IEEE P802.11  
Wireless LANs

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| IEEE 802.11 Task Group AY  November 2017 Orlando Plenary Meeting Minutes | | | | |
| Date: 2017-11-10 | | | | |
| Author: | | | | |
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Abstract

Task Group AY meeting minutes from the IEEE 802.11 Orlando plenary session, November 5-10, 2017.

**IEEE 802.11 Task Group AY**

**November 2017 Orlando Plenary Meeting**

**November 5-10, 2017**

**Monday, November 6, 2017, AM1 Session (08:00-10:00)**

Attendance: around 40 people

1. The IEEE 802.11ay task group ad-hoc meeting was called to order at 08:00 by the Chair, Edward Au (Huawei).
2. Agenda Doc. IEEE 802.11-17/1521r1.
3. Chair introduced the TG leadership: Vice Chair: Sang Kim (LG Electronics), Secretary: Jeorge Hurtarte (LitePoint) and Editor: Carlos Cordeiro (Intel)
4. Chair reviewed the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics, and reminders on Task Group rules, including meeting guidelines and attendance recording procedures (slides 4-11)
   1. Chair asked if anyone has any questions about the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics or reminders. No questions.
   2. Chair asked if anybody has any disclosures related to the patent policy. None.
   3. Chair asked if there were any questions on any of the above items. None.
   4. Chair reminded all to record their attendance.
   5. Chair reminded all to upload their presentations.
5. Chair introduced the leadership of the Task Group (slide 12).
6. Chair proceeded to discuss the agenda items for this ad-hoc meeting (slide 15) and asked if anyone wants to add any additional agenda items (none).
7. Presentations
   1. Presentation by Assaf Kasher (Qualcomm), Short SSW example, Doc. IEEE-11-17/1586r1.
      1. Opened the floor for discussion.
      2. Straw Poll: Do you agree to include the short SSW example as proposed in doc 11-17/1586r1 into the IEEE 802.11ay draft amendment?
      3. Yes: 26, No: 0, Abstain: 1. Straw poll passed.
   2. Presentation by Assaf Kasher (Qualcomm), Comment resolution II, Doc. IEEE-11-17/1580r0.
      1. Opened the floor for discussion.
      2. Straw Poll: Do you agree to accept the resolution as proposed in 17/1580r0 for CIDs 257, 258, 259, 260, 261, 56, 57, 58 and 59?
      3. Yes: 22, No: 0, Abstain: 1. Straw poll passed.
   3. Presentation by Jinmin Kim (LG Electronics), Comment resolution on CIDs for OFDM, Doc. IEEE-11-17/1658r0.
      1. Opened the floor for discussion.
      2. Straw Poll: Do you agree to accept comment resolution as proposed in doc 11-17/1658r0?
      3. Yes: 20, No: 0, Abstain: 0. Straw poll passed.
   4. Presentation by Jinmin Kim (LG Electronics), BRP for channel aggregation, Doc. IEEE-11-17/1674r0.
      1. Opened the floor for discussion.
      2. Straw Poll: Do you agree to include the texts described in 11-17-1674-00-00ay-BRP for channel aggregation?
      3. Yes: 23, No: 0, Abstain: 0. Straw poll passed.
   5. Presentation by SungJin Park (LG Electronics), Comment resolution on CIDs, Doc. IEEE-11-17/1660r1.
      1. Opened the floor for discussion.
      2. Straw Poll: Do you agree to accept comment resolution as proposed in doc 11-17-1660-01-00ay-Comment Resolution on CIDs (82, 101, 182, 373, 374, 478, 479)?
      3. Yes: 25, No: 0, Abstain: 0. Straw poll passed.
   6. Presentation by SungJin Park (LG Electronics), Signaling for MU-MIMO BF training, Doc. IEEE-11-17/1659r0.
      1. Opened the floor for discussion.
      2. Straw Poll: Do you agree to include the text for signaling intended responders in the MU-MIMO BF Training subphase proposed in (11-17-1659-00-00ay-Signaling for MU-MIMO BF Training) into the draft?
      3. Yes: 25, No: 0, Abstain: 0. Straw poll passed.
   7. Presentation by SunWoong Yun (LG Electronics), DCM SQPSK for channel aggregation   
      in OFDM mode, Doc. IEEE-11-17/1655r2, and 30.6.7.4.3 DCM SQPSK modulation, Doc. IEEE-11-17/1656r1.
      1. Opened the floor for discussion.
      2. Straw Poll: Do you agree to define DCM SQPSK across aggregated channels as described in (11-17-1656-00-00ay-Draft text for DCM SQPKS for channel aggregation in OFDM mode)?
      3. Yes: 25, No: 0, Abstain: 1. Straw poll passed.
   8. Presentation by Ilya Bolotin (Intel), Advanced MU-MIMO acknowledgement and PS flow, Doc. IEEE-11-17/1690r0, and Draft text for advanced MU-MIMO acknowledgement and PS flow, Doc. IEEE-11-17/1691r0.
      1. Opened the floor for discussion.
      2. Straw Poll: Do you agree to include the text changes proposed in 11-17-1691-00-00ay-Draft text for advanced MU-MIMO acknowledgement and PS flow to the spec draft?
      3. Yes: 29, No: 0, Abstain: 1. Straw poll passed.
   9. Presentation by George Calcev (Huawei), Advanced MU-MIMO acknowledgement and PS flow, Doc. IEEE-11-17/1698r1.
      1. Opened the floor for discussion.
      2. Straw Poll: Do you agree 802.11ay to support the concept of LOS determination sing multiple polarizations transmissions of the same TRN sequence?”?
      3. Yes: 27, No: 0, Abstain: 7. Straw poll passed.
8. Ad-hoc meeting adjourned at 09:50.

**Monday, November 6, 2017, PM1 Session (13:30-15:30)**

Attendance: around 40 people

1. The IEEE 802.11ay task group ad-hoc meeting was called to order at 13:31 by the Chair, Edward Au (Huawei).
2. Agenda Doc. IEEE 802.11-17/1521r3.
3. Chair introduced the TG leadership: Vice Chair: Sang Kim (LG Electronics), Secretary: Jeorge Hurtarte (LitePoint) and Editor: Carlos Cordeiro (Intel)
4. Chair reviewed the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics, and reminders on Task Group rules, including meeting guidelines and attendance recording procedures (slides 4-11)
   1. Chair asked if anyone has any questions about the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics or reminders. No questions.
   2. Chair asked if anybody has any disclosures related to the patent policy. None.
   3. Chair asked if there were any questions on any of the above items. None.
   4. Chair reminded all to record their attendance.
   5. Chair reminded all to upload their presentations.
5. Chair introduced the leadership of the Task Group (slide 12).
6. Chair reviewed the meeting time slots, locations and agenda items for the week (see slides 13 and 14 of the agenda document).
7. Chair proceeded to discuss the agenda items for this session (slide 20) and asked if anyone wants to add any additional agenda items (none).
8. Chair reviewed the progress of the Task Group AY and a list of contributions being discussed in the teleconference calls (slides 21-26).
9. Chair reviewed Task Group Documents/draft (slide 27).
10. Motion #323: Move to approve Task Group AY minutes of meetings from September 2017 interim:

<https://mentor.ieee.org/802.11/dcn/17/11-17-1512-00-00ay-tg-ay-september-2017-waikoloa-meeting-minutes.docx>

* 1. Move: Assaf Kasher
  2. Second: Claudio da Silva
  3. No objections noted. Unanimous consent.
  4. The September 2017 interim meeting minutes were approved.

1. Motion #324: Move to approve Task Group AY minutes of meetings from the teleconference calls on September 27, October 11, October 18, October 25, and November 1:

<https://mentor.ieee.org/802.11/dcn/17/11-17-1541-00-00ay-tg-ay-september-27-2017-conference-call-meeting-minutes.docx>

<https://mentor.ieee.org/802.11/dcn/17/11-17-1571-02-00ay-tg-ay-october-2017-conference-call-meeting-minutes.docx>

<https://mentor.ieee.org/802.11/dcn/17/11-17-1632-00-00ay-tg-ay-november-1-2017-conference-call-meeting-minutes.docx>

* 1. Move: Assaf Kasher
  2. Second: Claudio da Silva
  3. No objections noted. Unanimous consent.
  4. The September 27th, October 11th, October 18th, October 25th, and November 1st teleconference calls meeting minutes were approved.

1. Chair reviewed the list of presentations submitted (slides 30-38) and schedule for presenting those during the week.
   1. Chair asked if there were any additional presentations submissions or changes to the agenda items. None.
2. Chair reviewed the agenda setting for the week (slide 39).
3. Motions
   1. Motion #325: Comment Resolution
      1. Move to accept comment resolution for CIDs 98, 293, and 400 as proposed in 17/1530r0, and CID 294 as proposed in 17/1523r3.
      2. Note 1: Contribution number: 17/1530r0, 17/1523r3
      3. Note 2: Straw poll results: Approved with unanimous consent
      4. Move: Claudo da Silva
      5. Second: Assaf Kasher
      6. Result: The motion is passed (20 Yes; 0 No; 1 Abstain)
   2. Motion #326: Comment Resolution
      1. Move to accept comment resolution for CIDs 110, 143, 385, and 514 as proposed in 17/1532r0.
      2. Note 1: Contribution number: 17/1532r0
      3. Note 2: Straw poll results: Approved with unanimous consent
      4. Move: Claudo da Silva
      5. Second: Assaf Kasher
      6. Result: The motion is passed (21 Yes; 0 No; 0 Abstain)
   3. Motion #327: Draft
      1. Move to include the text proposed in 17/1534r1 for hybrid beamforming feedback into the IEEE 802.11ay draft amendment.
      2. Note 1: Contribution number: 17/1533r1, 17/1534r1
      3. Note 2: Straw poll results: Approved with unanimous consent
      4. Move: Li-Hsiang Sun
      5. Second: Assaf Kasher
      6. Result: The motion is passed (19 Yes; 0 No; 1 Abstain)
   4. Motion #328: Draft
      1. Move to include the text proposed in 17/1568r0 for the definition of OFDM PHY PPDU transmission into the IEEE 802.11ay draft amendment.
      2. Note 1: Contribution number: 17/1568r0
      3. Note 2: Straw poll results: Approved with unanimous consent
      4. Move: Claudio da Silva
      5. Second: Yan Xin
      6. Result: The motion is passed (23 Yes; 0 No; 0 Abstain)
   5. Motion #329: Draft
      1. Move to approve the removal of the multiple sector feedback mechanism from IEEE 802.11ay draft amendment as proposed in 17/1570r1.
      2. Note 1: Contribution number: 17/1570r1
      3. Note 2: Straw poll results: Approved with unanimous consent
      4. Move: Yan Xin
      5. Second: Assaf Kasher
      6. Result: The motion is passed (22 Yes; 0 No; 0 Abstain)
   6. Motion #330: Draft
      1. Move to include the text proposed in 17/1581r0 for the modification of EDMG-Header-B encoding procedure into the IEEE 802.11ay draft amendment.
      2. Note 1: Contribution number: 17/1581r0
      3. Note 2: Straw poll results: Approved with unanimous consent
      4. Move: Claudio da Silva
      5. Second: Thomas Handte
      6. Result: The motion is passed (25 Yes; 0 No; 0 Abstain)
   7. Motion #331: Draft
      1. Move to include the text proposed in 17/1584r0 that enables unsolicited RSS after BTI into the IEEE 802.11ay draft amendment.
      2. Note 1: Contribution number: 17/1584r0
      3. Note 2: Straw poll results: Approved with unanimous consent
      4. Move: Hiroyuki Motozuka
      5. Second: Assaf Kasher
      6. Result: The motion is passed (24 Yes; 0 No; 0 Abstain)
   8. Motion #332: Draft
      1. Move to include the text proposed in 17/1583r0 that enables an EDMG AP to use multiple antennas in BTI and A-BFT of a beacon interval into the IEEE 802.11ay draft amendment.
      2. Note 1: Contribution number: 17/1582r0, 17/1583r0
      3. Note 2: Straw poll results: Approved with unanimous consent
      4. Move: Yan Xin
      5. Second: Tony Han
      6. Result: The motion is passed (24 Yes; 0 No; 0 Abstain)
   9. Motion #333: Comment Resolution
      1. Move to accept comment resolution for CIDs 175, 176, 361, 275, 39, and 359 as proposed in 17/1579r0, and CIDs 257, 258, 259, 260, 261, 56, 57, 58, and 59 as proposed in 17/1580r1.
      2. Note 1: Contribution number: 17/1579r0, 17/1580r1
      3. Note 2: Straw poll results for 1579r0: Approved with unanimous consent
      4. Note 3: Straw poll results for 1580r1: Yes: 22, No: 0, Abstain: 1
      5. Move: Assaf Kasher
      6. Second: Yan Xin
      7. Result: The motion is passed (20 Yes; 0 No; 0 Abstain)
   10. Motion #334: Draft
       1. Move to include the text proposed in 17/1596r0 for the modification of the description of STBC encoding for SC mode into the IEEE 802.11ay draft amendment.
       2. Note 1: Contribution number: 17/1596r0
       3. Note 2: Straw poll results: Approved with unanimous consent
       4. Move: Claudio da Silva
       5. Second: Thomas Handte
       6. Result: The motion is passed (22 Yes; 0 No; 0 Abstain)
   11. Motion #335: Draft
       1. Move to include the text proposed in 17/1595r0 for the EDMG multi-TID aggregation support into the IEEE 802.11ay draft amendment.
       2. Note 1: Contribution number: 17/1595r0
       3. Note 2: Straw poll results: Approved with unanimous consent
       4. Move: Claudio da Silva
       5. Second: Assaf Kasher
       6. Result: The motion is passed (21 Yes; 0 No; 1 Abstain)
   12. Motion #336: Draft
       1. Move to include the text proposed in 17/1599r2 for “30.2.3 Support for non-EDMG and EDMG Formats” into the IEEE 802.11ay draft amendment.
       2. Note 1: Contribution number: 17/1599r2
       3. Note 2: Straw poll results: Approved with unanimous consent
       4. Move: Claudio da Silva
       5. Second: Assaf Kasher
       6. Result: The motion is passed (24 Yes; 0 No; 0 Abstain)
   13. Motion #337: Draft
       1. Move to accept comment resolution for CIDs 107, 274, and 329 as proposed in 17/1598r2.
       2. Note 1: Contribution number: 17/1598r2
       3. Note 2: Straw poll results: Approved with unanimous consent
       4. Move: Li-Hsiang Sun
       5. Second: Yan Xin
       6. Result: The motion is passed (25 Yes; 0 No; 0 Abstain)
   14. Motion #338: Draft
       1. Move to include the text proposed in 17/1622r1 for SLS with different Tx and Rx antennas into the IEEE 802.11ay draft amendment.
       2. Note 1: Contribution number: 17/1622r1, 17/1623r0
       3. Note 2: Straw poll results: Approved with unanimous consent
       4. Move: Li-Hsiang Sun
       5. Second: Sang Kim
       6. Result: The motion is passed (22 Yes; 0 No; 0 Abstain)
   15. Motion #339: Draft
       1. Move to include the text proposed in 17/1586r1 for the short SSW example into the IEEE 802.11ay draft amendment.
       2. Note 1: Contribution number: 17/1586r1
       3. Note 2: Straw poll results: Yes: 26, No: 0, Abstain: 1
       4. Move: Assaf Kasher
       5. Second: Claudio da Silva
       6. Result: The motion is passed (23 Yes; 0 No; 0 Abstain)
   16. Motion #340: Comment Resolution
       1. Move to accept comment resolution for CIDs 264 and 480 as proposed in 17/1658r0.
       2. Note 1: Contribution number: 17/1658r0
       3. Note 2: Straw poll results: Yes: 20, No: 0, Abstain: 0
       4. Move: Jinmin Kim
       5. Second: Sang Kim
       6. Result: The motion is passed (23 Yes; 0 No; 0 Abstain)
   17. Motion #341: Draft
       1. Move to include the text proposed in 17/1674r0 for the BRP for channel aggregation into the IEEE 802.11ay draft amendment.
       2. Note 1: Contribution number: 17/1674r0
       3. Note 2: Straw poll results: Yes: 23, No: 0, Abstain: 0
       4. Move: Jinmin Kim
       5. Second: Sang Kim
       6. Result: The motion is passed (22 Yes; 0 No; 0 Abstain)
   18. Motion #342: Comment Resolution
       1. Move to accept comment resolution for CIDs 82, 101, 282, 373, 374, 478, and 479 as proposed in 17/1660r1.
       2. Note 1: Contribution number: 17/1660r1
       3. Note 2: Straw poll results: Yes: 25, No: 0, Abstain: 0
       4. Move: SungJin Park
       5. Second: Sang Kim
       6. Result: The motion is passed (24 Yes; 0 No; 0 Abstain)
   19. Motion #343: Draft
       1. Move to include the text proposed in 17/1659r0 related to a signaling method for the intended responders that should perform receive AWV training in the MU-MIMO beamforming training subphase into the IEEE 802.11ay draft amendment.
       2. Note 1: Contribution number: 17/1659r0
       3. Note 2: Straw poll results: Yes: 25, No: 0, Abstain: 0
       4. Move: SungJin Park
       5. Second: Sang Kim
       6. Result: The motion is passed (24 Yes; 0 No; 0 Abstain)
   20. Motion #344: Draft
       1. Move to include the text proposed in 17/1656r1 for the definition of DCM SQPSK across aggregated channels into the IEEE 802.11ay draft amendment.
       2. Note 1: Contribution number: 17/1655r2, 17/1656r1
       3. Note 2: Straw poll results: Yes: 25, No: 0, Abstain: 1
       4. Move: SunWoong Yun
       5. Second: Sang Kim
       6. Result: The motion is passed (23 Yes; 0 No; 1 Abstain)
   21. Motion #345: Draft
       1. Move to include the text proposed in 17/1691r0 for advanced MU-MIMO acknowledgement and power save flow into the IEEE 802.11ay draft amendment.
       2. Note 1: Contribution number: 17/1690r0, 17/1691r0
       3. Note 2: Straw poll results: Yes: 29, No: 0, Abstain: 0
       4. Move: Claudio da Silva
       5. Second: Assaf Kasher
       6. Result: The motion is passed (25 Yes; 0 No; 0 Abstain)
4. Presentations
   1. Presentation by Assaf Kasher (Qualcomm), Mask comment resolution, Doc. IEEE-11-17/1642r0.
      1. Opened the floor for discussion.
      2. Do you agree to accept comment resolution as proposed in doc 11-17-1642-00-00ay-Comment Resolution on CIDs 14, 157, 521, 522, 523, 37, and 65?
      3. Yes: 29, No: 0, Abstain: 0. Straw poll passed.
   2. Presentation by Assaf Kasher (Qualcomm), Draft 0.3 CID148 comment resolution, Doc. IEEE-11-17/1597r1.
      1. Opened the floor for discussion.
      2. Do you agree to accept comment resolution as proposed in doc 11-17-1597-01-00ay-Comment Resolution on CID 148?
      3. Yes: 26, No: 0, Abstain: 0. Straw poll passed.
   3. Presentation by Thomas Handte (Sony), Resolution of remaining preamble comments, Doc. IEEE-11-17/1664r0.
      1. Opened the floor for discussion.
      2. Do you agree to adopt the comment resolutions to CIDs 97, 290, 405, 416, 417, 418, 419, 420, and 519 as proposed in document 11-17/1664r0?
      3. Yes: 24, No: 0, Abstain: 0. Straw poll passed.
   4. Presentation by Thomas Handte (Sony), Clarification of NUC applicability, Doc. IEEE-11-17/1688r0.
      1. Opened the floor for discussion.
      2. Do you agree to include the proposed draft text in 11-17/1688r0 to the IEEE 802.11ay Draft Specification?
      3. Yes: 26, No: 0, Abstain: 0. Straw poll passed.
   5. Presentation by SunWoong Yun (LG Electronics), Further considerations on OFDM TRN in 11ay, Doc. IEEE-11-17/1653r0, and Draft text for further considerations on OFDM TRN in 11ay, Doc. IEEE-11-17/1654r0.
      1. Opened the floor for discussion.
      2. Do you agree to define OFDM TRN subfield as described in (11-17-1654-00-00ay-Draft text for Further Considerations on OFDM TRN in 11ay)?
      3. Yes: 26, No: 0, Abstain: 0. Straw poll passed.
5. Meeting recessed at 15:23 and will resume on Tuesday AM1.

**Tuesday, November 7, 2017, AM1 Session (08:00-10:00)**

Attendance: around 60 people

1. The IEEE 802.11ay task group meeting was called to order at 08:01 by the Chair, Edward Au (Huawei).
2. Agenda Doc. IEEE 802.11-17/1521r5.
3. Chair introduced the TG leadership: Vice Chair: Sang Kim (LG Electronics), Secretary: Jeorge Hurtarte (LitePoint) and Editor: Carlos Cordeiro (Intel)
4. Chair reviewed the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics, and reminders on Task Group rules, including meeting guidelines and attendance recording procedures (slides 4-11)
   1. Chair asked if anyone has any questions about the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics or reminders. No questions.
   2. Chair asked if anybody has any disclosures related to the patent policy. None.
   3. Chair asked if there were any questions on any of the above items. None.
   4. Chair reminded all to record their attendance.
   5. Chair reminded all to upload their presentations.
5. Chair proceeded to discuss the agenda items for this session (slide 64) and asked if anyone wants to add any additional agenda items (none).
6. Presentations
   1. Presentation by Cheng Chen (Intel), Draft text for scheduling for mmWave distribution networks, Doc. IEEE-11-17/1640r0.
      1. Opened the floor for discussion.
      2. Straw Poll: Do you agree to include the text changes proposed in (11-17-1640-00-00ay-Draft text for Scheduling for mmWave Distribution Networks) to the spec draft?
      3. Yes: 33, No: 0, Abstain: 5. Straw poll passed.
   2. Presentation by Djordje Tujkovic (Intel), Beamforming protocol reuse for  
      mmWave distribution networks, Doc. IEEE-11-17/1679r0.
      1. Opened the floor for discussion.
7. Meeting recessed at 10:02 and will resume on Tuesday AM2.

**Tuesday, November 7, 2017, AM2 Session (10:30-12:30)**

Attendance: around 60 people

1. The IEEE 802.11ay task group meeting was called to order at 10:31 by the Chair, Edward Au (Huawei).
2. Agenda Doc. IEEE 802.11-17/1521r6.
3. Chair introduced the TG leadership: Vice Chair: Sang Kim (LG Electronics), Secretary: Jeorge Hurtarte (LitePoint) and Editor: Carlos Cordeiro (Intel)
4. Chair reviewed the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics, and reminders on Task Group rules, including meeting guidelines and attendance recording procedures (slides 4-11)
   1. Chair asked if anyone has any questions about the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics or reminders. No questions.
   2. Chair asked if anybody has any disclosures related to the patent policy. None.
   3. Chair asked if there were any questions on any of the above items. None.
   4. Chair reminded all to record their attendance.
   5. Chair reminded all to upload their presentations.
5. Chair proceeded to discuss the agenda items for this session (slide 67) and asked if anyone wants to add any additional agenda items (none).
6. Presentations
   1. Presentation by Carlos Cordeiro (Intel), Beamforming for mmWave distribution networks, Doc. IEEE-11-17/1646r1.
      1. Opened the floor for discussion.
      2. Straw Poll: Do you agree to include the text changes proposed in (11-17-1640-00-00ay-Draft text for Scheduling for mmWave Distribution Networks) to the spec draft?
      3. Yes: 23, No: 2, Abstain: 29. Straw poll passed.
   2. Presentation by Lochan Verma (Qualcomm), Ack/BA for mmWave distribution networks, Doc. IEEE-11-17/1647r0.
      1. Opened the floor for discussion.
      2. Straw Poll #1: Do you agree to add a new field called ‘slot-category’ in the ‘TDD Slot Schedule element format’ with the following values:

Basic TDD slot: A slot that has no restriction on the type of frames

Data-only TDD slots: A slot that permits only QoS data frames

The above field indicates what type of frames can be carried in the assigned slot

* + 1. Yes: 32, No: 0, Abstain: 18. Straw poll passed.
    2. Straw Poll #2: Do you agree to define ACK/BA transmission rule when SP with TDD channel access is used as follows (not normative text below)

A recipient of a QoS Data frame, or Management frame that solicits immediate acknowledgement shall respond with BlockAck/Ack frame in first reverse slot that permits Ack/BlockAck transmission (where the slot category is set to Basic slot).

* + 1. Yes: 33, No: 0, Abstain: 15. Straw poll passed.
    2. Straw poll #3 is withdrawn from the author.
  1. Presentation by Chris Hansen (Peraso), EDMG spatial stream feedback draft text, Doc. IEEE-11-17/1713r0.
     1. Opened the floor for discussion.
     2. Straw Poll: Do you agree to include the text changes proposed in 17/1713r0 to the IEEE 802.11ay draft amendment?
     3. Yes: 32, No: 0, Abstain: 0. Straw poll passed.

1. Meeting recessed at 12:25 and will resume on Tuesday PM3.

**Tuesday, November 7, 2017, PM3 Session (19:30-21:30)**

Attendance: around 40 people

1. The IEEE 802.11ay task group meeting was called to order at 19:33 by the Chair, Edward Au (Huawei).
2. Agenda Doc. IEEE 802.11-17/1521r7.
3. Chair introduced the TG leadership: Vice Chair: Sang Kim (LG Electronics), Secretary: Jeorge Hurtarte (LitePoint) and Editor: Carlos Cordeiro (Intel)
4. Chair reviewed the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics, and reminders on Task Group rules, including meeting guidelines and attendance recording procedures (slides 4-11)
   1. Chair asked if anyone has any questions about the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics or reminders. No questions.
   2. Chair asked if anybody has any disclosures related to the patent policy. None.
   3. Chair asked if there were any questions on any of the above items. None.
   4. Chair reminded all to record their attendance.
   5. Chair reminded all to upload their presentations.
5. Chair proceeded to discuss the agenda items for this session (slide 70) and asked if anyone wants to add any additional agenda items (none).
6. Presentations
   1. Presentation by Chris Hansen (Peraso), Proposed comment resolution from D0.3, Doc. IEEE-11-17/1714r0.
      1. Opened the floor for discussion.
      2. Straw Poll: Do you agree to accept comment resolution as proposed in 17/1714r0 on CIDs 29, 32, 90, 106, 134, 154, 160, 236, 237, 238, 239, 247, 366, 368, 369, 459, 460, and 475?
      3. Yes: 33, No: 0, Abstain: 0. Straw poll passed.
   2. Presentation by Chris Hansen (Peraso), Vertical MIMO coding for SC and OFDM mode, Doc. IEEE-11-17/1712r0.
      1. Opened the floor for discussion.
      2. Straw Poll: Do you agree to include the text changes proposed in 17/1712r0 to the IEEE 802.11ay draft amendment?
      3. Yes: 33, No: 0, Abstain: 0. Straw poll passed.
   3. Presentation by Xiaofei Wang (InterDigital), Configuration options for distribution networks, Doc. IEEE-11-17/1670r0.
      1. Opened the floor for discussion.
   4. Presentation by Rob Sun (Huawei), On the issues with odd and even node polarity, Doc. IEEE-11-17/1718r1.
      1. Opened the floor for discussion.
7. Meeting recessed at 20:59 and will resume on Wednesday PM2.

**Wednesday, November 8, 2017, PM2 Session (16:00-18:00)**

Attendance: around 45 people

1. The IEEE 802.11ay task group meeting was called to order at 16:00 by the Chair, Edward Au (Huawei).
2. Agenda Doc. IEEE 802.11-17/1521r8.
3. Chair introduced the TG leadership: Vice Chair: Sang Kim (LG Electronics), Secretary: Jeorge Hurtarte (LitePoint) and Editor: Carlos Cordeiro (Intel)
4. Chair reviewed the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics, and reminders on Task Group rules, including meeting guidelines and attendance recording procedures (slides 4-11)
   1. Chair asked if anyone has any questions about the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics or reminders. No questions.
   2. Chair asked if anybody has any disclosures related to the patent policy. None.
   3. Chair asked if there were any questions on any of the above items. None.
   4. Chair reminded all to record their attendance.
   5. Chair reminded all to upload their presentations.
5. Chair proceeded to discuss the agenda items for this session (slide 73) and asked if anyone wants to add any additional agenda items (none).
6. Motion #346: Move to approve contribution 17/1288r2 as the baseline document for the Coexistence Assurance Document:

<https://mentor.ieee.org/802.11/dcn/17/11-17-1288-02-00ay-tgay-coexistence-assurance-document.docx>

* 1. Move: Claudio da Silva
  2. Second: Sang Kim
  3. Result: The motion is passed (20 Yes; 0 No; 1 Abstain)
  4. The Coexistence Assurance Document was approved.

1. Presentations
   1. Presentation by Hiroyuki Motozuka (Panasonic), Comment resolution on CID11, Doc. IEEE-11-17/1676r1.
      1. Opened the floor for discussion. Edits made during the discussion. The contribution the author asked the task group to review and approval was 17/1676r2.
      2. Straw Poll: Do you agree to accept resolutions to CID 11 proposed in doc 11-17/1676r2?
      3. Yes: 27, No: 0, Abstain: 4. Straw poll passed.
   2. Presentation by Hiroyuki Motozuka (Panasonic), Text changes on EDMG A-PPDU format, Doc. IEEE-11-17/1677r0.
      1. Opened the floor for discussion. Edits made during the discussion. The contribution the author asked the task group to review and approval was 17/1677r1.
      2. Straw Poll: Do you agree to include the proposed text changes describing EDMG A-PPDU frame format in 11-17/1677r1 to the Draft amendment?
      3. Yes: 29, No: 0, Abstain: 1. Straw poll passed.
   3. Presentation by Hiroyuki Motozuka (Panasonic), EDMG A-PPDU transmission, Doc. IEEE-11-17/1683r0.
      1. Opened the floor for discussion.
      2. Straw Poll: Do you agree to include the specification text describing the waveform of EDMG SC mode/OFDM mode A-PPDU proposed in 11-17/1683r0 to the Draft amendment?
      3. Yes: 29, No: 0, Abstain: 1. Straw poll passed.
   4. Presentation by Hiroyuki Motozuka (Panasonic), EDMG-Header-A encoding and modulation for EDMG SC/OFDM mode A-PPDU, Doc. IEEE-11-17/1678r0.
      1. Opened the floor for discussion.
      2. Straw Poll: Do you agree to include the EDMG-Header-A encoding and modulation for EDMG SC/OFDM mode A-PPDU proposed in 11-17/1678r0 to the Draft amendment?
      3. Yes: 31, No: 0, Abstain: 1. Straw poll passed.
   5. Presentation by Yutaka Murakami (Panasonic), Phase hopping modulation, Doc. IEEE-11-17/1707r1, and 30.6.6.3.9 Phase Hopping Modulation, Doc. IEEE-11-17/1708r1.
      1. Opened the floor for discussion.
      2. Straw Poll: Do you agree to define the Phase Hopping Modulation as defined in 11-17-1708-01-00ay-phase-hopping-modulation?
      3. Yes: 27, No: 0, Abstain: 1. Straw poll passed.
   6. Presentation by Yutaka Murakami (Panasonic), Comment resolution on phase hopping, Doc. IEEE-11-17/1709r1.
      1. Opened the floor for discussion.
      2. Straw Poll: Do you agree to accept resolutions to CID528 in 11-17-1709-01-00ay-comment-resolution-on-phase-hopping?
      3. No objections noted. Unanimous consent.
2. Motions
   1. Motion #347: Comment Resolution
      1. Move to accept comment resolution for CIDs 14, 157, 521, 522, 523, 37, and 65 as proposed in 17/1642r0, and CID 148 as proposed in 17/1597r1.
      2. Note 1: Contribution number: 17/1642r0, 17/1597r1
      3. Note 2: Straw poll results for 1642r0: 29 Yes; 0 No; 0 Abstain
      4. Note 3: Straw poll results for 1597r1: 26 Yes; 0 No; 0 Abstain
      5. Move: Assaf Kasher
      6. Second: Claudio da Silva
      7. Result: The motion is passed (23 Yes; 0 No; 1 Abstain)
   2. Motion #348: Comment Resolution
      1. Move to accept comment resolution for CIDs 97, 290, 405, 416, 417, 418, 419, 420, and 519 as proposed in 17/1664r0.
      2. Note 1: Contribution number: 17/1664r0
      3. Note 2: Straw poll results: 24 Yes; 0 No; 0 Abstain
      4. Move: Dana Ciochina
      5. Second: Claudio da Silva
      6. Result: The motion is passed (24 Yes; 0 No; 1 Abstain)
   3. Motion #349: Draft
      1. Move to include the text proposed in 17/1688r0 for the clarification of non-uniform constellation application the IEEE 802.11ay draft amendment.
      2. Note 1: Contribution number: 17/1688r0
      3. Note 2: Straw poll results: 26 Yes; 0 No; 0 Abstain
      4. Move: Dana Ciochina
      5. Second: Assaf Kasher
      6. Result: The motion is passed (24 Yes; 0 No; 0 Abstain)
   4. Motion #350: Draft
      1. Move to include the text proposed in 17/1654r0 for the definition of OFDM TRN subfield into the IEEE 802.11ay draft amendment.
      2. Note 1: Contribution number: 17/1653r0, 17/1654r0
      3. Note 2: Straw poll results: 25 Yes; 0 No; 0 Abstain
      4. Move: SunWoong Yun
      5. Second: Sang Kim
      6. Result: The motion is passed (22 Yes; 0 No; 1 Abstain)
   5. Motion #351: Draft
      1. Move to include the text proposed in 17/1640r0 related to a scheduling mechanism for mmWave distribution networks into the IEEE 802.11ay draft amendment.
      2. Note 1: Contribution number: 17/1640r0
      3. Note 2: Straw poll results: 33 Yes; 0 No; 5 Abstain
      4. Move: Claudio da Silva
      5. Second: Assaf Kasher
      6. Result: The motion is passed (22 Yes; 0 No; 2 Abstain)
   6. Motion #352: Draft
      1. Move to include the text proposed in 17/1713r0 related to EDMG spatial stream feedback into the IEEE 802.11ay draft amendment.
      2. Note 1: Contribution number: 17/1713r0
      3. Note 2: Straw poll results: 32 Yes; 0 No; 0 Abstain
      4. Move: Chris Hansen
      5. Second: Claudio da Silva
      6. Result: The motion is passed (25 Yes; 0 No; 1 Abstain)
   7. Motion #353: Comment Resolution
      1. Move to accept comment resolution for CIDs 29, 32, 90, 106, 134, 154, 160, 236, 237, 238, 239, 247, 366, 368, 369, 459, 460, and 475 as proposed in 17/1714r0.
      2. Note 1: Contribution number: 17/1714r0
      3. Note 2: Straw poll results: 33 Yes; 0 No; 0 Abstain
      4. Move: Chris Hansen
      5. Second: Yan Xin
      6. Result: The motion is passed (24 Yes; 0 No; 1 Abstain)
   8. Motion #354: Draft
      1. Move to include the text proposed in 17/1712r0 related to vertical MIMO coding for SC and OFDM modes into the IEEE 802.11ay draft amendment.
      2. Note 1: Contribution number: 17/1712r0
      3. Note 2: Straw poll results: 33 Yes; 0 No; 0 Abstain
      4. Move: Chris Hansen
      5. Second: Assaf Kasher
      6. Result: The motion is passed (23 Yes; 0 No; 1 Abstain)
   9. Motion #355: Comment Resolution
      1. Move to accept comment resolution for CID 11 as proposed in 17/1676r2.
      2. Note 1: Contribution number: 17/1676r2
      3. Note 2: Straw poll results: 27 Yes; 0 No; 4 Abstain
      4. Move: Hiroyuki Motozuka
      5. Second: Sang Kim
      6. Result: The motion is passed (23 Yes; 0 No; 1 Abstain)
   10. Motion #356: Draft
       1. Move to include the text proposed in 17/1677r1 related to the definition of EDMG A-PPDU format into the IEEE 802.11ay draft amendment.
       2. Note 1: Contribution number: 17/1677r1
       3. Note 2: Straw poll results: 29 Yes; 0 No; 1 Abstain
       4. Move: Hiroyuki Motozuka
       5. Second: Sang Kim
       6. Result: The motion is passed (22 Yes; 0 No; 1 Abstain)
   11. Motion #357: Draft
       1. Move to include the text proposed in 17/1683r0 related to the description of the waveform for the EDMG SC mode and OFDM mode A-PPDU transmission into the IEEE 802.11ay draft amendment.
       2. Note 1: Contribution number: 17/1683r0
       3. Note 2: Straw poll results: 29 Yes; 0 No; 1 Abstain
       4. Move: Hiroyuki Motozuka
       5. Second: Sang Kim
       6. Result: The motion is passed (23 Yes; 0 No; 1 Abstain)
   12. Motion #358: Draft
       1. Move to include the text proposed in 17/1678r0 related to the EDMG-Header-A encoding and modulation for EDMG SC mode A-PPDU and OFDM mode A-PPDU into the IEEE 802.11ay draft amendment.
       2. Note 1: Contribution number: 17/1678r0
       3. Note 2: Straw poll results: 31 Yes; 0 No; 1 Abstain
       4. Move: Hiroyuki Motozuka
       5. Second: Assaf Kasher
       6. Result: The motion is passed (22 Yes; 0 No; 1 Abstain)
   13. Motion #359: Draft
       1. Move to include the text proposed in 17/1708r1 for the definition of phase hopping modulation into the IEEE 802.11ay draft amendment.
       2. Note 1: Contribution number: 17/1707r1, 17/1708r1
       3. Note 2: Straw poll results: 27 Yes; 0 No; 1 Abstain
       4. Move: Yutaka Murakami
       5. Second: Assaf Kasher
       6. Result: The motion is passed (22 Yes; 0 No; 1 Abstain)
   14. Motion #360: Comment Resolution
       1. Move to accept comment resolution for CID 528 as proposed in 17/1709r1.
       2. Note 1: Contribution number: 17/1709r1
       3. Note 2: Straw poll results: Approved with unanimous consent
       4. Move: Yutaka Murakami
       5. Second: Claudio da Silva
       6. Result: The motion is passed (24 Yes; 0 No; 1 Abstain)
3. Presentations
   1. Presentation by Jinjing Jiang (Marvell), Multi-TID aggregation for 11ay, Doc. IEEE-11-17/1732r0, and EDMG Multi-TID aggregation support, Doc. IEEE-11-17/1735r1.
      1. Opened the floor for discussion.
      2. Straw Poll: Do you agree to include the proposed text changes on EDMG Multi-TID aggregation support in 11-17/1735r1 to the Draft amendment?
      3. Yes: 25, No: 0, Abstain: 0. Straw poll passed.
   2. Presentation by Jinnan Liu (Huawei), TRN subfield for channel aggregation, Doc. IEEE-11-17/1600r1, and Draft text of CA TRN subfield, Doc. IEEE-11-17/1601r1.
      1. Opened the floor for discussion.
      2. Straw Poll: Do you support to accept the text in 11-17-1601-00-00ay-Draft-Text-for-CA-TRN-Subfield for 11ay Draft text??
      3. Yes: 31, No: 0, Abstain: 1. Straw poll passed.
4. Meeting recessed at 18:00 and will resume on Thursday AM1.

**Thursday, November 9, 2017, AM1 Session (08:00-10:00)**

Attendance: around 40 people

1. The IEEE 802.11ay task group meeting was called to order at 16:00 by the Chair, Edward Au (Huawei).
2. Agenda Doc. IEEE 802.11-17/1521r10.
3. Chair introduced the TG leadership: Vice Chair: Sang Kim (LG Electronics), Secretary: Jeorge Hurtarte (LitePoint) and Editor: Carlos Cordeiro (Intel)
4. Chair reviewed the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics, and reminders on Task Group rules, including meeting guidelines and attendance recording procedures (slides 4-11)
   1. Chair asked if anyone has any questions about the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics or reminders. No questions.
   2. Chair asked if anybody has any disclosures related to the patent policy. None.
   3. Chair asked if there were any questions on any of the above items. None.
   4. Chair reminded all to record their attendance.
   5. Chair reminded all to upload their presentations.
5. Chair proceeded to discuss the agenda items for this session (slide 93) and asked if anyone wants to add any additional agenda items (none).
6. Presentations
   1. Presentation by Li-Hsiang Sun (InterDigital), Resolution to 11ay related CIDs, Doc. IEEE-11-17/1680r2.
      1. Opened the floor for discussion.
      2. Straw Poll: Do you agree to accept resolutions to CID376, 387 in 11-17-1680-02-00ay-comment-resolutions-for-CID 376-387?
      3. Yes: 22, No: 0, Abstain: 0. Straw poll passed.
   2. Presentation by Kome Oteri (InterDigital), Hybrid beamforming protocol design detail, Doc. IEEE-11-17/1689r0, and Draft text for hybrid beamforming protocol design details, Doc. IEEE-11-17/1692r0.
      1. Opened the floor for discussion. Edits made during the discussion. The contributions the author asked the task group to review and approval were 17/1689r1 and 17/1692r1.
      2. Straw Poll: Do you agree to the following:

Include the text proposed in 17/1692r1 for the definition of Hybrid Beamforming Protocol Design Details into the IEEE 802.11ay draft amendment?

* + 1. Yes: 36, No: 0, Abstain: 0. Straw poll passed.
  1. Presentation by Michael Grigat (Deutsche Telecom), 3D ray-tracing and network performance, Doc. IEEE-11-17/1669r0.
     1. Opened the floor for discussion.
  2. Presentation by Carlos Cordeiro (Intel), Comment spreadsheet for CC24, Doc. IEEE-11-17/0649r9.
     1. Opened the floor for discussion. Note that as per the discussion in September 2017 interim, all remaining (14) CIDs were rejected due to the lack of submission.
     2. The following CIDs were discussed and resolved: CIDs 277, 547, 435, 500, 177, 338, 55 and 191.

1. Meeting recessed at 18:00 and will resume on Thursday PM1.

**Thursday, November 9, 2017, PM1 Session (13:30-15:30)**

Attendance: around 50 people

1. The IEEE 802.11ay task group meeting was called to order at 13:30 by the Chair, Edward Au (Huawei).
2. Agenda Doc. IEEE 802.11-17/1521r11.
3. Chair introduced the TG leadership: Vice Chair: Sang Kim (LG Electronics), Secretary: Jeorge Hurtarte (LitePoint) and Editor: Carlos Cordeiro (Intel)
4. Chair reviewed the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics, and reminders on Task Group rules, including meeting guidelines and attendance recording procedures (slides 4-11)
   1. Chair asked if anyone has any questions about the IEEE-SA patent policy, participation in IEEE 802 meetings, logistics or reminders. No questions.
   2. Chair asked if anybody has any disclosures related to the patent policy. None.
   3. Chair asked if there were any questions on any of the above items. None.
   4. Chair reminded all to record their attendance.
   5. Chair reminded all to upload their presentations.
5. Chair proceeded to discuss the agenda items for this session (slide 96) and asked if anyone wants to add any additional agenda items (none).
6. Presentations
   1. Presentation by Claudio da Silva (Intel), Comment resolution for CID 54, Doc. IEEE-11-17/1675r0.
      1. Opened the floor for discussion.
      2. Straw Poll: Do you accept the resolution given in 17/1675r0 to CID 54?
      3. Yes: 33, No: 0, Abstain: 0. Straw poll passed.
7. Motions
   1. Motion #361: Draft
      1. Move to include the text proposed in 17/1735r1 related to an enhancement of the EDMG Multi-TID aggregation support into the IEEE 802.11ay draft amendment.
      2. Note 1: Contribution number: 17/1732r0, 17/1735r1
      3. Note 2: Straw poll results: 25 Yes; 0 No; 0 Abstain
      4. Move: Jinjing Jiang
      5. Second: Claudio da Silva
      6. Result: The motion is passed (26 Yes; 0 No; 0 Abstain)
   2. Motion #362: Draft
      1. Move to include the text proposed in 17/1760r1 related to the definition of the TRN subfield for channel aggregation into the IEEE 802.11ay draft amendment.
      2. Note 1: Contribution number: 17/1600r1, 17/1601r1
      3. Note 2: Straw poll results: 31 Yes; 0 No; 0 Abstain
      4. Move: Tony Han
      5. Second: Claudio da Silva
      6. Result: The motion is passed (29 Yes; 0 No; 0 Abstain)
   3. Motion #363: Comment Resolution
      1. Move to accept comment resolution for CIDs 376 and 387 as proposed in 17/1680r2.
      2. Note 1: Contribution number: 17/1680r2
      3. Note 2: Straw poll results: 22 Yes; 0 No; 0 Abstain
      4. Move: Li-Hsiang Sun
      5. Second: Sang Kim
      6. Result: The motion is passed (27 Yes; 0 No; 0 Abstain)
   4. Motion #364: Draft
      1. Move to include the text proposed in 17/1692r1 for the hybrid beamforming protocol design details into the IEEE 802.11ay draft amendment.
      2. Note 1: Contribution number: 17/1689r1, 17/1692r1
      3. Note 2: Straw poll results: 36 Yes; 0 No; 0 Abstain
      4. Move: Kome Oteri
      5. Second: Li-Hsiang Sun
      6. Result: The motion is passed (25 Yes; 0 No; 0 Abstain)
   5. Motion #365: Comment Resolution
      1. Move to accept comment resolution for CIDs 277, 547, 435, 500, 177, 338, 55, and 191 as proposed in 17/0649r9.
      2. Move: Carlos Cordeiro
      3. Second: Claudio da Silva
      4. Result: The motion is passed (25 Yes; 0 No; 0 Abstain)
   6. Motion #366: Comment Resolution
      1. Move to accept comment resolution for CID54 as proposed in 17/1675r0.
      2. Note 1: Contribution number: 17/1675r0
      3. Note 2: Straw poll results: 33 Yes; 0 No; 0 Abstain
      4. Move: Claudio da Silva
      5. Second: Assaf Kasher
      6. Result: The motion is passed (28 Yes; 0 No; 0 Abstain)
8. Chair proceeded to discuss on the draft readiness and how the task group thinks on moving forward to start a working group technical letter ballot.
9. Motions
   1. Motion #367: WG Letter Ballot
      1. Instruct the editor to prepare TGaY Draft 1.0.

Approve a 30 day Working Group Technical Letter Ballot asking the question “Should TGaY Draft 1.0 be forwarded to Sponsor Ballot?”

* + 1. Move: Carlos Cordeiro
    2. Second: Assaf Kasher
    3. Result: The motion is passed (29 Yes; 1 No; 5 Abstain)

1. Chair reviewed the goals for the January 2018 interim meeting (slide 106).
2. Chair discussed the upcoming teleconference schedule per slide 107 of Doc. IEEE 802.11-17/1188r11. There is no objection.
3. The Task Group AY Orlando plenary meeting was adjourned on November 9, 2017 at 14:55.