**IEEE P802.19**

**Wireless Coexistence**

|  |  |  |
| --- | --- | --- |
| Project | IEEE P802.19 Wireless Coexistence WG | |
| Title | **November 2024 WG and TG3a Meeting Minutes** | |
| Date Submitted | [December 30, 2024] | |
| Source | Yukimasa Nagai Mitsubishi Electric Corporation 5-1-1 Ofuna, Kamakura, KANAGAWA  2478501 JAPAN | Voice: N/A  E-mail: Nagai.Yukimasa@ds.MitsubishiElectric.co.JP |
| Re: | [] | |
| Abstract | November 2024 IEEE 802.19 Working Group and IEEE 802.19.3a Task Group Meeting Minutes in Vancouver | |
| Purpose | [] | |
| Notice | This document has been prepared to assist the IEEE P802.19. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein. | |
| Release | The contributor acknowledges and accepts that this contribution becomes the property of IEEE and may be made publicly available by IEEE P802.19. | |

**Monday November 11, 2024 – Working Group Opening**

* WG chair called the meeting to order at 6:30 PM in both Vancouver and WebEx.
* The chair read IEEE IPR statement and IEEE-SA participant behavior slide on the WG Opening report, document 802.19-24/0036r0. No objections and comments.  
  <https://mentor.ieee.org/802.19/dcn/24/19-24-0036-00-0000-november-2024-wg-opening-report.pptx>
* The chair reviewed the agenda. No changed were needed. The WG unanimously approved the agenda, document 802.19-24/37r0.  
  <https://mentor.ieee.org/802.19/dcn/24/19-24-0037-00-0000-november-2024-wg-agenda.xlsx>
* The chair reviewed the WG opening Report, document 802.19-24/0036r0.  
  <https://mentor.ieee.org/802.19/dcn/24/19-24-0036-00-0000-november-2024-wg-opening-report.pptx>
  + Voting member update: 53
  + The motion to approve the minutes from the previous meeting, document 802.19-24/0035r0, passed unanimously. Moved by Ben, Second by: Steve.  
    <https://mentor.ieee.org/802.19/dcn/24/19-24-0035-00-0000-september-2024-wg-and-tg3a-minutes.docx>
  + Don’t forget attendance for two sessions.
    - [IEEE Standards Association - Home](https://imat.ieee.org/attendance)
  + WG organization introduction
    - WG Chair : Tuncer Baykas (Ofinno)
    - WG Vice Chair : Steve Shellhammer (Qualcomm)
    - WG Secretary : Yukimasa Nagai (Mitsubishi Electric)
    - TG3a Chair : Ben Rolfe (Blind Creek Associates)
    - Liaison To/From 802.11 : Tuncer Baykas (Ofinno)
    - Liaison To/From 802.15 : Ben Rolfe (Blind Creek Associates)
  + Coexistence Assurance Report:
    - No voting between July and November meetings.
  + 802.19.3a Task Group Update
    - Scope of project were introduced.
  + Coexistence Meetings
    - This week there are several coexistences related meeting.
    - 802.11 Coex (Tue AM1)
    - 802.11 Coex (Tue PM3) – joint meeting with 802.15.4ab
    - 802.11 Coex (Thu AM1)
    - No questions and comments
  + Public Visibility SC activities
  + Conference information related to IEEE standards.
    - IEEE Conference on Standards for Communications and Networking (CSCN), and online workshop were introduced.
  + Liaison report from IEEE 802.11
    - The 802.11 liaison provided a verbal liaison report from 802.11. Group status updates were introduced: AIML SC, Coexistence, PAR review, WNG SC, JTC1, maintenance, sensing, TGbi, TGbn, etc, document 802.19-24/0039r0.  
      <https://mentor.ieee.org/802.19/dcn/24/19-24-0039-00-0000-november-2024-802-11-liaison-report.pptx>
    - Question
      * Check the status of Enhanced Light Communications (ELC) SG about development of CSD and PAR.
  + Liaison report from IEEE 802.15
    - The 802.15 liaison provided a verbal liaison report from 802.15. Group status updates were introduced: Next Gen UWB for comment resolution, 16t is in SA ballot, revision to 802.15.9 is proceeding, key management protocol delivery extensions, TG4ad for the next generation SUN PHYs, TG6 is revision project, TG4ac for privacy, etc.
    - Comment
      * IEEE 802.11bp – AMP also mentioned privacy and security discussed in TG4ac.
* No other business discussed.
* The WG recessed at 6:49 PM and switched to TG3a opening.

**Monday November 11, 2024 – TG3a Opening**

* TG chair called the meeting to order at 6:49PM.
* The chair reviewed the agenda, document 802.19-0040r0.  
  <https://mentor.ieee.org/802.19/dcn/24/19-24-0040-00-003a-tg19-3a-meeting-slides-and-agenda.pptx>
  + The TG chair reviewed project overview, officers, near term milestones and call for contributions for specific topics. Neither future discussion nor objection for agenda. No changed were needed.
  + Two presentations were planned.
  + The TG3a unanimously approved the agenda.
  + Don’t’ forget attendance.
* The motion to approve the minutes from the previous meeting, document 802.19-24/0035r0, passed unanimously.  
  <https://mentor.ieee.org/802.19/dcn/24/19-24-0035-00-0000-september-2024-wg-and-tg3a-minutes.docx>
* Kazuto Yano, ATR presented the contribution titled “Measurement results of radio noise over Sub-1 GHz band emitted from mini PC and laptop PC”, document 802.19-24/0038r0.  
  <https://mentor.ieee.org/802.19/dcn/24/19-24-0038-00-003a-measurement-results-of-radio-noise-over-sub-1-ghz-band-emitted-from-mini-pc-and-laptop-pc.pdf>
  + Comments and Questions:
    - Clarification of measurement condition: calibration to dBm with the resolution on the right side of Page 13. From the discussion, calibration doesn’t seem correct for measurement.
    - Clarification of measurement result: continuous interference or not from other devices on the Page 11 and 13. From the discussion, additional data will be taken for report at the next meeting.
    - Clarification of measurement condition: the effect of the receiving antenna in 100 cm from target devices to measure interferences. From the measurement result with low noise, 100 cm from target devices might be no effect on the system. Need more clarification for the test results and measurement conditions.
    - Clarification of measurement result: these strong emissions still fulfill regulations? From the EMS, they fulfill regulations, but cause interference the communication. Need more clarification for measurement and products in the future, since the leaked radio waves are different from the devices, size, prices and so on.
    - Clarification of measurement set up whether testbed including data logger, LNA, cable, BPF and antenna is calibrated or not with measured color bar -70 to -100 dBm? If the input signal was -80 dBm, the signal input at the data logger might be less than -100 dBm. From the discussion including slide 6 and 7, measurement set up will be clarified at the next meeting.
* No other business discussed.
* Call for additional topic on Thursday. Let the chair the item.
* The TG3a recessed at 7:26 PM.

**Thursday September 14, 2024 – Task Group Closing**

* The TG chair called the meeting to order at 6:31 PM in both Vancouver and WebEx.
* The chair reviewed the agenda., document 802.19-24/0040r2.  
  <https://mentor.ieee.org/802.19/dcn/24/19-24-0040-02-003a-tg19-3a-meeting-slides-and-agenda.pptx>
  + The TG chair read IEEE IPR statement and IEEE-SA participant behavior slide.
  + The TG3a unanimously approved the agenda without modifications.
* Takenori Sumi, presented the contribution titled “IEEE 802.11ah and IEEE 80215.4g SUN OFDM PHY Coexistence Simulation for Case 1-3“ document 802.19-24/0042r0.  
  <https://mentor.ieee.org/802.19/dcn/24/19-24-0042-00-003a-ieee-802-11ah-and-ieee-802-15-4g-sun-ofdm-phy-coexistence-simulation-for-case-1-3.pptx>
  + Comments and Questions
    - Clarification of simulation condition: Exchange information between 802.11 and 802.15. would include some measurement result between 802.11 and 802.15. The shared information on simulator are transmission timing and power information to calculate mutual interference on both IEEE 802.11 and IEEE 802.15 sides. No actual measured data on real products or prototype to evaluate this simulation. Refer simulation parameters discussed in IEEE 802.19 task group.
    - Clarification of definition of packet delivery rate: Does PDR include retransmission or not? This PDR includes retransmissions: IEEE 802.15.4g is 4 times, IEEE 802.11ah is 7 times as default parameters defined in standards.
    - Clarification of definition of CCA parameter: Does this CCA parameter fulfill Japanese regulation or not. JP regulation CCA is -80 dBM / 200 KHz. The simulation results fulfill JP regulation for CCA threshold.
    - Clarification of use cases: do you consider moving conditions for the simulation result, and is there any plan for evaluation of moving situation? No. The fixed situation is only considered for the utility use cases, so far.
    - Clarification of simulation results of PDR: What would happen if there is NO IEEE 802.15.4g traffic. If only IEEE 802.11ah, there is no interference to IEEE 802.15.4g, contention inter IEEE 802.11ah devices.
    - Clarification of simulation results of PDR: When the traffic saturated, PDR is also down or not? Yes. After IEEE 802.11 ah saturated, IEEE 802.11ah might be down by interference between IEEE 802.15.4g and IEEE 802.11ah, and also contention inter IEEE 802.11ah devices.
    - Clarification of interference condition between IEEE 802.11ah and IEEE 802.15.4g on the simulation: SIRN is calculated from signals of other systems using information exchange between IEEE 802.11ah and IEEE 802.15.4g on the simulator. Tx/rx timing and power are also considered.
* Near Term Milestones
  + Collect background information.
  + Discuss and agree on initial project timeline.
* Next Step
  + Begin development of technical guidance document
    - Use cases
    - Technical objectives
    - Features
  + Comment:
    - In addition to measurement results, simulation results discussed in this group, coexistence measurement results using actual products are helpful to discuss the recommended practice.
    - Some parameters including CCA terminology, use case scenario might be candidate for discussion in the recommended practice.
* No other business discussed.
* The TG adjourned 19:17 PM this week and switched to WG closing.

**Thursday November 14, 2024 – Working Group Closing**

* The WG chair called the meeting to order at 19:18 PM in both Vancouver and WebEx.
* The chair read IEEE IPR statement and IEEE-SA participant behavior slide on the WG Opening report, document 802.19-24/0041r0. No objections and comments.  
  <https://mentor.ieee.org/802.19/dcn/24/19-24-0041-00-0000-november-2024-wg-closing-report.pptx>
* Coexistence Assessment Documents (CAD)
  + No voting between July and November meetings
* 802.19.3a Task Group Update
* Public Visibility SC Activities
  + IEEE 802 has a Linked page.
* Straw Polls for Vancouver meeting:
  + 1. How many people would like to come back to this venue?
    - Yes: 10
    - No: 0
  + 2. Did you go to the social?
    - Yes: 11
    - No:: 1
  + 3. If you attended the Social, did you like the social?
    - Yes: 3
    - No: 8
* No other business discussed.
* The WG adjourned 19:22 PM this week.

**Attendance November 2024**

|  |  |
| --- | --- |
| Carlos Aldana | Meta Platforms |
| Yusuke Asai | Nippon Telegraph and Telephone Corporation |
| Tuncer Baykas | Ofinno |
| Harry Bims | Bims Laboratories, Inc. |
| Scott Blue | Bluetooth sig |
| MARC EMMELMANN | Self |
| Ming Gan | Huawei technologies co., ltd |
| Jianlin Guo | Mitsubishi Electric Research Laboratories (MERL) |
| Hiroshi Harada | National Institute of Information and Communications Technology (NICT) |
| Susumu Ishihara | Shizuoka University; Ministry of Internal Affairs and Communications, Japan |
| SHUGO KAJITA | Space-Time Engineering Japan, Inc. |
| Carl Kain | United Stated Department of Transportation |
| Srinivas Kandala | Samsung Electronics |
| Arata Kato | Space-Time Engineering Japan, Inc. |
| Youhan Kim | Qualcomm Incorporated |
| Akira Kishida | NTT |
| Shoichi Kitazawa | Muroran IT |
| Alexander Krebs | Apple Inc. |
| Hiroshi Mano | Koden Techno Info K.K. |
| Hitoshi Morioka | SRC Software |
| Yukimasa Nagai | Mitsubishi Electric Corporation |
| Stephen Palm | Broadcom Corporation |
| Gaurav Patwardhan | Hewlett Packard Enterprise |
| James Petranovich | ViaSat, Inc. |
| Riku Pirhonen | NXP Semiconductors |
| Haneya Qureshi | GM |
| Joerg Robert | Technische Universitaet Ilmenau |
| Benjamin Rolfe | Blind Creek Associates |
| Sam Sambasivan | AT&T |
| Stephan Sand | German Aerospace Center (DLR) |
| Shigenobu Sasaki | Niigata University |
| Stephen Shellhammer | Qualcomm Incorporated |
| Ian Sherlock | Texas Instruments Inc. |
| Don Sturek | Silver Spring Networks Inc. |
| Takenori Sumi | Mitsubishi Electric Corporation |
| Mineo Takai | Space-Time Engineering |
| Matthias Wendt | Signify |
| Shang-Te Yang | Apple Inc |
| Kazuto Yano | Advanced Telecommunications Research Institute International (ATR) |