931, 11109, 12335, 12336, and 1110 in doc 11-17/1766r2.**
        1. **Moved by Jae Seung Lee, Seconded by Yasu Inoue.**
        2. **Discussion: No discussion.**
        3. **Result: Motion was accepted with no objection.**
  2. **Zhou Lan (Broadcom Ltd.) presented “CR of CID 14328,” based on the submission 11-18-0056.**
     1. Summary
        1. Resolution with proposed changes to TGax D2.0 for CIDs from the WG LB for TGax related to CID 14328 is proposed.
           1. The CID 14328 discusses the MU-RTS and range extension.
     2. Discussion
        1. People discussed about the two options.
           1. Option 1:
           2. Option 2:
     3. **Straw Poll: Which option do you prefer?**
        1. **Option 1: 38**
        2. **Option2: 2**
        3. **None of the above: 2**
     4. Discussion
        1. Po-Kai Huang (Intel) has related submission (18/0353r1).
     5. **CR Motion #577 (MAC): Move to accept resolution to the CID 14328, 11503, 11516, 13035 in doc 11-18/0353r1.**
        1. **Moved by Zhou Lan, Seconded by Po-Kai Huang.**
        2. **Discussion: No discussion.**
        3. **Result: Motion was accepted with no objection.**
  3. **Abhishek Patil (Qualcomm) presented “,” based on the submission 11-18-0554-00.**
     1. Summary
     2. Discussion
        1. Some people asked for clarification.
     3. **CR Motion #578 (MAC): Move to accept resolution to CID 12490 in doc 11-18/0554r0.**
        1. **Moved by Abhishek Patil, Seconded by Sai Shankar Nandagopalan.**
        2. **Discussion: No discussion.**
        3. **Result: Motion was accepted with no objection.**

1. **Goals for the May 2018**
   1. Complete comment resolution and initiate a 30-day WG letter ballot
   2. Approve a new revision of the Coexistence Assurance document taking into account the new added band.
   3. Prepare and approve PAR extension.
2. **AoB**
   1. **Nothing..**
3. **Adjournment**
   1. TGax adjourned for the week @ 15:08.