IEEE P802.11  
Wireless LANs

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| AANI January 2020 Meeting Minutes | | | | |
| Date: 2020-01-14 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Graham Smith | SRT |  |  |  |
| Joseph LEVY | InterDigital Communication, Inc. |  | +1.631.622.4139 | [joseph.levy@interdigital.com](mailto:joseph.levy@interdigital.com) |

Abstract

Minutes from the AANI SC meeting held during the 802.11 WLAN Working Group Session on Jan 14, 2020 in Irvine. Edited by Joseph Levy (InterDigital) AANI SC Chair.

Note: in this document:

Q – proceeds discussion questions,

C – proceeds comments,

A – proceeds answers/replies (in response to a question or comment),

and

The Chair - proceeds action or statements by the AANI SC Chair.

# Tuesday January 14, AM2

**Administration:**

**Chair: Joseph LEVY, InterDigital**

**Secretary Acting: Graham Smith (SR Technologies).**

**Meeting called to order by the Chair 10:30 local time** (about15 persons in the room.)

**Proposed Meeting Agenda:**

The meeting agenda is shown below, and published in the agenda document: [11-20/2127r3](https://mentor.ieee.org/802.11/dcn/19/11-19-1022-01-AANI-aani-sc-agenda-july-2019.pptx)

1. **Call for Secretary**
2. **Administrative: Reminders, Rules, Guidelines, Resources, Participation, Approval of Minutes**
3. **Background/Status**
4. **Technical Discussion / Contributions**
   * On interworking between 3GPP 5G network & WLAN
5. **Future Sessions Planning**

The Chair: call for a volunteer for secretary, Graham Smith volunteered.

**Approval of the agenda:**

The Chair: Called for comments or additions to the agenda.

There were none.

The Chair: Is there any objection to accepting this agenda?

No objection, Agenda approved.

**The Chair reviewed the IEEE guidelines.**

**Approval of the Minutes:**

Minutes from the November Meeting in Waikoloa:[**11-19/2097r2**](https://mentor.ieee.org/802.11/dcn/19/11-19-2097-01-AANI-aani-november-2019-meeting-minutes.docx)

Approved with no comments or objection.

Nendica Reminder:

The Chair announced that the IEEE 802 Nendica will be meeting at this meeting

* Wednesday 15th PM1 13:30-15:30 PST
* And during the 802.1 meetings next week

**NENDICA Update**

NENDICA Chair gave a short report as per 802.1-20-0003 (on 802.1 reflector).

Met in Waikoloa, Nov 2019, and updated the procedures, approved Flexible IoT Report, and discussed managed LAN as service.

**Background and Status:**

* At the July 802.11 meeting the WG agreed to a “press release” on “IEEE P802.11ax meets the salient requirements of IMT-2020 Indoor Hotspot and Dense Urban environments”
* The 802.11 WG Chair designated the following SMEs to work with IEEE staff to generate the “Press Release”:
  + Sindhu Verma (Broadcom)
  + Shudhodeep Adhikari (Broadcom)
  + Joseph Levy (InterDigital)
* The “Press Release” has been reviewed and approved by the SMEs, the 802.11 Chair, the 802 EC, and IEEE Corporate.
* The “Press Release” was released 17 Dec 2019:
* <https://standards.ieee.org/news/2019/5g-indoor-hotspot-and-dense-urban-deployments.html>

The Chair called for questions or concerns?

Q – was there any reaction?

A - Why did we not submit .11 to IMT 2020?

C – We did not need to.

Update on ITU IMT-2020 Status (slide 12 of 20/2127r1)

The status of the IMT-2020 is summarized in: [11-20/0008r0](https://mentor.ieee.org/802.11/dcn/19/11-20-0008-00-AANI-itu-imt-2020-status-of-proposals) “ITU IMT-2020 Status of Proposals”, Joseph Levy (InterDigital)

* At close of meeting, the IMT-2020 work is basically proceeding on schedule and all 6 candidate proposals now considered complete.
* Need a TIES account to see them. See Chair.

Q - Are there any references?

A - No reference to any WLAN anywhere

The Chair - Full Specification is in this process and will be published.

Q – when?

A – End of 2020.

Q – Need to have approved standards?

A – Do not believe so. Typically core specifications are not approved standards. 3GPP will release everything they have into these core requirements. What’s reviewed and what’s incorporated are not the same thing.

C – Not everything new is evaluated.

C – Evaluation reports and proposals(?) are kept in folder outside of TIES.

Status on Proposal on Interworking (Slide 13 20/2127r1)

* At the July meeting a proposal was made: [11-19/1160r1](https://mentor.ieee.org/802.11/dcn/19/11-19-1160-01-AANI-proposal-on-interworking-between-ieee-802-11-wlan-and-3gpp-5g-core-network.pptx) Proposal on Interworking between IEEE 802.11 WLAN and 3GPP 5G Core Network– Hyun Seo Oh (ETRI)
* At the September meeting more details were provided: [11-19/1529r1](https://mentor.ieee.org/802.11/dcn/19/11-19-1529-01-AANI-objective-and-scope-of-technical-report-on-interworking-between-5g-core-network-and-wlan.docx), “Objective and scope of technical report on interworking between 5G core network and WLAN”, Hyun Seo Oh (ETRI)
* At the November meeting two contributions were discussed:
  + [11-19/2046r0](https://mentor.ieee.org/802.11/dcn/19/11-19-2046-00-AANI-the-initial-technical-draft-report-on-interworking-between-3gpp-5g-network-network.pptx) The Initial Technical Draft Report on Interworking between 3GPP 5G Network & WLAN - Hyun Seo OH (ETRI)
  + [11-19/1843](https://mentor.ieee.org/802.11/dcn/19/11-19-1843-00-AANI-initial-technical-draft-report-on-interworking-between-3gpp-5g-network-and-wlan.docx) - Initial technical draft report on interworking between 3GPP 5G network & WLAN - Hyun Seo OH (ETRI)
  + There was an objection to continuing this work, expressed by an 802.11 voting member. To which the Chair replied that the work of the AANI SC is contribution driven.

**Discussion / Contributions:**

* [11-20/0013r0](https://mentor.ieee.org/802.11/dcn/20/11-20-0013-00-AANI-draft-technical-report-on-interworking-between-3gpp-5g-network-wlan.docx) “Draft technical report on interworking between 3GPP 5G network & WLAN” - Hyun Seo OH(ETRI)
* “This contribution is a draft technical report on WLAN interworking to 3GPP 5G network. It describes the interworking reference model and interworking types supported by 3GPP 5G network and WLAN, and defines the necessary functionalities and specific procedures that enable WLAN access networks to interwork with 3GPP 5G network. This technical report on interworking between 3GPP 5G network and WLAN will provide a reference and guideline for stakeholders with interest in standardization and system development.”

Hyun Seo OH(ETRI) presented the document.

At end:

“It is reviewed that EDCA and HCCA of WLAN technology will meet QoS for Non-GBR service type and will be limited to meet low latency and high reliability for GBR and delay critical GBR types.” (To be described)

Also, **Gap analysis and Recommendations** still to be provided and discussed.

Q – Clause 4.1 radio channel sharing method. What is intention? Same spectrum? licensed with unlicensed?

A - Simultaneously 2 channels, unlicensed and licenced.

Q – This is interconnection rather than interworking as this description is all in the higher layer. So missing the interworking aspect. Whereas 802.11 is below this level. Does not relate to specifications in 802.11. Needs more thinking to address interworking.

Q – Section 4.5 QoS comment that EDCA and HCCA will meet. When talking 3GPP in unlicensed would get similar answers.

Q – What is purpose of this document?

A – Simultaneous use of WLAN and 3GPP. Details of QoS values to be analysed for unlicensed band and provide recommendations to 802.11.

C – Gap analysis, cross characteristics and come up with what 802.11 can do better. Is there really a gap as voice works pretty well? Do we really need GPR conversational voice? Stopped doing that years ago.

The Chair – not saying Wi-Fi can’t support these things. But in order to be supported thru the 3GPP core, these are the requirements that are being called for. Would imagine that 802.11 can meet the criteria but nothing in our specification, so there may be a gap between the two specifications. These doesn’t seem to be a way to guarantee a particular service over the core, so the network will know that 802.11 will support it. Licensed band has admission control etc and performance built into the 3GPP specifications with ability to manage it. This is a management problem.

Q – Table 1, is this taken directly from 3GPP spec. Where do I find the guaranteed bit rate?

A – Depends on resource time. Audio low rate, video higher rate.

Q - GBR is a guaranteed bit rate so not sure how to understand this Table. Is this end to end delay

A – Yes

Q – Any details on allocation of delays over the air and core? What is the air budget?

A – Not specified. Will check.

Q – EAP 5G terminology, is EAP 5G is well defined. Is there an ITF term? If so use it.

A – EAP5 is defined for privacy. Fig 7 is EAP 5G protocol. Refers to that figure not giving specific.

C – EAP 5G is defined as “vendor specific EAP method”.

Q – What is timeline for this work?

A – Finish in May meeting.

Q – The what is process, approve in AANI?

The Chair – if gap analysis is ready, there the document would need to be approved by AANI, and then presented to the WG. But, we haven’t agreed this yet and we need to have an agreed way forward detailed. If others contribute it may not be possible for this work to be ready by May. If there is active discussion over the Gap analysis or other content, the work could continue beyond May, we are contribution driven. This said, I would like to wrap up this work soon and the May meeting is a good target.

**Future session planning**

**Teleconference:**

As required with 10 days’ notification

No planned teleconferences. If needed a teleconference will be scheduled with at least 10 days’ notice. If a request (for gap analysis discussion for example) contact the Chair.

No comments

**Next Meeting**

15-20 March 2020 Hilton Atlanta, Atlanta Georgia, USA:

The AANI SC is contribution driven, contributions are requested:

* 1. Technical and discussion contributions on 802.11 technical performance relative to IMT-2020 requirements
  2. Technical and discussion contributions on interworking/integration of 802.11 with the 3GPP Next Generation System
  3. In support of 802.1 Nendica

*Note: IMT-2020 proposal contribution deadline has passed*

Meeting time requested: 1 session – Tuesday (TBC)

The Chair called for AOB, there was none.

**Having exhausted the agenda, the meeting adjourned at 11.45 am local time.**