IEEE P802.11
Wireless LANs

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| Wireless Next Generation (WNG) Standing CommitteeMeeting Minutes for January-2022 Electronical Meeting |
| Date: 01-18-2022 |
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Abstract

Meeting Minutes for the WNG SC meeting held electronically, on January 17th and 18th, 2022.

**WNG Session #1: January 17th, 2022, 11:15am to 1:15pm ET**

Chair: Jim Lansford (Qualcomm)

Vice Chair & Secretary: Lei Wang (Futurewei)

**Meeting Agenda:**

The meeting agenda for WNG 2022-January Interim meeting is shown below, and also published in the agenda document:

<https://mentor.ieee.org/802.11/dcn/21/11-21-1970-00-0wng-agenda-for-wng-sc-2022-january.pptx>

* Call Meeting to Order
* Agenda approval
* Attendance reminder
* Documentation reminder
* Announcements
* Approval of Previous meeting minutes
	+ Minutes from November 2021 WNG Meeting
		- <https://mentor.ieee.org/802.11/dcn/21/11-21-1823-00-0wng-wng-meeting-minutes-2021-november-electronic-meeting.docx>
* Presentations
	+ Monday 17 January 2022, 11:15 – 13:15 EST
	+ Tuesday 18 January 2022, 11:15-13:15 EST
* Plans for March 2022
* Adjournment

In addition, the detailed agenda for the WNG Monday Session is included in the agenda file, and also as shown below:

* Announcements
* Approval of Previous meeting minutes
	+ Minutes from November
		- <https://mentor.ieee.org/802.11/dcn/21/11-21-1823-00-0wng-wng-meeting-minutes-2021-november-electronic-meeting.docx>
* Presentations
	+ “Beyond be’” – Rolf de Vegt (Qualcomm)
	+ “Next-Gen-After-11be” – Vinko Erceg (Broadcom)
	+ “Next generation after 802.11be” – Laurent Cariou (Intel)
	+ “Look ahead to next generation” – Ming Gan (Huawei)
* Recess

**Meeting Minutes:**

* Chair called the meeting to order at 11:15am ET on Monday, January 17th, 2022.
* Chair reminded the group to record the attendance of this meeting by using the IEEE Attendance Tool. The link to the attendance tool is also provided in the chat window of the electronic meeting.
* Agenda approval:

<https://mentor.ieee.org/802.11/dcn/21/11-21-1970-00-0wng-agenda-for-wng-sc-2022-january.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 previous meeting minutes
	+ Minutes from 2021-November WNG Meeting

<https://mentor.ieee.org/802.11/dcn/21/11-21-1823-00-0wng-wng-meeting-minutes-2021-november-electronic-meeting.docx>

* + The 2021-November WNG SC meeting minutes was approved by unanimous consent.
* Approximately 265 people attended the WNG Monday Session electronically.
* Discussion on how to conduct Q&As in the meeting:
	+ Chair mentioned that a request was received, suggesting having Q&As after all presentations due to on the same topic, in order to accommodate all 4 presentations in this session. Chair would like to hear how the group thinks on this matter.
	+ Discussed and concluded that there will be a limited-time Q&A right after each presentation, and if time allows, more Q&As will be allowed for all 4 presentations near the end of this session.
* Presentation #1: “Beyond be’” – Rolf de Vegt (Qualcomm)

<https://mentor.ieee.org/802.11/dcn/22/11-22-0059-00-0wng-beyond-be.pptx>

* + Rolf presented the contribution.
	+ Summary of Discussion
		- Discussions on multi-band power consumption indicated a general support to the high-level objective to reduce device level power consumption (STA and AP); pointed out that it involves multiple perspectives, e.g., regulatory, co-existence, AP vs STA control / complexity; etc.; and encouraged further discussions / contributions on this topic.
		- There were multiple questions involving detailed technical features or solutions, e.g., reliability vs range, roaming with existing deployments, low latency feasibility, etc., for which the presenter suggested it is too early to get into the details, instead, the group should focus on use cases and requirements first.
		- Discussed the challenges in areas where 6GHz band is not available, e.g., Mainland China: the next-gen Wi-Fi still needs to have some attractive features for those areas, to improve Wi-Fi performance in spectrum congested environments.
* Presentation #2: “Next-Gen-After-11be” - Vinko Erceg (Broadcom)

<https://mentor.ieee.org/802.11/dcn/22/11-22-0032-00-0wng-next-gen-after-11be.pptx>

* + Vinko presented the contribution.
	+ Summary of Discussion
		- Discussed the overlapping between the proposed 11be R2 and the next-gen, particularly for MAC people; emphasized to keep 11be R2 slim and to focus on high-level discussions of the requirements and use cases in the next-gen Study Group.
		- Asked what the potential technics could be to have 2X throughput increase in 11be R2 as proposed in the contribution; and the answer was that it is to be discussed and it could be network throughput.
		- Discussed the latency requirement as listed on slide 6 of the presentation and suggested having further study and discussion on use cases and requirements.
		- Discussed that, in addition to PHY / MAC, the scope of the next-gen Study Group could also include upper layers for the purpose of considering end-to-end solutions.
		- Clarified that the “Sensory inputs” on slide 5 refers to a wide range of sensing devices / applications, e.g., IoT sensing, wireless sensing, etc.
		- Suggested that, in addition to Study Group, another 802.11 tool can be considered too, i.e., Topic Interest Group (TIG).
* Presentation #3: “Next generation after 802.11be” – Laurent Cariou (Intel)

<https://mentor.ieee.org/802.11/dcn/22/11-22-0046-01-0wng-next-generation-after-802-11be.pptx>

* + Laurent presented the contribution.
	+ Summary of Discussion
		- Clarified that 10Gigi Wi-Fi refers to device throughput, as 11ac / 11ax / 11be have already targeted for it.
		- Clarified that mobility needs to be further studied and discussed in the next-gen Study Group, although the presenter thinks it is about low speed mobility.
		- Clarified that mission-critical applications are in the scope for further discussion.
		- Discussed the latency number; clarified that the number of <0.1ms is from 6G requirements; and suggested doing further study and analysis on what’s required and what’s achievable, e.g., it would be very challenging for Wi-Fi with OBSS, but for some very controlled environment, something may be possible.
		- Suggested paying attention on the terminologies used in 802.11 WG and Wi-Fi Alliance (WFA).
		- Suggested that scalability needs to be considered, which may help co-existence.
		- Agreed that co-existence with other technologies in the same band needs to be taken into account, not only for the proposed next-gen project, actually for entire 802.11 WG.
* Presentation #4: “Look ahead to next generation” - Ming Gan (Huawei)

<https://mentor.ieee.org/802.11/dcn/22/11-22-0030-01-0wng-look-ahead-to-next-generation.pptx>

* + Ming presented the contribution.
	+ Summary of Discussion
		- Suggested having further study and analysis in the next-gen Study Group on how we are going to reach the proposed goals, including throughput, latency, power consumption etc., to address specific requirements from use cases and applications.
		- Discussed how100Gbps throughput can be reached and whether it is realistic, particularly, considering it would be very difficult for sub-7GHz bands; the suggested solutions include to use new spectrum, to have combination of low-band and high-band, to consider existing PHY and new PHY to deal with different rules and characteristics of different bands, etc.; and agreed that it needs further study.
		- Suggested having further study on what information / data need to be pull out of Wi-Fi air interface to enable machine learning (ML) for improving Wi-Fi performance.
		- Multiple people indicated their supports to the Way forward slide, particularly on understanding the use cases and requirements first, before talking about features.
* Recess at 1:15pm ET.

**WNG Session #2: January 18th, 2022, 11:15am to 11:50am ET**

Chair: Jim Lansford (Qualcomm)

Vice Chair & Secretary: Lei Wang (Futurewei)

**Meeting Agenda:**

The detailed agenda for the WNG Tuesday Session is shown below; and also published in the agenda document:

<https://mentor.ieee.org/802.11/dcn/21/11-21-1970-00-0wng-agenda-for-wng-sc-2022-january.pptx>

* Call to Order
* Presentations
	+ “Inconsistent STA range and channel support indications” – Amelia Andersdotter, Sean Muir (Sky UK Group)
* Plans for March 2022
	+ Chair will make a call for presentations in advance
* Adjourn

**Meeting Minutes:**

* Chair called the meeting to order at 11:15am ET on Tuesday, January 18th, 2022.
* Chair reminded the group to record the attendance of this meeting by using the IEEE Attendance Tool. The link to the attendance tool is also provided in the chat window of the electronic meeting.
* Agenda approval:

<https://mentor.ieee.org/802.11/dcn/21/11-21-1970-00-0wng-agenda-for-wng-sc-2022-january.pptx>

* The agenda for this session 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.
* Approximately 240 people attended the WNG Tuesday Session electronically.
* Presentation: “Inconsistent STA range and channel support indications” – Amelia Andersdotter, Sean Muir (Sky UK Group)

<https://mentor.ieee.org/802.11/dcn/22/11-22-0014-00-0wng-inconsistent-sta-range-and-channel-support-indications.pptx>

* + Amelia presented the contribution.
	+ Summary of Discussion
		- Clarified that the examples given in this presentation do not indicate something wrong, instead, indicate insufficient information provided about the operating channels; and the real issue is inefficiency.
		- Some historical information was provided about the indications of operating channels in 802.11 specs, starting from 802.11j amendment.
		- Agreed that the current channel indication mechanism is highly inefficient, and we need to do something to improve it.
		- Discussed what we should / could do about this, and suggestions include: submit comments to 11me, or to WFA, or to both.
		- Presenter indicated a plan of submitting a comment to 11me.
		- Another suggestion is to check WFA’s Agile Multiband specification to see if this has been addressed by using Supported Operating Classes and the preferences.
* Plans for March 2022:
	+ Call for contributions: WNG chair will issue a call for contributions before 802.11 plenary meeting in March 2022.
* Adjourned at 11:50am ET.