IEEE P802.11  
Wireless LANs

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| Wireless Next Generation (WNG) Standing Committee Meeting Minutes for July-2025 Madrid Hybrid Meeting | | | | |
| Date: July 29, 2025 | | | | |
| Author(s): | | | | |
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Abstract

Meeting Minutes for the WNG SC meeting held in mixed-mode with in-person meeting in Madrid, Spain, and with electronic meeting access, on July 29th, 2025.

**WNG Meeting #1: Tuesday, July 29th, 2025, 9:00am to 11:00am Madrid Time**

Chair: Jim Lansford (FaraFir Consulting)

Vice Chair & Secretary: Lei Wang (Futurewei / Huawei)

**Meeting Agenda:**

The meeting agenda for WNG 2025-July meeting is shown below, and also published in the agenda document:

<https://mentor.ieee.org/802.11/dcn/25/11-25-1053-00-0wng-agenda-for-wng-sc-2025-july.pptx>

* Call Meeting to Order
* Agenda approval
* Attendance reminder
* Documentation reminder
* Announcements
* Approval of Previous meeting minutes
  + Minutes from May 2025
* Presentations
  + Tuesday July 29, 0900-1100 and 1930-3130 Central European Summer Time
* Plans for September 2025
* Adjourn

In addition, the detailed agenda for WNG July meeting #1 with the presentation information is included in the agenda file, and also as shown below:

* Announcements
* Approval of Previous meeting minutes
  + Minutes from May:

<https://mentor.ieee.org/802.11/dcn/25/11-25-0947-00-0wng-wng-meeting-minutes-2025-may-warsaw-meeting.docx>

* Presentations: AM1 (0900-1100)
  + Openwifi and sub-20 MHz Co-OFDMA, Robbe Gaeremynck (Ghent University)
  + Signal Design for Sensing Security/Privacy in ISAC, Christos Masouros (University College London)
  + Rate Splitting Multiple Access for 802.11, Bruno Clerckx (Imperial College)
  + Multiband Channel Model for 802.11, Volker Jungnickel, et al (Fraunhofer)

**Meeting Minutes:**

* Chair called the meeting to order at 9:00am Madrid time on Tuesday, July 29th, 2025, and showed the group the agenda file.
* Chair reminded the group to record the attendance of this meeting by using the IEEE Attendance Tool.
* Agenda approval:

<https://mentor.ieee.org/802.11/dcn/25/11-25-1053-00-0wng-agenda-for-wng-sc-2025-july.pptx>

* The agenda was approved by unanimous consent.
* Chair also noted the affiliation FAQ, anti-trust FAQ, ethics code, IEEE 802.11 policies and procedures, and IEEE 802 policies and procedures.
* Chair covered the voting rules for WNG SC, being a standing committee.
* Approval of the meeting minutes of the previous WNG meeting.
  + Minutes from 2025-May WNG Meeting

<https://mentor.ieee.org/802.11/dcn/25/11-25-0947-00-0wng-wng-meeting-minutes-2025-may-warsaw-meeting.docx>

* + The 2025-May WNG SC meeting minutes was approved by unanimous consent.
* Attendance:
  + In the meeting room: ~ 200
  + Webex attendance: 338

* Presentation #1: “Openwifi and sub-20 MHz Co-OFDMA”, Robbe Gaeremynck (Ghent University)

<https://mentor.ieee.org/802.11/dcn/25/11-25-1039-00-0wng-openwifi-and-sub-20-mhz-co-ofdma.pptx>

* + Robbe presented the contribution in-person.
  + Summary of Discussion
    - * Discussed synchronization and clarified that the synchronization is performed via a fiber backhaul.
      * Explained the differences between the two figures on slide 13.
      * Clarified that some capabilities, e.g., coexistence, inter-AP interference mitigation, processing for 2X2 MIMO, are not in the scope of the current project, but could be feasible for future study or collaboration with others.
  + In addition, a demo was set up in the WNG meeting room from 7:45am to 9am Madrid time, and also continue for about another 20minutes after WNG meeting.
* Presentation #2: “Signal Design for Sensing Security/Privacy in ISAC”, Christos Masouros (University College London)

<https://mentor.ieee.org/802.11/dcn/25/11-25-1198-00-0wng-signal-design-for-sensing-security-privacy-in-isac.pptx>

* + Christos presented the contribution remotely via Webex
  + Summary of Discussion
    - * Clarified the simulation scenarios are for indoor, not for outdoor.
      * Discussed the figures on Slide 4.
      * Also, discussed the assumptions of the transmitters.
      * Suggested adding document number to the document.
* Presentation #3: “Rate Splitting Multiple Access for 802.11”, Bruno Clerckx (Imperial College)

<https://mentor.ieee.org/802.11/dcn/25/11-25-1200-00-0wng-rate-splitting-multiple-access-for-802-11.pptx>

* + Bruno presented the contribution remotely via Webex.
  + Summary of Discussion
    - * Discussed Slide 4, e) multicasting, and clarified that the physical multicasting transmits two unicast messages on the same PHY channel to two different users.
      * Discussed the experiment results shown on Slide 7.
      * Discussed Slide 5, there are 3 streams, one for each user and one common.
      * Discussed the criteria for splitting messages; explained that the way to split depends on what you want to achieve, e.g., fairness, high sum throughput, or high minimum throughput, etc.
      * Clarified the presented scheme is for PHY layer optimization, not only applicable to Wi-Fi, but also applicable to cellular systems.

* Presentation #4: “Multiband Channel Model for 802.11”, Volker Jungnickel, et al (Fraunhofer)

<https://mentor.ieee.org/802.11/dcn/25/11-25-1067-01-0wng-unified-channel-model-for-802-11.pptx>

* + Volker, Stephan, and Sreelal jointly presented the contribution in-person.
  + Summary of Discussion
    - * Discussed channel models take into account of antenna.
      * Questioned what if more interesting things come up, e.g., AI generated algorithms, and clarified that channel model unification will consider some AI generated algorithms
      * Clarified the timeline for 2026-January is just a proposal and the outcome of the proposed TIG is a report containing references, e.g., open source software. All those items will be discussed in the group once the group is formed.
      * Discussed a few other topics, e.g., verification of the models, cross-bands simulation, small-scale fading, different antenna, CIR and CFR differentiation, and site-specific modeling, etc.
      * Straw Poll: *Would you support the formation of a Technical Interest Group (TIG) to create a Unified Channel Model (UCM) for 802.11?*
      * Straw Poll Result: 120 yes, 21 no, 52 abstain.
* Recessed at 11:00am Madrid Time.

**WNG Meeting #2: Tuesday, July 29th, 2025, 7:30pm to 9:30pm Madrid Time**

Chair: Jim Lansford (FaraFir Consulting)

Vice Chair & Secretary: Lei Wang (Futurewei / Huawei)

The detailed agenda for WNG July meeting #2 with the presentation information is included in the agenda file <https://mentor.ieee.org/802.11/dcn/25/11-25-1053-00-0wng-agenda-for-wng-sc-2025-july.pptx>, and also as shown below:

* Presentations: PM-3 (1930-2130)
  + High-resolution sensing with multiband communication signals, Jacopo Pegoraro (Univ of Padova), Joerg Widmer (IMDEA Networks)
  + AI-driven Dirty Paper Coding for Multiuser MIMO, Mathini Sellathurai (Heriot-Watt University)
  + Status update: ns-3 WiFi Simulations, Muyuan Shen (University of Washington)
* Plans for September 2025
  + Chair will make a call for presentations in advance
* Adjourn

**Meeting Minutes:**

* Chair called the meeting to order at 7:30pm Madrid time on Tuesday, July 29th, 2025, and showed the group the agenda file.
* Chair reminded the group to record the attendance of this meeting by using the IEEE Attendance Tool.
* Attendance:
  + In the meeting room: ~ 30
  + Webex attendance: 108
* Presentation #5: “High-resolution sensing with multiband communication signals”, Jacopo Pegoraro (University of Padova), Joerg Widmer (IMDEA Networks)

<https://mentor.ieee.org/802.11/dcn/25/11-25-1319-00-0wng-high-resolution-sensing-with-multiband-communication-signals.pptx>

* + Joerg presented the contribution in-person and Jacopo jointly presented remotely via webex.
  + Summary of Discussion
    - * Discussed how to get the very impressive gain as shown on Slide 22.
      * Discussed how to synchronize among sub-bands and also in high frequency bands, and clarified that it needs to find an optimal way to optimize in the initial phase, while other approaches are possible too.
      * Discussed how to separate doppler and offset, and clarified to do peak detection, time-domain sampling, cut out in the time domain, as long as bandwidth is large enough.
      * Questioned the matrix for compensation on Slide 10, and clarified that it does not have synchronization, instead doing post-processing at Rx side, then synchronization, not over the air synchronization. What CFO achieved is what is obtained from the system.
      * Jacopo also posted a message in Webex chat window, encouraging 802.11 participants who have further questions to reach out to him at [jacopo.pegoraro@unipd.it](mailto:jacopo.pegoraro@unipd.it).
* Presentation #6: “AI-driven Dirty Paper Coding for Multiuser MIMO”, Mathini Sellathurai (Heriot-Watt University)

<https://mentor.ieee.org/802.11/dcn/25/11-25-1197-00-0wng-ai-driven-dirty-paper-coding-for-multiuser-mimo.pptx>

* + Mathini presented the contribution remotely via Webex.
  + Summary of Discussion
    - * Discussed the training data, digital twin or real data, also how sensitive to the training data, and clarified it needs a diverse set of scenarios, e.g., indoor, urban, sub-urban, etc.
      * Discussed how to manage to achieve robustness and training frequency, and training frequency depends on the models and there are normalizations for channel statics.
      * Mathini also posted a message in Webex chat window, encouraging 802.11 participants who have further questions to reach out to her at [mathini@ieee.org](mailto:mathini@ieee.org).
* Presentation #7: “Status update: ns-3 WiFi Simulations”, Muyuan Shen (University of Washington)

<https://mentor.ieee.org/802.11/dcn/25/11-25-1270-01-0wng-status-update-ns-3-wifi-simulations.pptx>

* + Muyuan and Summit jointly presented the contribution remotely via Webex.
  + Summary of Discussion
    - * Discussed how to get NS3 with AI; and clarified that NS3 can get detailed date but not at run time. During run-time at NS3, some data could be offloaded, with proper interface to AI platform, e.g., OPEN AI.
      * Discussed the difficulties of getting familiar with NS3 for newcomers, and Summit offered for further offline discussions.
      * Summit and Muyuan also posted a message in Webex chat window, encouraging 802.11 participants who have further questions to reach out to them at [sroy@uw.edu](mailto:sroy@uw.edu), [muyuan@uw.edu](mailto:muyuan@uw.edu).
* Plans for September 2025:
  + Call for contributions: WNG chair will issue a call for contributions before IEEE 802.11 2025-September meeting.
* Any other business: none.
* Adjourned at 9:30pm Madrid Time.