IEEE P802.11  
Wireless LANs

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| TGaz September -November 2020 telecon meeting minutes | | | | |
| Date: 2020-01-29 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Assaf Kasher | Qualcomm |  |  | akasher@qti.qualcomm.com |
|  |  |  |  |  |

Abstract

This document contains telecon minutes for the TGaz telecons between the September 14-18, 2020, cancelled interim and the November 2020 interim.

1. **TGaz – September 29th 2020** 
   1. Called to order by TGaz Chair, Jonathan Segev (Intel Corporation) and Vice Chair and secretary (active), Assaf Kasher (Qualcomm), at **10:02am PDT,**
   2. Agenda Doc. **IEEE 802.11-20/01370r12 (in progress - slide 31)**
   3. Review Patent Policy and logistics
      1. Chair reviewed the IEEE-SA Patent Policy, duty to inform, the guideline for IEEE WG meetings and logistics – no clarifications requested.
      2. Chair called for any potentially essential patents, no one stepped forward.
      3. Chair reminded participants to register their attendance using imat.
      4. Chair reviewed other guidelines for IEEE meetings, asked if any clarifications are requested, no one stepped forward.
      5. Chair reviewed IEEE copyright policy, – no clarification requested
      6. Chair reviewed IEEE code of ethics and WG participation as an individual professional. – no clarification requested
      7. Chair reviewed IEEE 802 ground rules
      8. Recorded Participation requirement  
         Headcount: ~40 present

* 1. Review Agenda
     1. Agenda review and setting: reviewed submission list for the meeting
     2. Review submissions
        1. 11-20-1410 80 Editorial CIDs
  2. Roy Want presented 11-20-1410
     1. Strawpoll  
        Do you agree to the CIDs resolutions as depicted in document 11-20-1410r0  
        Results: (Y/N/A) 10/0/1
  3. Review of submission pipeline
     1. 11-20-1501 Erik Lindskog LMR Time Stamps CR
     2. 11-20-1410 Roy Want 80 Editorial CIDs CR
     3. 11-20-1502 Erik Lindskog Some LB 249 Passive TB Ranging CR – Part III CR
     4. 11-20-1373 Qinghua Li Attacks to Fully Random OFDM Sounding Signal Technical
     5. 11-20-1245 Christian Berger Tx Power control for Non-TB Ranging CR – follow up
  4. Chair asked to modify the agenda to include presentation of 11-20-1245 Christian Berger Tx Power control for Non-TB Ranging CR – follow up
     1. No objection
  5. Christian Berger presented 11-20-1245
     1. Revision 2 uploaded
        1. Adjusted to draft 2.3
        2. Removed RSSI feedback type
     2. Q: It is to fix the reporting type vs the previous version. The text in the last changed paragraph in page 3 is not clear
     3. R: It is a copying error – fixed
     4. C: I am supportive of this
     5. Q: at which point does the EVM cause CRC errors that mean no feedback is received
     6. R: Sometime, the EVM is so bad that the packet is lost, not clear how the ranging performance is affected, it depends on the algorithm.
     7. **Strawpoll**:  
        Do you agree to the resolution of CID 3883 as depicted in 11-20-1245r3  
        **Results**: (Y/N/A) : (14/6/5)
  6. AOB
  7. Adjourn at 11:05 PDT
  8. Attendance:

|  |  |  |  |
| --- | --- | --- | --- |
| TGaz | 9/29 | Berger, Christian | NXP Semiconductors |
| TGaz | 9/29 | Cao, Rui | NXP Semiconductors |
| TGaz | 9/29 | Carney, William | Sony Corporation |
| TGaz | 9/29 | Chen, Cheng | Intel Corporation |
| TGaz | 9/29 | Cheng, Xilin | NXP Semiconductors |
| TGaz | 9/29 | Chu, Liwen | NXP Semiconductors |
| TGaz | 9/29 | Das, Dibakar | Intel Corporation |
| TGaz | 9/29 | Grandhe, Niranjan | NXP Semiconductors |
| TGaz | 9/29 | Henry, Jerome | Cisco Systems, Inc. |
| TGaz | 9/29 | Kasher, Assaf | Qualcomm Incorporated |
| TGaz | 9/29 | Lindskog, Erik | SAMSUNG |
| TGaz | 9/29 | Li, Qinghua | Intel Corporation |
| TGaz | 9/29 | Raissinia, Alireza | Qualcomm Incorporated |
| TGaz | 9/29 | Rosdahl, Jon | Qualcomm Technologies, Inc. |
| TGaz | 9/29 | Segev, Jonathan | Intel Corporation |
| TGaz | 9/29 | Sosack, Robert | Molex Incorporated |
| TGaz | 9/29 | Wang, Chao Chun | MediaTek Inc. |
| TGaz | 9/29 | Wang, Qi | Apple, Inc. |
| TGaz | 9/29 | Wang, Yi-Hsiu | Zeku |
| TGaz | 9/29 | Want, Roy | Google |
| TGaz | 9/29 | Wu, Tianyu | Apple, Inc. |
| TGaz | 9/29 | Zeng, Ruochen | NXP Semiconductors |

1. **TGaz – September 30th 2020** 
   1. Called to order by TGaz Chair, Jonathan Segev (Intel Corporation) and Vice Chair and secretary (active), Assaf Kasher (Qualcomm), at **10:02am PDT,**
   2. Agenda Doc. **IEEE 802.11-20/01370r12 (in progress - slide 31)**
   3. Review Patent Policy and logistics
      1. Chair reviewed the IEEE-SA Patent Policy, duty to inform, the guideline for IEEE WG meetings and logistics – no clarifications requested.
      2. Chair called for any potentially essential patents, no one stepped forward.
      3. Chair reminded participants to register their attendance using imat.
      4. Chair reviewed other guidelines for IEEE meetings, asked if any clarifications are requested, no one stepped forward.
      5. Chair reviewed IEEE copyright policy, – no clarification requested
      6. Chair reviewed IEEE code of ethics and WG participation as an individual professional. – no clarification requested
      7. Chair reviewed IEEE 802 ground rules
      8. Recorded Participation requirement  
         Headcount: ~15 present
   4. Agenda Setting
   5. Restrawpoll of 11-20-1392 to reflect correct document version
      1. **Strawpoll**:  
         We agree to the resolutions of CIDs 3594, 3599, 3600, 3904, 3601, 3603, 3605, 3608, 3621, 3622, 3624, 3628, 3683, 3813, 3815, 3861 as depicted in document 11-20-1392r2.
      2. Results (Y/N/A) (10/0/1)
   6. Erik Lindskog presented 11-20-1502
      1. Title: Some LB 249 Passive TB Ranging CR - Part III
      2. CID 3052, 3053, 3874
         1. Request to add a reference in the resolution to the previous motion number
         2. Accepted
      3. CID 3557: Revise
      4. CID 3656: Revise
      5. CID 3658: needs more time for discussion
      6. CID 3804: Revise
      7. CID 3301, 3152, 3841
      8. CID 3310, Revise
      9. **Strawpoll** : We agree to the resolution of CIDs 3052, 3053, 3874, 3557, 3656, 3804, 3301, 3152, 3841, 3310 as depicted in document 11-20-1502r3
      10. **Results**: (Y/N/A) (10/0/0)
   7. Erik Lindskog presented 11-20-1501
      1. CID 3277, 3278 – for further review
   8. Submission pipeline review
   9. Review Scheduled telecon:
   10. AOB
   11. Adjourned at: 12:00PM PDT
   12. Attendance:

|  |  |  |  |
| --- | --- | --- | --- |
| TGaz | 9/30 | Berger, Christian | NXP Semiconductors |
| TGaz | 9/30 | Bhandaru, Nehru | Broadcom Corporation |
| TGaz | 9/30 | Das, Dibakar | Intel Corporation |
| TGaz | 9/30 | Grandhe, Niranjan | NXP Semiconductors |
| TGaz | 9/30 | Kasher, Assaf | Qualcomm Incorporated |
| TGaz | 9/30 | Li, Qinghua | Intel Corporation |
| TGaz | 9/30 | Lindskog, Erik | SAMSUNG |
| TGaz | 9/30 | Raissinia, Alireza | Qualcomm Incorporated |
| TGaz | 9/30 | Segev, Jonathan | Intel Corporation |
| TGaz | 9/30 | Wang, Chao Chun | MediaTek Inc. |
| TGaz | 9/30 | Wang, Qi | Apple, Inc. |
| TGaz | 9/30 | Wang, Yi-Hsiu | Zeku |
| TGaz | 9/30 | Zeng, Ruochen | NXP Semiconductors |

1. **TGaz – October 1st , 2020** 
   1. Called to order by TGaz Chair, Jonathan Segev (Intel Corporation) and Vice Chair and secretary (active), Assaf Kasher (Qualcomm), at **10:02am PDT,**
   2. Agenda Doc. **IEEE 802.11-20/01370r12 (in progress - slide 31)**
   3. Review Patent Policy and logistics
      1. Chair reviewed the IEEE-SA Patent Policy, duty to inform, the guideline for IEEE WG meetings and logistics – no clarifications requested.
      2. Chair called for any potentially essential patents, no one stepped forward.
      3. Chair reminded participants to register their attendance using imat.
      4. Chair reviewed other guidelines for IEEE meetings, asked if any clarifications are requested, no one stepped forward.
      5. Chair reviewed IEEE copyright policy, – no clarification requested
      6. Chair reviewed IEEE code of ethics and WG participation as an individual professional. – no clarification requested
      7. Chair reviewed IEEE 802 ground rules
      8. Recorded Participation requirement  
         Headcount: ~14 present
   4. Agenda Setting
      1. 11-20-0340 LB249\_FTM\_negotiation\_and\_exchange (Girish Madpuwar) (1hr)
      2. 11-20-1553 LB 249 some DMG CIDs part 1 (Assaf Kasher) (1hr, as time permits)
      3. 11-20-1501 LMR Time Stamps (Erik Lindskog) – as time permits
   5. Girish Madpuwar presented 11-20-0340
      1. CID 3066 – Accept
      2. CID 3123 – Needs more time
         1. Q: in the figures Generation Information has been changed to Counter are we going the other way here
         2. C: is a new SAC and counter
         3. C: original contributor said they are the same.
      3. CID 3760, 3914, 3912, 3913 revise
         1. C: the figures have already been modified to include some of the changes.
         2. C: Editor will send the updated version of the figures so there will be no more change over change.
      4. CID 3771 – Revise
      5. CID 3754 – Revised (combined with CID 3124)
         1. C: modify non-SAC to zero-SAC
         2. R: OK with that.
      6. CID 3842 – Accept
      7. CID 3777, 3778: Revise
      8. CID 3782: Revised
      9. CID 3783: Revised
      10. CID 3779, 3780: Revise
   6. Review submission pipeline
   7. Review telecon schedule
   8. AOB
   9. Attendance:

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| --- | --- | --- | --- |
| TGaz | 10/1 | Berger, Christian | NXP Semiconductors |
| TGaz | 10/1 | Bhandaru, Nehru | Broadcom Corporation |
| TGaz | 10/1 | Kasher, Assaf | Qualcomm Incorporated |
| TGaz | 10/1 | Lindskog, Erik | SAMSUNG |
| TGaz | 10/1 | Madpuwar, Girish | Broadcom Corporation |
| TGaz | 10/1 | Raissinia, Alireza | Qualcomm Incorporated |
| TGaz | 10/1 | Rosdahl, Jon | Qualcomm Technologies, Inc. |
| TGaz | 10/1 | Segev, Jonathan | Intel Corporation |
| TGaz | 10/1 | Sosack, Robert | Molex Incorporated |
| TGaz | 10/1 | Wang, Qi | Apple, Inc. |
| TGaz | 10/1 | Wang, Yi-Hsiu | Zeku |
| TGaz | 10/1 | Want, Roy | Google |
| TGaz | 10/1 | Yee, Peter | NSA-CSD |
| TGaz | 10/1 | Zeng, Ruochen | NXP Semiconductors |

1. **TGaz – October 6th , 2020** 
   1. Called to order by TGaz Chair, Jonathan Segev (Intel Corporation) and Vice Chair and secretary (active), Assaf Kasher (Qualcomm), at **10:02am PDT,**
   2. Agenda Doc. **IEEE 802.11-20/01370r16 (in progress - slide 31)**
   3. Review Patent Policy and logistics
      1. Chair reviewed the IEEE-SA Patent Policy, duty to inform, the guideline for IEEE WG meetings and logistics – no clarifications requested.
      2. Chair called for any potentially essential patents, no one stepped forward.
      3. Chair reminded participants to register their attendance using imat.
      4. Chair reviewed other guidelines for IEEE meetings, asked if any clarifications are requested, no one stepped forward.
      5. Chair reviewed IEEE copyright policy, – no clarification requested
      6. Chair reviewed IEEE code of ethics and WG participation as an individual professional. – no clarification requested
      7. Chair reviewed IEEE 802 ground rules
      8. Recorded Participation requirement  
         Headcount: ~17 present
   4. Agenda
      1. 11-20-0340 LB249\_FTM\_negotiation\_and\_exchange (Girish Madpuwar) – for completion (1hr)
      2. 11-20-1553 LB 249 some DMG CIDs part 1 (Assaf Kasher) – 1hr (as time permits)
   5. Girish Mapuwar presented 11-20-0340 (continued)
      1. CID 3783 – Revise
      2. CID 3625 – Reject
      3. CID 3768 – Revised
      4. CID 3760, 3914, 3912,3913
      5. CID 3123, 3124, 3754 – wait until D2.4 is ready.
      6. CID 3782 – Revised
      7. CID 3843 – Accept
      8. **Strawpoll:**   
         We agree to the resolutions of CIDs 3066, 3760, 3842, 3843, 3912, 3913, 3914, 3771, 3777, 3778, 3779, 3780, 3782, 3783, 3625, 3768 as depicted in document 11-20-0340r8.  
         **Results: 12/0/1**
   6. Assaf Kasher (Qualcomm) presented document 11-20/**1553r0**
      1. **Title:** LB249-Some-DMG-CIDs-Part-I
      2. **Summary**: This document proposes resolutions to CIDs: 3000, 3018, 3054, 3055, 3056, 3057, 3058, 3059, 3060, 3061, 3153, 3154, 3170, 3175. Editor instruction based on D2.3
      3. Discussion:
      4. C. #3054 Confirming dash removed.  R. Yes.
      5. C.#3055  Please ensure the section  number has a title reference.
      6. TODO for editor: Check 10.42.10.5 has the correct section title reference.
      7. C. #3170: This clause 11, so somewhere else there must be a description of the parameters
      8. R. This is specific to DMG ranging parameters.
      9. **Strawpoll**We agree to the resolutions of CIDs 3000, 3018, 3054, 3055, 3056, 3057, 3058, 3059, 3060, 3061, 3153, 3154, 3175 as depicted in document 11-20-1553r1.  
         **Results** (Y/N/A): 6/0/1
   7. Chair reviewed Telecon Schedule
   8. Chair reviewed submission pipeline
   9. Attendance

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| TGaz | 10/6 | Berger, Christian | NXP Semiconductors |
| TGaz | 10/6 | Das, Dibakar | Intel Corporation |
| TGaz | 10/6 | Grandhe, Niranjan | NXP Semiconductors |
| TGaz | 10/6 | Kasher, Assaf | Qualcomm Incorporated |
| TGaz | 10/6 | Lindskog, Erik | SAMSUNG |
| TGaz | 10/6 | Madpuwar, Girish | Broadcom Corporation |
| TGaz | 10/6 | NANDAGOPALAN, SAI SHANKAR | Cypress Semiconductor Corporation |
| TGaz | 10/6 | Pare, Thomas | MediaTek Inc. |
| TGaz | 10/6 | Raissinia, Alireza | Qualcomm Incorporated |
| TGaz | 10/6 | Segev, Jonathan | Intel Corporation |
| TGaz | 10/6 | Wang, Qi | Apple, Inc. |
| TGaz | 10/6 | Wang, Yi-Hsiu | Zeku |
| TGaz | 10/6 | Want, Roy | Google |
| TGaz | 10/6 | Zeng, Ruochen | NXP Semiconductors |

1. **TGaz – October 7th , 2020** 
   1. Called to order by TGaz Chair, Jonathan Segev (Intel Corporation) and Vice Chair and secretary (active), Assaf Kasher (Qualcomm), at **10:02am PDT,**
   2. Agenda Doc. **IEEE 802.11-20/01370r19 (in progress - slide 92)**
   3. Review Patent Policy and logistics
      1. Chair reviewed the IEEE-SA Patent Policy, duty to inform, the guideline for IEEE WG meetings and logistics – no clarifications requested.
      2. Chair called for any potentially essential patents, no one stepped forward.
      3. Chair reminded participants to register their attendance using imat.
      4. Chair reviewed other guidelines for IEEE meetings, asked if any clarifications are requested, no one stepped forward.
      5. Chair reviewed IEEE copyright policy, – no clarification requested
      6. Chair reviewed IEEE code of ethics and WG participation as an individual professional. – no clarification requested
      7. Chair reviewed IEEE 802 ground rules
      8. Recorded Participation requirement  
         Headcount: ~17 present
   4. Agenda
      1. 11-20-1501 LMR Time Stamps (Erik Lindskog) (25)
      2. 11-20-1581 Some LB249 Passive TB CR
   5. Roy Want presented comment resolution status
      1. Document 11-20-1319
      2. There are 106 technical CIDs that were not strawpalled
      3. There are 12 unassigned technical CIDs
   6. Erik Lindskog presented 11-20-1501
      1. CID 3274: Reject
      2. CID 3047: Reject
      3. CID 3275: Reject
      4. CID 3234: Reject commenter ready to withdraw.
      5. **Strawpoll:**We agree to the resolutions of CIDS 3274, 3047 3275 3234 as depicted in document 11-20-1501r2  
         **Results** 11/0/2
   7. Erik Lindskog presented 11-20-1581
      1. CID 3658 Revise
      2. **Strawpoll:**We agree to the resolution of CID 3658 as depicted in document 11-20-1581r2
      3. **Result** 9/03
   8. Roy Want presented 11-20-0017 – open CIDs review
      1. Technical and General unassigned – 19
      2. CID 3328, 3036 – Reject (resolved by the group)
      3. CID 3341 – will request guidance from WG editor and IEEE staff
      4. CID 3365 – Reject – withdrawn by commenter
      5. CID 3451 – Revise
   9. OOB
   10. Adjourned at 12:00 PDT
   11. Attendance:

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| --- | --- | --- | --- |
| TGaz | 10/7 | Berger, Christian | NXP Semiconductors |
| TGaz | 10/7 | Bhandaru, Nehru | Broadcom Corporation |
| TGaz | 10/7 | Das, Dibakar | Intel Corporation |
| TGaz | 10/7 | Grandhe, Niranjan | NXP Semiconductors |
| TGaz | 10/7 | Kasher, Assaf | Qualcomm Incorporated |
| TGaz | 10/7 | Lindskog, Erik | SAMSUNG |
| TGaz | 10/7 | NANDAGOPALAN, SAI SHANKAR | Cypress Semiconductor Corporation |
| TGaz | 10/7 | Raissinia, Alireza | Qualcomm Incorporated |
| TGaz | 10/7 | Rosdahl, Jon | Qualcomm Technologies, Inc. |
| TGaz | 10/7 | Segev, Jonathan | Intel Corporation |
| TGaz | 10/7 | Sosack, Robert | Molex Incorporated |
| TGaz | 10/7 | Wang, Chao Chun | MediaTek Inc. |
| TGaz | 10/7 | Wang, Qi | Apple, Inc. |
| TGaz | 10/7 | Wang, Yi-Hsiu | Zeku |
| TGaz | 10/7 | Want, Roy | Google |
| TGaz | 10/7 | Yee, Peter | NSA-CSD |
| TGaz | 10/7 | Zeng, Ruochen | NXP Semiconductors |

1. **TGaz – October 8th , 2020** 
   1. Called to order by TGaz Chair, Jonathan Segev (Intel Corporation) and Vice Chair and secretary (active), Assaf Kasher (Qualcomm), at **10:02am PDT,**
   2. Agenda Doc. **IEEE 802.11-20/01370r19 (in progress - slide 92)**
   3. Review Patent Policy and logistics
      1. Chair reviewed the IEEE-SA Patent Policy, duty to inform, the guideline for IEEE WG meetings and logistics – no clarifications requested.
      2. Chair called for any potentially essential patents, no one stepped forward.
      3. Chair reminded participants to register their attendance using imat.
      4. Chair reviewed other guidelines for IEEE meetings, asked if any clarifications are requested, no one stepped forward.
      5. Chair reviewed IEEE copyright policy, – no clarification requested
      6. Chair reviewed IEEE code of ethics and WG participation as an individual professional. – no clarification requested
      7. Chair reviewed IEEE 802 ground rules

Recorded Participation requirement  
Headcount: ~17 present

* 1. Agenda
     1. 11-20-1437 LB249 for Various Comments (Roy Want /Jonathan Segev) (as needed)
     2. 11-20-1590 LB249 LB249-Some-DMG-CIDs-Part-II – Assaf Kasher (if time permits)
  2. Jonathan Segev presented 11-20-1437
     1. CID 3477 - revise
     2. CID 3482 – reject
     3. CID 3539 - Revised
     4. CID 3570 – reject
     5. CID 3467
     6. 3643 – reject
     7. CID 3826 reject
     8. CID 3850 - resolution will be provided by Qi Wang
     9. CID 3851, 3852- resolution will be provided by Qi Wang
     10. CID 3864-revise
     11. CID 3889 – revised
     12. CID 3898 – Reject
     13. CID 3108 –
     14. CID 3236 – Reject
  3. Submission pipeline review
  4. Review Telecon Schedule
  5. AOB
  6. Attendance

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| --- | --- | --- | --- |
| TGaz | 10/8 | Aldana, Carlos | Facebook |
| TGaz | 10/8 | Berger, Christian | NXP Semiconductors |
| TGaz | 10/8 | Bhandaru, Nehru | Broadcom Corporation |
| TGaz | 10/8 | Das, Dibakar | Intel Corporation |
| TGaz | 10/8 | Grandhe, Niranjan | NXP Semiconductors |
| TGaz | 10/8 | Kasher, Assaf | Qualcomm Incorporated |
| TGaz | 10/8 | Lindskog, Erik | SAMSUNG |
| TGaz | 10/8 | Pare, Thomas | MediaTek Inc. |
| TGaz | 10/8 | Raissinia, Alireza | Qualcomm Incorporated |
| TGaz | 10/8 | Rosdahl, Jon | Qualcomm Technologies, Inc. |
| TGaz | 10/8 | Segev, Jonathan | Intel Corporation |
| TGaz | 10/8 | Sosack, Robert | Molex Incorporated |
| TGaz | 10/8 | Wang, Chao Chun | MediaTek Inc. |
| TGaz | 10/8 | Wang, Qi | Apple, Inc. |
| TGaz | 10/8 | Wang, Yi-Hsiu | Zeku |
| TGaz | 10/8 | Want, Roy | Google |
| TGaz | 10/8 | Yee, Peter | NSA-CSD |
| TGaz | 10/8 | Zeng, Ruochen | NXP Semiconductors |

1. **TGaz – October 13th , 2020** 
   1. Called to order by TGaz Chair, Jonathan Segev (Intel Corporation) and Vice Chair and secretary (active), Assaf Kasher (Qualcomm), at **10:02am PDT,**
   2. Agenda Doc. **IEEE 802.11-20/01370r22 (in progress - slide 108)**
   3. Review Patent Policy and logistics
      1. Chair reviewed the IEEE-SA Patent Policy, duty to inform, the guideline for IEEE WG meetings and logistics – no clarifications requested.
      2. Chair called for any potentially essential patents, no one stepped forward.
      3. Chair reminded participants to register their attendance using imat.
      4. Chair reviewed other guidelines for IEEE meetings, asked if any clarifications are requested, no one stepped forward.
      5. Chair reviewed IEEE copyright policy, – no clarification requested
      6. Chair reviewed IEEE code of ethics and WG participation as an individual professional. – no clarification requested
      7. Chair reviewed IEEE 802 ground rules

Recorded Participation requirement  
Headcount: ~20 present

* 1. Agenda
     1. 11-20-1437 LB249 for Various Comments (Roy Want /Jonathan Segev) (as needed)
     2. 11-20-1590 LB249 LB249-Some-DMG-CIDs-Part-II – Assaf Kasher (if time permits)
  2. Jonathan Segev Presented 11-20-1437r1 (continues)
     1. CID 3482 Revise
     2. CID 3108 Revise – a duplicate of 3301
     3. CID 3238 –
        1. C: Much discussion is required for this test
        2. C: This puts a requirement on a receiver implementation that should not be imposed
        3. C: The number of LTFs is there to support verification algorithms that are part of the security
        4. C: the commenter claims that it should be up to the ISTA to choose the level of security
        5. C: We believe, and there are a lot of studies that show that more than one LTF is necessary for Security verification.
     4. **Strawpoll:**   
        **Proposed Resolution #1: Reject**The requirement was specified based on substantial technical discussion in the group. No technical material was presented remove this requirement  
        **Proposed resolution: #2: Accept**TGaz editor remove P121L11-12  
        **Not taken – commenter withdrew comment – resolution is reject.**
     5. **CID 3239 – commenter withdrew the comment**
     6. **Strawpoll:**We agree to the resolution of CIDs 3328, 3306, 3341,3365, 3541, 3477, 3482, 3529, 3570, 3643, 3826, 2864, 3889, 3898, 3108, 3238, 3239, as depicted in document 11-20-1437r2  
        Results:
     7. **Attendance: 14/0/1**

|  |  |  |  |
| --- | --- | --- | --- |
| TGaz | 10/13/2020 | Aldana, Carlos | Facebook |
| TGaz | 10/13/2020 | Berger, Christian | NXP Semiconductors |
| TGaz | 10/13/2020 | Bhandaru, Nehru | Broadcom Corporation |
| TGaz | 10/13/2020 | Das, Dibakar | Intel Corporation |
| TGaz | 10/13/2020 | Grandhe, Niranjan | NXP Semiconductors |
| TGaz | 10/13/2020 | Kasher, Assaf | Qualcomm Incorporated |
| TGaz | 10/13/2020 | Lindskog, Erik | SAMSUNG |
| TGaz | 10/13/2020 | NANDAGOPALAN, SAI SHANKAR | Cypress Semiconductor Corporation |
| TGaz | 10/13/2020 | Pare, Thomas | MediaTek Inc. |
| TGaz | 10/13/2020 | Raissinia, Alireza | Qualcomm Incorporated |
| TGaz | 10/13/2020 | Rosdahl, Jon | Qualcomm Technologies, Inc. |
| TGaz | 10/13/2020 | Segev, Jonathan | Intel Corporation |
| TGaz | 10/13/2020 | Wang, Qi | Apple, Inc. |
| TGaz | 10/13/2020 | Wang, Yi-Hsiu | Zeku |
| TGaz | 10/13/2020 | Want, Roy | Google |
| TGaz | 10/13/2020 | Wu, Tianyu | Apple, Inc. |
| TGaz | 10/13/2020 | Yee, Peter | NSA-CSD |

1. **TGaz – October 14th , 2020** 
   1. Called to order by TGaz Chair, Jonathan Segev (Intel Corporation) and Vice Chair and secretary (active), Assaf Kasher (Qualcomm), at **10:02am PDT,**
   2. Agenda Doc. **IEEE 802.11-20/01370r22 (in progress - slide 108)**
   3. Review Patent Policy and logistics
      1. Chair reviewed the IEEE-SA Patent Policy, duty to inform, the guideline for IEEE WG meetings and logistics – no clarifications requested.
      2. Chair called for any potentially essential patents, no one stepped forward.
      3. Chair reminded participants to register their attendance using imat.
      4. Chair reviewed other guidelines for IEEE meetings, asked if any clarifications are requested, no one stepped forward.
      5. Chair reviewed IEEE copyright policy, – no clarification requested
      6. Chair reviewed IEEE code of ethics and WG participation as an individual professional. – no clarification requested
      7. Chair reviewed IEEE 802 ground rules

Recorded Participation requirement  
Headcount: ~14 present

* 1. Assaf Kasher Presented 11-20-1590
     1. Result 12/0/2
  2. Presentation Pipeline:
     1. 1556
     2. 1555
     3. 11-20-1649
  3. Review Telecon Schedule
  4. AOB –
  5. Adjourned at 11:35 PDT
  6. Attendance:

|  |  |  |  |
| --- | --- | --- | --- |
| TGaz | 10/14/2020 | Berger, Christian | NXP Semiconductors |
| TGaz | 10/14/2020 | Bhandaru, Nehru | Broadcom Corporation |
| TGaz | 10/14/2020 | Grandhe, Niranjan | NXP Semiconductors |
| TGaz | 10/14/2020 | Kasher, Assaf | Qualcomm Incorporated |
| TGaz | 10/14/2020 | Raissinia, Alireza | Qualcomm Incorporated |
| TGaz | 10/14/2020 | Rosdahl, Jon | Qualcomm Technologies, Inc. |
| TGaz | 10/14/2020 | Segev, Jonathan | Intel Corporation |
| TGaz | 10/14/2020 | Wang, Chao Chun | MediaTek Inc. |
| TGaz | 10/14/2020 | Wang, Qi | Apple, Inc. |
| TGaz | 10/14/2020 | Wang, Yi-Hsiu | Zeku |
| TGaz | 10/14/2020 | Yee, Peter | NSA-CSD |
| TGaz | 10/14/2020 | Zeng, Ruochen | NXP Semiconductors |

1. **TGaz – October 15th , 2020** 
   1. Called to order by TGaz Chair, Jonathan Segev (Intel Corporation) and Vice Chair and secretary (active), Assaf Kasher (Qualcomm), at **10:02am PDT,**
   2. Agenda Doc. **IEEE 802.11-20/01370r22 (in progress - slide 121)**
   3. Review Patent Policy and logistics
      1. Chair reviewed the IEEE-SA Patent Policy, duty to inform, the guideline for IEEE WG meetings and logistics – no clarifications requested.
      2. Chair called for any potentially essential patents, no one stepped forward.
      3. Chair reminded participants to register their attendance using imat.
      4. Chair reviewed other guidelines for IEEE meetings, asked if any clarifications are requested, no one stepped forward.
      5. Chair reviewed IEEE copyright policy, – no clarification requested
      6. Chair reviewed IEEE code of ethics and WG participation as an individual professional. – no clarification requested
      7. Chair reviewed IEEE 802 ground rules

Recorded Participation requirement  
Headcount: ~11 present

* 1. Agenda Setting:
     1. 11-20-1649 LB249 Secure-LTF and other CIDs (Girish Madpuwar).
     2. 11-20-1603 comment resolution LB29 CID 3226 (Christian Berger)
     3. 11-20-1653 LMR times stamp part III (11-20-1555 supporting material) Erik Lindskog
  2. Girish Madpuwar presented 10-20-1649
     1. Cid 3124 3754 3123 – need more review by a larger group
     2. CID 3450 – Accepted – no agreement – more offline discussion is needed
  3. Christian Berger presented 11-20-1603
     1. CID 3226 Revised
     2. **Strawpoll**:   
        we agree to the resolution of CID 3336 as depicted in document 11-20-1603r2  
        Results: (Y/N/A) (12/0/0)
  4. Erik Lindskog 11-20-1663/1555
     1. CID 3277, 3278,3273 -Revised – needs more review
  5. Review submission pipeline
  6. Review telecon schedule (slide 124)
  7. AOB?
  8. Adjourned at 11:00 PDT
  9. Attendance:

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| --- | --- | --- | --- |
| TGaz | 10/15 | Berger, Christian | NXP Semiconductors |
| TGaz | 10/15 | Bhandaru, Nehru | Broadcom Corporation |
| TGaz | 10/15 | Das, Dibakar | Intel Corporation |
| TGaz | 10/15 | Grandhe, Niranjan | NXP Semiconductors |
| TGaz | 10/15 | Haasz, Jodi | IEEE Standards Association (IEEE-SA) |
| TGaz | 10/15 | Lindskog, Erik | SAMSUNG |
| TGaz | 10/15 | Madpuwar, Girish | Broadcom Corporation |
| TGaz | 10/15 | Raissinia, Alireza | Qualcomm Incorporated |
| TGaz | 10/15 | Segev, Jonathan | Intel Corporation |
| TGaz | 10/15 | Sosack, Robert | Molex Incorporated |
| TGaz | 10/15 | Wang, Qi | Apple, Inc. |
| TGaz | 10/15 | Wang, Yi-Hsiu | Zeku |
| TGaz | 10/15 | Yee, Peter | NSA-CSD |
| TGaz | 10/15 | Zeng, Ruochen | NXP Semiconductors |

1. **TGaz – October 20th , 2020** 
   1. Called to order by TGaz Chair, Jonathan Segev (Intel Corporation) and Vice Chair and secretary (active), Assaf Kasher (Qualcomm), at **10:02am PDT,**
   2. Agenda Doc. **IEEE 802.11-20/01370r25 (in progress - slide 121)**
   3. Review Patent Policy and logistics
      1. Chair reviewed the IEEE-SA Patent Policy, duty to inform, the guideline for IEEE WG meetings and logistics – no clarifications requested.
      2. Chair called for any potentially essential patents, no one stepped forward.
      3. Chair reminded participants to register their attendance using imat.
      4. Chair reviewed other guidelines for IEEE meetings, asked if any clarifications are requested, no one stepped forward.
      5. Chair reviewed IEEE copyright policy, – no clarification requested
      6. Chair reviewed IEEE code of ethics and WG participation as an individual professional. – no clarification requested
      7. Chair reviewed IEEE 802 ground rules

Recorded Participation requirement  
Headcount: ~14 present

* 1. Agenda:
     1. Review LB249 status
     2. 11-20-1654 proposed resolutions to a few 11az LB249 CIDs (Qi Wang) – 20min
     3. 11-20-1666 Misc CIDs clause 9 and 11 (Dibakar Das) – 1hr
  2. Roy Want presented 11-20-1392
     1. Review of status of comment resolution – 91 remaining – pre-strawpoll
  3. Qi Wang presented 11-20-1654
     1. Title: proposed resolutions to a few 11az LB249
     2. CID 3851, 3850, 3852 – revise
     3. Strawpoll  
        We agree to the resolution of CIDs 3850 3851, 3852, as depicted in document 11-20-1654r1  
        Results: (Y/N/A) 8/0/2
  4. Group resolves comments:
     1. CID 3772 – assigned to Christian Berger
     2. CID 3773 – reassigned to Assaf Kasher
     3. CID 3775 – assigned to Girish Madpuwar
     4. CID 3006 – revised by the group.
     5. CID 3007 – Revised – technical duplicate of CID3884 – resolved in D2.4
  5. Submission pipeline
  6. AOB?
  7. Adjourned at 12:00 PDT.
  8. Attendance:

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| --- | --- | --- | --- |
| TGaz | 10/20 | Bahn, Christy | IEEE STAFF |
| TGaz | 10/20 | Berger, Christian | NXP Semiconductors |
| TGaz | 10/20 | Bhandaru, Nehru | Broadcom Corporation |
| TGaz | 10/20 | Grandhe, Niranjan | NXP Semiconductors |
| TGaz | 10/20 | Kasher, Assaf | Qualcomm Incorporated |
| TGaz | 10/20 | Pare, Thomas | MediaTek Inc. |
| TGaz | 10/20 | Raissinia, Alireza | Qualcomm Incorporated |
| TGaz | 10/20 | Rosdahl, Jon | Qualcomm Technologies, Inc. |
| TGaz | 10/20 | Segev, Jonathan | Intel Corporation |
| TGaz | 10/20 | Wang, Qi | Apple, Inc. |
| TGaz | 10/20 | Wang, Yi-Hsiu | Zeku |
| TGaz | 10/20 | Want, Roy | Google |
| TGaz | 10/20 | Yee, Peter | NSA-CSD |
| TGaz | 10/20 | Zeng, Ruochen | NXP Semiconductors |

1. **TGaz – October 21st , 2020** 
   1. Called to order by TGaz Chair, Jonathan Segev (Intel Corporation) and Vice Chair and secretary (active), Assaf Kasher (Qualcomm), at **10:02am PDT,**
   2. Agenda Doc. **IEEE 802.11-20/01370r25 (in progress - slide 121)**
   3. Review Patent Policy and logistics
      1. Chair reviewed the IEEE-SA Patent Policy, duty to inform, the guideline for IEEE WG meetings and logistics – no clarifications requested.
      2. Chair called for any potentially essential patents, no one stepped forward.
      3. Chair reminded participants to register their attendance using imat.
      4. Chair reviewed other guidelines for IEEE meetings, asked if any clarifications are requested, no one stepped forward.
      5. Chair reviewed IEEE copyright policy, – no clarification requested
      6. Chair reviewed IEEE code of ethics and WG participation as an individual professional. – no clarification requested
      7. Chair reviewed IEEE 802 ground rules

Recorded Participation requirement  
Headcount: ~14 present

* 1. Agenda:
     1. 11-20-1684 Comment Resolution LB249 Christian Berger – 15min
  2. Continuing comment resolution as a group in
     1. CID 3899 – revised
     2. CID 3990 – reject
     3. CID 4012 – reject
  3. Christian Berger presented 11-20-1684
     1. Review of the equations in 1684
  4. Submission pipeline
  5. Attendance:

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| --- | --- | --- | --- |
| TGaz | 10/21 | Berger, Christian | NXP Semiconductors |
| TGaz | 10/21 | Bhandaru, Nehru | Broadcom Corporation |
| TGaz | 10/21 | Das, Dibakar | Intel Corporation |
| TGaz | 10/21 | Grandhe, Niranjan | NXP Semiconductors |
| TGaz | 10/21 | Kasher, Assaf | Qualcomm Incorporated |
| TGaz | 10/21 | Raissinia, Alireza | Qualcomm Incorporated |
| TGaz | 10/21 | Rosdahl, Jon | Qualcomm Technologies, Inc. |
| TGaz | 10/21 | Segev, Jonathan | Intel Corporation |
| TGaz | 10/21 | Thompson, Tom | IEEE STAFF |
| TGaz | 10/21 | Wang, Chao Chun | MediaTek Inc. |
| TGaz | 10/21 | Wang, Qi | Apple, Inc. |
| TGaz | 10/21 | Wang, Yi-Hsiu | Zeku |
| TGaz | 10/21 | Want, Roy | Google |
| TGaz | 10/21 | Yee, Peter | NSA-CSD |
| TGaz | 10/21 | Zeng, Ruochen | NXP Semiconductors |

1. **TGaz – October 22nd , 2020** 
   1. Called to order by TGaz Chair, Jonathan Segev (Intel Corporation) and Vice Chair and secretary (active), Assaf Kasher (Qualcomm), at **10:02am PDT,**
   2. Agenda Doc. **IEEE 802.11-20/01370r25 (in progress - slide 121)**
   3. Review Patent Policy and logistics
      1. Chair reviewed the IEEE-SA Patent Policy, duty to inform, the guideline for IEEE WG meetings and logistics – no clarifications requested.
      2. Chair called for any potentially essential patents, no one stepped forward.
      3. Chair reminded participants to register their attendance using imat.
      4. Chair reviewed other guidelines for IEEE meetings, asked if any clarifications are requested, no one stepped forward.
      5. Chair reviewed IEEE copyright policy, – no clarification requested
      6. Chair reviewed IEEE code of ethics and WG participation as an individual professional. – no clarification requested
      7. Chair reviewed IEEE 802 ground rules

Recorded Participation requirement  
Headcount: ~14 present

* 1. Agenda
     1. LB249 comment resolution status – Roy Want
     2. Continue comment resolution for comments pending resolution 11-20-1683 (Roy Want /Jonathan Segev)
     3. 11-20-1556 – LMR timestamp clock and reporting – Erik Lindskog
  2. Roy Want present 11-20-1391
     1. Information about individual comment resolution status:
  3. Jonathan Segev continued on TG resolution of comments -11-20-1683
     1. CID 3265 – revised – resolved in d2.4
     2. CID 3317 – revised
     3. CID 3320 – accept
     4. CID 3321 – revised
     5. CID 3322 – revised
     6. CID 3455 – reject
     7. CID 3456- revised
     8. Strawpoll: We agree to the resolution 3006, 3007, 3899, 3990, 4012, 3264, 3265, 3317, 3320, 3321, 3322, 3455, 3456 (13 CIDs total), as depicted in document 11-20-1683r3  
        Results (Y/N/A): 11/0/0
  4. Erik Lindskog presented 11-20-1556
     1. Title LMR timestamp clock and reporting
     2. CID 3279, 3280 – revised – more time to review is needed
  5. Review submission pipeline
  6. AOB
  7. Attendance:

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| TGaz | 10/22 | Berger, Christian | NXP Semiconductors |
| TGaz | 10/22 | Bhandaru, Nehru | Broadcom Corporation |
| TGaz | 10/22 | Das, Dibakar | Intel Corporation |
| TGaz | 10/22 | Grandhe, Niranjan | NXP Semiconductors |
| TGaz | 10/22 | Kasher, Assaf | Qualcomm Incorporated |
| TGaz | 10/22 | Lindskog, Erik | SAMSUNG |
| TGaz | 10/22 | Raissinia, Alireza | Qualcomm Incorporated |
| TGaz | 10/22 | Segev, Jonathan | Intel Corporation |
| TGaz | 10/22 | Wang, Yi-Hsiu | Zeku |
| TGaz | 10/22 | Yee, Peter | NSA-CSD |
| TGaz | 10/22 | Zeng, Ruochen | NXP Semiconductors |

**References:**