IEEE P802.11
Wireless LANs

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| Wireless Next Generation (WNG) Standing CommitteeMeeting Minutes for April 6th 20222 Teleconference |
| Date: 04-11-2022 |
| Author(s): |
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Abstract

Meeting Minutes for the WNG SC teleconference meeting, on April 6th, 2022.

**WNG Meeting: April 6th, 2022, 09:00 to 11:00 ET**

Chair: Jim Lansford (Qualcomm)

Vice Chair: Lei Wang (Futurewei)

Secretary: Stephen McCann (Huawei)

**Meeting Minutes:**

* Chair called the meeting to order at 09:00 ET on Wednesday, April 6th, 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. You attendance at this meeting does not affect your voting rights.
* Agenda approval:
* <https://mentor.ieee.org/802.11/dcn/22/11-22-0616-00-0wng-agenda-for-wng-sc-2022-april-special-meeting.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.
* Presentation #1: “Making the Case for Open, Softwarized, Data-Driven 802.11 Networks” – Francesco Restuccia (Northeastern University)
* <https://mentor.ieee.org/802.11/dcn/22/11-22-0460-00-0wng-making-the-case-for-open-softwarized-data-driven-802-11-networks.pdf>
* IEEE 802 chair: I think this is a great opportunity for a representative of the academic community to make this presentation.
	+ Summary of Discussion
		- The presentation is to stimulate discussion and feedback.
		- Comment (C): CSI = Channel State Information
		- Question (Q): On slide #26, what would be an initial place to start?
		- Answer (A): I think the access point is a good place to start at the physical (PHY) layer.
		- C: These are good suggestions, but I wonder if you would consider starting a TIG or a SG? These groups would have to concentrate on some standardization aspects of your work.
		- Q: On slide #10, under SA2 there is a system support in the top left hand corner. What does this mean?
		- A: Since AI algorithms are very complex, system support is required.
		- Q: What is the highlighted RAN3 Study Item (SI) on the right hand side of slide #10.
		- A: This is about AI in multi-link scenarios. When you consider a scenario of many devices, AI is useful to determine the algorithms that are required to detect certain behavior.
		- Q: On slide #24, does a STA receive signals from 2 APs simultaneously?
		- A: Not necessarily. This diagram shows many things, such as software sharing. It’s not just distributed MIMO. Some of these aspects may be implemented in the future.
		- Q: What happens when you have multiple providers in a small area (e.g. an airport)?
		- A: These scenarios are not easy. If you can provide interfaces to access points then that will assist co-operation between providers.
		- Q: This looks like a deployment of simple APs that rely on a centralized AI to manage the system.
		- A: As the complexity increases, this implies higher costs, so perhaps software AI could be used to manage Wi-Fi networks.
		- C: There are aspects of the PHY and MAC that can be changed, but there also needs to be some network changes. Perhaps the definition of interfaces are the way forward.
		- Chair: Perhaps a TIG could be formed to look at these issues.
		- Q: What kind of PHY challenges are there?
		- A: Interfaces to the PHY layer would be required, so that the AP can manage the spectrum. This may require some form of real time operation.
		- Q: Some people have been able to replace software within access points, which can contravene the radio regulations. Isn’t this also possible with AI?
		- A: Yes. Therefore there needs to be some control so that AI does not alter access points outside of the radio regulations.
		- Q: When people do data capture and analysis, they breach certain privacy regulations. Has this been considered?
		- A: Yes and again this is an important issue.
		- IEEE 802 Chair: How can this discussion continue. What is the best way forward?
		- Chair: Perhaps, we can come back to that later.
		- Q: If an 802.11 group is formed, that group will probably have to consider algorithms and coding.
		- A: Yes, exactly
		- C: I’m also concerned about privacy issues. We want to avoid bad actors in the network.
		- C: I would also like to know what should be done with this activity. It’s a system level activity and IEEE 802 is ostensibly a PHY/MAC standards development project. 802.11 doesn’t have the scope to consider system level issues.
		- C: Regarding CSI leakage, this is an issue. I believe that security and privacy should be designed into a standard to try and prevent this as much as possible. Security should not be an afterthought.
		- IEEE 802.11 Chair: I think more discussion about the scope of this work is required. Therefore a TIG or ad-hoc group would be preferred at this time.
		- IEEE 802 Chair: I suggest that some sort of scoping statement needs to be written. This would then form the outline of an ad-hoc group or a TIG. This scope can be determined by as many people as possible.
		- IEEE 802.11 Chair: Let’s work on a proposal off-line. That proposal has to be supported by the membership. Then it can be presented at the next WNG SC meeting during the May interim.
		- Chair: Perhaps a straw poll can be run at this WNG SC meeting.
		- C: Note that this next WNG SC meeting will be virtual.
* Plans for May 2022:
	+ Call for contributions: The WNG SC chair will issue a call for contributions before the 802.11 plenary meeting in May 2022.
* Adjourned at 10:18 ET.

**Attendance**

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| **Name** | **Affiliation** |
| Abouelseoud, Modamed | Apple |
| Andersdotter, Amelia | Sky UK Group |
| Ansley, Carol | Cox |
| Au, Kwok Shum | Huawei Technologies Co., Ltd |
| Bajko, Gabor | Nokia |
| Bankov, Dmitry | IITP |
| Baron, stephane | Canon Research Centre France |
| Bischoff, Brent |  |
| Canpolat, Necati | Intel |
| Chemrov, Kirill | IITP |
| Choo, Seungho | Senscomm Semiconductor Co., Ltd. |
| Dash, Debashis | Apple |
| Dogukan, Ali | Vestel |
| DONG, XIANDONG | Xiaomi |
| Eitan, Alecsander | Qualcomm Incorporated |
| Erkucuk, Serhat | Offinno |
| Fang, Yonggang | Mediatek |
| Gan, Ming | Huawei Technologies Co., Ltd |
| Grigat, Michael | Deutsche Telekom AG |
| Halasz, David | Morse Micro |
| Handte, Thomas | Sony |
| Hernandez, Marco | National Institute of Information and Communications Technology (NICT) |
| Hervieu, Lili | Cable Television Laboratories Inc. (CableLabs) |
| Huang, Guogang | Huawei Technologies Co., Ltd |
| Huang, Lei | OPPO |
| Huq, Kazi | Ofinno |
| Jian Yu, Ross | Huawei Technologies Co., Ltd |
| Kamel, Mahmoud | InterDigital |
| Katla, Satyanarayana | IDCC |
| Khorov, Evgeny | IITP RAS |
| Kim, Sang | LGE |
| Kneckt, Jarkko | Apple |
| Lanante, Leonardo | Ofinno |
| Lansford, James | Qualcomm Incorporated; University of Colorado at Boulder |
| Levitsky, Ilya | IITO |
| Levy, Joseph | InterDigital |
| Lin, Zinan | InterDigital |
| Liu, Yong | Apple |
| Liu, Chenchen | Huawei Technologies Co., Ltd |
| Lou, Hanqing | InterDigital |
| Max, Sebastian | Ericsson AB |
| McCann, Stephen | Huawei Technologies Co., Ltd |
| Minotani, Jun | Panasonic Corporation |
| Montemurro, Mike | Huawei Technologies Co., Ltd |
| Motozuka, Hiroyuki | Panasonic Corporation |
| Namboodiri, Vamadevan | Samsung |
| Nezou, Patrice | Canon Research Centre France |
| Nikolich, Paul | self employed/various |
| Petrick, Al | InterDigital |
| Pulikkoonattu, Rethna | Broadcom |
| Restuccia, Francesco | Northeastern University |
| Riegel, Max | Nokia |
| RISON, Mark | Samsung Cambridge Solution Centre |
| Rolfe, Benjamin | Blind Creek Associates |
| Rosdahl, Jon | Qualcomm Technologies, Inc. |
| Sand, Stephen | German Aerospace Center DLR |
| Schelstraete, Sigurd | MaxLinear |
| SEVIN, Julien | Canon |
| Sherlock, Ian | Texas Instruments |
| Stanley, Dorothy | Hewlett Packard Enterprise |
| Suh, Jung Hoon | Huawei Technologies Co., Ltd |
| Viger, Pascal | Canon |
| Wang, Harry | Tencent |
| Wang, Xiaofei | InterDigital |
| Wang, Xianbin | Western University |
| Wei, Dong | NXP Semiconductors |
| Xin, Yan | Huawei Technologies Co., Ltd |
| Yang, Jay | Nokia |
| Yang, Ray | InterDigital |
| Yang, Steve TS | Mediatek |
| Yano, Kazuto | Advanced Telecommunications Research Institute International (ATR) |
| Zhou, Lei | H3C |