IEEE P802.11
Wireless LANs

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| Wireless Next Generation (WNG) Standing CommitteeMeeting Minutes for March-2018 MeetingChicago, IL, USA |
| Date: 03-08-2018 |
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Abstract

Meeting Minutes for the WNG SC meeting held in Chicago, IL, USA, in March, 2018.

**WNG Session #1: Tuesday, March 6th, 2018, 8:00 AM to 10:00 AM Chicago Time**

Chair: Jim Lansford (Qualcomm)

Vice Chair: Lei Wang (Huawei)

**Meeting Agenda:**

The meeting agenda is shown below, and also published in the agenda document:

<https://mentor.ieee.org/802.11/dcn/18/11-18-0292-02-0wng-agenda-for-wng-2018-march.ppt>

* Call Meeting to Order
* Agenda approval
* Attendance reminder
* Documentation reminder
* Approval of Previous meeting minutes
	+ Minutes from January

 <https://mentor.ieee.org/802.11/dcn/18/11-18-0253-00-0wng-wng-meeting-minutes-of-2018-january-irvine-meeting.docx>

* Announcements
* Presentations
	+ Second WNG session may be required – time/day to be announced
* Plans for May 2018
* Adjournment

**Meeting Minutes:**

* Meeting called to order at 8:05am Chicago time on Tuesday, March 6, 2018, by Chair, Jim Lansford.
* Agenda approval:

<https://mentor.ieee.org/802.11/dcn/18/11-18-0292-02-0wng-agenda-for-wng-2018-march.ppt>

* The agenda was approved by unanimous consent
* The chair also noted the affiliation FAQ, anti-trust FAQ, ethics code, IEEE 802.11 policies and procedures, and IEEE 802 policies and procedures
* The chair covered the voting rules for WNG SC, being a standing committee
* Approximately 170 people attended the WNG Session #1.
* Presentation #1: “Introduction to RPW- Experimental Study of a rotating polarization wave (RPW) system” – Ken Takei (Hitachi Ltd.)

<https://mentor.ieee.org/802.11/dcn/18/11-18-0357-00-0000-experimental-study-of-a-rotating-polarizaton-wave-system.pptx>

* + Summary of Discussion
		- Discussion on how to compare to circular polarization and multiple antennas. The RPW has only one type of polarization; while traditional way uses 2 types of polarizations. The number of types of polarizations is related device sizes. And the presenter plans to collect more data and present in next meeting
		- Discussion on the use ceases of the proposed technology. It may be difficult for mobile application; polarization must be fixed; good for IoT systems; or other use cases where devices not moving.
		- Discussion on how to compare to a system with 2 antennas, with some sort of switch between two antennas, to choose a better one. Mainly about complexity and Sigma-difference.
		- Discussion on the complexity about the synchronization between Tx and Rx; and the availability of such synchronization function in existing systems.
		- Discussion on the possible impacts on 802.11 standards: mainly on two areas, i.e., 1) antenna; polarization has 3-direction, x/y/z; and 2) Transmitter uses two different frequencies. The presenter plans to provide more experimental data next time.
* Approval of previous meeting minutes
* The minutes of 2018-January Irvine meeting:

<https://mentor.ieee.org/802.11/dcn/18/11-18-0253-00-0wng-wng-meeting-minutes-of-2018-january-irvine-meeting.docx>

* + The minutes were approved by unanimous consent.
* Presentation #2: "Exploring Next Generation V2X Communication" - Hongyuan Zhang (Marvell)

<https://mentor.ieee.org/802.11/dcn/18/11-18-0513-01-0wng-802-11-for-next-generation-v2x-communication.pptx>

* + Summary of Discussion
		- Discussion on why now to consider to envlove 802.11p; mainly reasons include: 1) 802.11p market is ramping up; 2) see comments on lack of road map; and 3) 802.11 technologies have envolved a lot since 802.11p completion;
		- Discussion on new requeirements for use cases, e.g., higher throughput; longer range, etc.
		- Discussion on the simulation results shown in Slide 17 to 19, and improvements resulted from the additional technologies, e.g., LDPC, midamble, etc. LDPC does not have much improve to lower MCS, but have improvement for higher MCS.
		- Discussion on why not modify 11ax and why have to start a SG: different spectrum; different use cases, need a SG to discuss;
		- Two suggestions were provided to modify the Straw Poll: 1) add a choice of “Need more info”; and 2) add text to indicate “no new technology”.
	+ Straw Poll: Do you support the formation of a new 802.11 Study Group to develop PAR and CSD for next generation WAVE technologies, leveraging existing 802.11 technologies?
		- Yes: 89
		- No: 2
		- Need more info: 34
		- Abstain: 6
* Presentation #3: "Introducing multiple primary channels to exploit unused resources scattered in multiple channels/bands“ - Kazuto Yano (ATR)

<https://mentor.ieee.org/802.11/dcn/17/11-17-1699-07-0wng-introducing-multiple-primary-channels-to-exploit-unused-resources-scattered-in-multiple-channels-bands.pptx>

* + No questions / comments
	+ Straw Poll: Do you think that IEEE 802.11 wireless LAN group should further investigate/discuss introduction of multiple primary channels for meeting future demand on the wireless LAN?
		- Yes: 26
		- No: 3
		- Abtain: 82
* Chair announced that there will be another WNG Session this week for the remaining two contributions. The time and room will be announced soon.
* Recess at 9:52am CST.

**WNG Session #2: Thursday, March 8th, 2018, 8:00 AM to 10:00 AM Chicago Time**

Chair: Jim Lansford (Qualcomm)

Vice Chair: Lei Wang (Huawei)

**Meeting Agenda:**

The meeting agenda is shown below, and also published in the agenda document:

<https://mentor.ieee.org/802.11/dcn/18/11-18-0292-03-0wng-agenda-for-wng-2018-march.ppt>

* Call Meeting to Order
* Agenda approval
* Attendance reminder
* Documentation reminder
* Approval of Previous meeting minutes
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* Announcements
* Presentations
	+ Tuesday 6 March 2018, 08:00 – 10:00
	+ Thursday 8 March 2018, 08:00 – 10:00
* Plans for May 2018
* Adjournment

**Meeting Minutes:**

* Meeting called to order at 8:00am Chicago time on Tuesday, March 8, 2018, by Chair, Jim Lansford.
* Agenda approval:

 <https://mentor.ieee.org/802.11/dcn/18/11-18-0292-03-0wng-agenda-for-wng-2018-march.ppt>

* The agenda was approved by unanimous consent
* The chair also noted the affiliation FAQ, anti-trust FAQ, ethics code, IEEE 802.11 policies and procedures, and IEEE 802 policies and procedures
* The chair covered the voting rules for WNG SC, being a standing committee
* Approximately 85 people attended the WNG Session #2.
* Presentation #4: “Reconsidering Implicit Feedback for Beamforming” – Roger Marks (Huawei)

<https://mentor.ieee.org/802.11/dcn/18/11-18-0509-00-0wng-reconsidering-implicit-feedback-for-beamforming.pptx>

* + Discussion on the implicity feedback in the some systems, e.g., Radar, 802.11ay, due to the explicit-feedback not really feasible in some cases;
	+ Questioned the intended proposal: are you intended to make an amendment to all existing 802.11 systems; or just for 11ax? The answer is, at this moment, not intend to propose any amendment for 802.11 standards, but just to propose a forward-looking topic to discuss.
	+ Discussion on the calibration in very close promixity and in very short timeframe: lots of assumptions, very hard to be super confident about the theorectical models; the literatures show the study the models are not perfect, the calibration is not perfect, but the channel estimation is still reasonable;
	+ Comment: this topic was discussed in 11ax, but was not adopted in 11ax with similar reasons to 11ac. With Massive MIMO, this may be re-opened.
	+ Straw Poll #1: Do you think that future WLAN developments will lead to a demand for more MIMO spatial streams in a WLAN network
		- Yes: 39
		- No: 1
		- Need more info: 29
		- Abstain: 1
	+ Discussion on the Straw Poll #2 text: 1) clarified the “future standards”; and 2) change “below 6 GHz” to “below 7 GHz”.
	+ Straw Pool#2: Do you think that 802.11 should anticipate the reintroduction of implicit feedback for channel estimation in the future for standards below 7 GHz?
		- Yes: 17
		- No: 0
		- Need more info: 46
		- Abstain: 2
* Presentation #5: IEEE 802.11ba beyond wake-up” – Eduard Garcia-Villegas (Polytechnic University of Catalonia)

<https://mentor.ieee.org/802.11/dcn/18/11-18-0540-00-0wng-ieee-802-11ba-more-than-a-wake-up-radio.pptx>

* + Comment: divide into two type of use cases: 1) does not need changes in Primary Radio; 2) do need changes in primary radio; don’t think the use cases are out of scope of entire 802.11.
	+ Questioned about any evaluation on what expect on stand-by power consumption on non-AP stations; and the answer is that the evaluation has not been done.
	+ Comment: some of the use cases can ben enabled by 802.11ba today, e.g., slide 10, mesh may be enabled; for the forwarding use cases, it can be done step-by-step forwarding data; 11ba lower layer will support ; still encourage to continue working with the group to see how enable the other use cases.
	+ Discussion on the Straw Poll:
		- Clarified that the Straw Poll text about “future amendment/extension of IEEE 802.11ba” means “after 802.11ba is published.”
		- Add an option of “Within the scope of IEEE 802.11WG but I don’t support the idea”
		- add an option of “need more info”
	+ Straw Poll: What do you think of the use of IEEE 802.11ba transmissions for purposes beyond Wake-Up (such us those in this presentation)?
		1. Out of the scope of the IEEE 802.11WG
		2. Within the scope of IEEE 802.11WG but I don’t support the idea
		3. Maybe as a future amendment/extension of IEEE 802.11ba
		4. No opinion/Don’t care
		5. Need more information
	+ Straw Poll Results: A(0) / B(3) / C(25) / D(5) / E(29)
* Plan for 2018-May meeting:
	+ Call for contributions: the WNG chair will issue a call for contributions before the 2018-May meeting.
* Any other business: none
* Adjourned at 9:39am Chicago Time