IEEE P802.11
Wireless LANs

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| AANI SC Telecon Minutes 14 July 2020(802.11 July Plenary) |
| Date: 2020-07-14 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Graham SMITH | SR Technologies | Sunrise, Florida |  | gsmith@srtrl.com |
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Abstract

This document contains the minutes of the IEEE 802.11 AANI SC teleconference held on 14 July 2020 at 09:00 hrs EDT.

An addendum to these minutes has been provided that reports on a way forward straw poll that was conducted via the 802.11 AANI SC email reflector after the close of this meeting.

Note: Highlighted text are action items.

Q- proceeds a question asked at the meeting

A- proceeds an answer given by the presenter

C- proceeds a comment

# Tuesday 14 July 2020, 09:00 hrs EDT:

**Chair: Joseph Levy, Interdigital**

**Acting Secretary: Graham Smith**

**1. The teleconference was called to order by Chair 9:00 hrs. EDT,**

Graham Smith (SRT) volunteered to be acting secretary.

Agenda slide deck ([11-20/0991r1](https://mentor.ieee.org/802.11/dcn/20/11-20-0991-01-AANI-aani-sc-teleconference-agenda-14-july-2020.pptx)):

**2. The Chair reminded everyone to sign attendance.**

See attendance list at the bottom of this document.

**3. Approval of the Agenda:**

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**
		+ [**11-20/0013r3**](https://mentor.ieee.org/802.11/dcn/20/11-20-0013-03-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), et al.**
		+ [**11-20/1031r2**](https://mentor.ieee.org/802.11/dcn/20/11-20-1031-02-AANI-11-20-0013-03-aani-draft-technical-report-on-interworking-between-3gpp-5g-network-wlan-intel-comments.docx) **“11-20-0013-03-AANI-draft-technical-report-on-interworking-between-3gpp-5g-network-wlan-Intel-comments”, Binita Gupta (Intel), Necati Canpolat (Intel), Carlos Cordeiro (Intel)**
5. **Straw Poll on comment collection/way forward**
6. **Future Sessions Planning**

The Chair reviewed the agenda. The proposed agenda was approved without objection.

**4. Policies and procedures were presented by the chair.**

**5. Approval of Minutes**

**Minutes from the January 2020 Meeting in Irvine, California, USA :** [**11-20/0302r0**](https://mentor.ieee.org/802.11/dcn/20/11-20-0302-00-AANI-aani-january-2020-meeting-minutes.docx)

No comments - approved by unanimous consent.

**07 May 2020 Teleconference:** [**11-20/0625r0**](https://mentor.ieee.org/802.11/dcn/20/11-20-0625-00-AANI-minutes-aani-sc-2020-04-07.docx)

 **23 June 2020 Teleconference:** [**11-20/0946r2**](https://mentor.ieee.org/802.11/dcn/20/11-20-0946-02-AANI-aani-sc-telecon-minutes-23-june-2020.docx)

 **06 July 2020 Teleconference:** [**11-20/1016r0**](https://mentor.ieee.org/802.11/dcn/20/11-20-1016-00-AANI-aani-sc-telecon-minutes-06-july-2020.docx)

No comments, all approved by unanimous consent.

**Background/Status**

**Nendica**

All Nendica documents available at: <https://mentor.ieee.org/802.1/documents>

## Presentations/discussion:

Status presented as per slide 10 of 20/0991r1.

**Draft technical report on interworking between 3GPP 5G network & WLAN, Hyun Seo OH, ETRI (11-20/13r3)**

Hyun Seo (ETRI) went through the latest version and summaries of new changes since the last version (r3)

Editorial comments and 3 types of TSN bridges are described.

Conclusion section was presented.

Actions possible: generate changes to 802.11 specification and/or liaison statements. AANI SG cannot carry out specification work.

“[**11-20-0013-03**](https://mentor.ieee.org/802.11/dcn/20/11-20-1031-00-AANI-comments-on-11-20-0013-03-aani-draft-technical-report-on-interworking-between-3gpp-5g-network-wlan.docx)**-AANI-draft-technical-report-on-interworking-between-3gpp-5g-network-wlan-Intel-comments”, Binita Gupta (Intel), Necati Canpolat (Intel), Carlos Cordeiro (Intel)**

*(Note: a comment was made during the meeting there were 802.11 format and rules issues with this document. To correct this issue the documents numbered 11-20/1031r0, 11-20/1031r1, 11-20/1031r2, and11-20/1031r3 that were on the Mentor server at the time of the meeting have all been removed from the Mentor server. A new version of the document that is in agreement with 802.11 format requirements and rules has been posted to the Mentor server:* [*11-20/1031r0*](https://mentor.ieee.org/802.11/dcn/20/11-20-1031-00-AANI-comments-on-11-20-0013-03-aani-draft-technical-report-on-interworking-between-3gpp-5g-network-wlan.docx)*. This document is technically equivalent to the documents that were removed. The 802.11 membership were notified of these changes via an e-mail from the Chair on the AANI SC email reflector. The links both point to the new document)*

Binita Gupta (Intel) presented Intel Comments on 20/0013. Document takes the form of comments embedded into 20/0013r3. No changes to text.

No time for technical discussion.

C – Thanks for analysis, contribution should be from an individual. Post revision and edit title please.

C – There is a difference in views.

No discussion due to time

Chair opined whether to have a Straw Poll on Direction

Update document prior to comment collection, or include these comments first?

C – As we have straw poll from last week, why not go forward for comment collection?

## The meeting ran out of time at 10.00 am

A follow up SP was run by e-mail on the IEEE 802 AANI SC reflector asking the question:

Which way forward do you prefer:

1. Consider the comments provided in 11-20/1031r2 (as presented during the meeting) and update the report **before** submitting the report for WG comment collection.
2. Submit 11-20/0013r3 for WG comment collection “now” and consider the comments provided in 11-20/1031r2 during the comment resolution phase, along with other comments received during the WG comment collection.

To decide the way forward the Chair indicated he would run an email SP.

## Adjourned: 10.00 hrs. EDT

An addendum on the e-mail straw poll run after the close of this meeting and a list of attendees follow.

**Addendum:**

**After the close of this meeting the following email straw poll was run via the AANI SC reflector (****STDS-802.11-AANI@LISTSERV.IEEE.ORG****) on Tue 7/14/2020 11:02 AM :**

Dear All,

At today’s (14 July 9:00-10:00AM) AANI SC teleconference comments were provided in 11-20/1031r2 on the Draft Technical Report: 11-20/0013r3.

The meeting ended prior to the AANI SC being able to make a decision on how to progress this work. (Due to poor time management on my part and technical issues with Webex.)

I believe that the AANI SC has two ways forward:

1. Consider the comments provided in 11-20/1031r2 (as presented during the meeting) and update the report **before** submitting the report for WG comment collection.
2. Submit 11-20/0013r3 for WG comment collection “now” and consider the comments provided in 11-20/1031r2 during the comment resolution phase, along with other comments received during the WG comment collection.

Your response:

            I prefer way forward:  1 or 2

Please vote your preference for 1 or 2 directly to me via e-mail: jslevy@ieee.org

(This can be done by replying to this e-mail, without reply all.)

Please use the reflector for all technical/procedural discussion - but not for this straw poll.

I will tabulate the results of this poll and share the result on the reflector.  Note: I will **not** share how individuals have voted.

Please reply with your preferred way forward (vote) prior to Wednesday 15 July 11:00 AM ET as I will need the result of this poll to determine how to progress the work.

Thank you for your support of the AANI SC.

--

Regards,

Joseph Levy

802.11 AANI Chair

**The results of this email straw poll were reported to the 802.11 AANI SC via the AANI SC reflector (****STDS-802.11-AANI@LISTSERV.IEEE.ORG****) on Wed 7/15/2020 11:59 AM :**

The results of the Straw Poll are as follows:

I received 21 responses

10 preferred: 1) Consider the comments provided in 11-20/1031r2 (as presented during the meeting) and update the report **before** submitting the report for WG comment collection.

10 preferred: 2) Submit 11-20/0013r3 for WG comment collection “now” and consider the comments provided in 11-20/1031r2 during the comment resolution phase, along with other comments received during the WG comment collection.

1 individual was fine with either option.

The SP is inconclusive - so as Chair I will exercise my administrative authority to progress this work.

I request and encourage the authors and commenters work together to:

1. Continue discussion on the AANI SC email reflector
2. The authors: to update the report (11-20/0013r3) considering the comments received
3. The commenters: are encouraged to provide some text/graphic contributions for the report (possibly becoming authors/contributors of the report).
4. The authors to generate an updated report (11-20/0013r4 or greater) for presentation review at the next AANI Teleconference, to be scheduled on Tuesday 28 July 9:00am-10:00am.
5. Following the 28 July teleconference, I will take the updated report with any additional edits agreed during the teleconference and request the 802.11 WG chair send the report for a 20 day WG comment collection - with a target start date of 31 July 2020 and a target close date of 20 August 2020.

Proceeding in this manner, will allow the AANI SC to hold a Teleconference on 25 August to discuss and assign the comments.  This will allow for approximately 3 weeks to resolve the comments prior to the September Interim meeting (which will not be a F2F meeting).  I will also schedule AANI SC Teleconference on the 1st and 8th of September to support comment resolution (we will hold these teleconferences only if there is something to discuss).  Assuming we can complete comment resolution and an updated report is available in line with this proposed timeline - the AANI SC will then ask for 802.11 WG endorsement of the report during the closing plenary of the 802.11 September Interim meeting (assuming there is a closing plenary meeting).  Note: this proposed schedule of events is only an estimate, the actual progress will depend on contributions received and how well we work together to complete this report.

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Regards,

Joseph Levy

802.11 AANI Chair

# Attendance:

175 attended the meeting:

| **Name** | **Affiliation** |
| --- | --- |
| AbidRabbu, Shaima' | Istanbul Medipol University; Vestel |
| Aboulmagd, Osama | Huawei Technologies Co. Ltd |
| Abushattal, Abdelrahman | Istanbul Medipol University; Vestel |
| Adachi, Tomoko | TOSHIBA Corporation |
| Adhikari, Shubhodeep | Broadcom Corporation |
| Agrawal, Sandeep | C-DOT/Centre for Development of Telematics |
| AKHTAR, NADEEM | Arista Networks, Inc. |
| Alayasra, Musab | Medipol University; Vestel |
| An, Song-Haur | INDEPENDENT |
| Arrington, Arthur | Air Network Solutions |
| Asai, Yusuke | NTT |
| Au, Kwok Shum | Huawei Technologies Co., Ltd |
| Auluck, Vijay | Self |
| Avrillon, Matthieu | Luceor |
| Awater, Geert | Qualcomm Incorporated |
| Aygul, Mehmet | Istanbul Medipol University; Vestel |
| B, Hari Ram | NXP Semiconductors |
| Baek, SunHee | LG ELECTRONICS |
| Banerjea, Raja | Qualcomm Incorporated |
| Bankov, Dmitry | IITP RAS |
| BECHADERGUE, Bastien | OLEDCOMM |
| Berens, Friedbert | FBConsulting Sarl |
| Berner, Stephan | PureLiFi |
| Bluschke, Andreas | Signify |
| Bredewoud, Albert | Broadcom Corporation |
| Calcev, George | Huawei R&D USA |
| Cao, Rui | NXP Semiconductors |
| Carney, William | Sony Corporation |
| Cha, Jaesun | Electronics and Telecommunications Research Institute (ETRI) |
| CHAN, YEE | Facebook |
| Chen, Cheng-Ming | Qualcomm Incorporated |
| Chen, Evelyn | Ericsson AB |
| Cheng, Xilin | NXP Semiconductors |
| Chitrakar, Rojan | Panasonic Asia Pacific Pte Ltd. |
| Cho, Hangyu | LG ELECTRONICS |
| CHUN, JINYOUNG | LG ELECTRONICS |
| Chung, Bruce | Realtek Semiconductor Corp. |
| Chung, Chulho | SAMSUNG |
| Ciochina, Dana | Sony Corporation |
| Coffey, John | Realtek Semiconductor Corp. |
| Costa, D. Nelson | Peraso Technologies Incorporated |
| Das, Subir | Perspecta Labs Inc |
| Dash, Debashis | Apple |
| DeLaOlivaDelgado, Antonio | InterDigital, Inc. |
| Ding, Baokun | Huawei Technologies Co. Ltd |
| DOAN, DUNG | Qualcomm Incorporated |
| Du, Rui | Huawei Technologies Co., Ltd |
| Ecclesine, Peter | Cisco Systems, Inc. |
| Edgar, Richard | Imagination Technologies Ltd. |
| EMMELMANN, MARC | Self Employed / Koden-TI / Fraunhofer FOKUS |
| Fang, Yonggang | ZTE TX Inc |
| Feng, Xiang | Keysight Technologies |
| Fletcher, Paul | Samsung Cambridge Solution Center |
| Furuichi, Sho | Sony Corporation |
| Gan, Ming | Huawei Technologies Co. Ltd |
| Ganwani, Vijay | NXP Semiconductors |
| Garg, Lalit | Broadcom Corporation |
| Ghosh, Chittabrata | Intel Corporation |
| Godbole, sachin | Broadcom Corporation |
| Goto, Fumihide | Self |
| Grigat, Michael | Deutsche Telekom AG |
| Guo, Yuchen | Huawei Technologies Co. Ltd |
| Haider, Muhammad Kumail | Facebook |
| HAN, CHONG | pureLiFi |
| Han, Jonghun | SAMSUNG |
| HAN, Xiao | Huawei Technologies Co. Ltd |
| Han, Zhiqiang | ZTE Corporation |
| Handte, Thomas | Sony Corporation |
| Harrison, Edward | Anritsu Company |
| Hervieu, Lili | Cable Television Laboratories Inc. (CableLabs) |
| Hiertz, Guido | Ericsson GmbH |
| Hsieh, Hung-Tao | MediaTek Inc. |
| Hsu, Chien-Fang | MediaTek Inc. |
| Hu, Mengshi | HUAWEI |
| Huang, Guogang  | Huawei Technologies Co. Ltd |
| Huang, Lei | Panasonic Asia Pacific Pte Ltd. |
| Hurtarte, Jeorge | Teradyne, Inc. |
| Ibrahim, Mostafa | SAMSUNG ELECTRONICS |
| Inohiza, Hirohiko | Canon |
| Inoue, Yasuhiko | Nippon Telegraph and Telephone Corporation (NTT) |
| Jang, Insun | LG ELECTRONICS |
| Jeffries, Timothy | Huawei R&D USA |
| Jeon, Eunsung | SAMSUNG ELECTRONICS |
| Jeong, Yangseok | KT Corp. |
| Ji, Chenhe | Huawei Technologies Co., Ltd |
| Jia, Jia | Huawei Technologies Co., Ltd |
| Jones, Steven | Samsung Cambridge Solution Center |
| JUNG, MYUNG CHEUL | Pantech Inc. |
| Kain, Carl | Noblis, Inc. |
| KANG, Kyu-Min | Electronics and Telecommunications Research Institute (ETRI) |
| Kasher, Assaf | Qualcomm Incorporated |
| Kenney, John | TOYOTA InfoTechnology Center U.S.A. |
| Khorov, Evgeny | IITP RAS |
| Khude, Nilesh | NXP Semiconductors |
| Kim, Jeongki | LG ELECTRONICS |
| Kim, Myeong-Jin | SAMSUNG |
| kim, namyeong | LG ELECTRONICS |
| Kim, Sang Gook | LG ELECTRONICS |
| Kim, Sanghyun | WILUS Inc. |
| Kim, Yongho | Korea National University of Transportation |
| Kim, Youhan | Qualcomm Incorporated |
| KIM, Youngjae | Telecommunications Technology Association (TTA) |
| Kitazawa, Shoichi | Muroran IT |
| Klimakov, Andrey | Huawei Technologies Co., Ltd |
| Kumar, Manish | Marvell Semiconductor, Inc. |
| Kureev, Aleksey | IITP RAS |
| Kwak, Jin-Sam | WILUS Inc. |
| Lan, Zhou | Broadcom Corporation |
| Lee, Hyeong Ho | Netvision Telecom Inc. |
| Lee, Jae Seung | ETRI |
| Lee, Nancy | Signify |
| Lee, Wookbong | SAMSUNG |
| Levitsky, Ilya | IITP RAS |
| Levy, Joseph | InterDigital, Inc. |
| Li, Jialing | Qualcomm Incorporated |
| Li, Qinghua | Intel Corporation |
| Li, Yanchun | Huawei Technologies Co. Ltd |
| Li, Yiqing | Huawei Technologies Co. Ltd |
| Liang, dandan | Huawei Technologies Co. Ltd |
| Lim, Dong Guk | LG ELECTRONICS |
| Lin, Wei | Huawei Technologies Co. Ltd |
| LIU, CHENCHEN | Huawei Technologies Co. Ltd |
| Loginov, Vyacheslav | IITP RAS |
| Lopez, Miguel | Ericsson AB |
| Lu, Liuming | ZTE Corporation |
| Luo, Chaoming | Beijing OPPO telecommunications corp., ltd. |
| Ma, Mengyao | HUAWEI |
| Mai, Huiheng | Blu Wireless Technology |
| Malinen, Jouni | Qualcomm Incorporated |
| Mano, Hiroshi | Koden Techno Info K.K. |
| Martinez Vazquez, Marcos | MaxLinear Corp |
| Max, Sebastian | Ericsson AB |
| McCann, Stephen | BlackBerry |
| Mcconnell, Ray | Blu Wireless Technology Ltd |
| Mehrnoush, Morteza | Facebook |
| Memisoglu, Ebubekir | IMU, VESTEL |
| Mirfakhraei, Khashayar | Cisco Systems, Inc. |
| Montreuil, Leo | Broadcom Corporation |
| Motozuka, Hiroyuki | Panasonic Corporation |
| NAGATA, KENGO | Nippon Telegraph and Telephone Corporation (NTT) |
| Nakano, Hiroki | CAHI Corporation |
| Nguyen, An | U.S. Department of Homeland Security |
| Nikolich, Paul | self employed/various |
| Oh, Hyun Seo | Electronics and Telecommunications Research Institute (ETRI) |
| Ohsawa, Tomoki | NICT |
| Okada, Hiraku | Nagoya University |
| Omar, Hassan | Huawei Technologies Co., Ltd |
| Ouchi, Masatomo | Canon |
| Oyama, Satoshi | Association of Radio Industries and Businesses (ARIB) |
| Ozbakis, Basak | VESTEL Electronics Corp. |
| Pan, Chun | Huawei Technologies Co., Ltd |
| Parekh, Jatin | Arista Networks, Inc. |
| Park, Eunsung | LG ELECTRONICS |
| Patil, Abhishek | Qualcomm Incorporated |
| Petranovich, James | ViaSat, Inc. |
| Petrick, Albert | Jones-Petrick and Associates, LLC. |
| Petry, Brian | Broadcom Corporation |
| Pettersson, Charlie | Ericsson AB |
| Pirhonen, Riku | Self Employed |
| porat, ron | Broadcom Corporation |
| Prabhakaran, Dinakar | Broadcom Corporation |
| Purwita, Ardimas | University of Edinburgh |
| Rafique, Saira | Istanbul Medipol University, Vestel |
| Rai, Kapil | Qualcomm Incorporated |
| Rantala, Enrico-Henrik | Nokia |
| Riegel, Maximilian | Nokia |
| RISON, Mark | Samsung Cambridge Solution Centre |
| Rosdahl, Jon | Qualcomm Technologies, Inc. |
| Roy, Sayak | NXP Semiconductors |
| Ryan, Stuart | Blu Wireless Technology Ltd. |
| Sakamoto, Takenori | Panasonic Corporation |
| Sakoda, Kazuyuki | Sony Corporation |
| Salem, Mohamed | Huawei Technologies Co., Ltd |
| Sambasivan, Sam | AT&T |
| Sandhu, Shivraj | Qualcomm Incorporated |
| Sato, Naotaka | Sony Corporation |
| Schiessl, Sebastian | u-blox |
| Sedin, Jonas | Ericsson AB |
| Sethi, Ankit | NXP Semiconductors |
| Sevin, Julien | Canon Research Centre France |
| Sherlock, Ian | Texas Instruments Incorporated |
| Singh, Gurdev | SAMSUNG ELECTRONICS |
| Sinn, Ulrich | Siemens AG |
| Smith, Graham | SR Technologies |
| Solaija, Muhammad Sohaib | Istanbul Medipol University; Vestel |
| Song, Taewon | LG ELECTRONICS |
| Stanley, Dorothy | Hewlett Packard Enterprise |
| Startsev, Ivan | IITP |
| Stavridis, Athanasios | Ericsson AB |
| SUH, JUNG HOON | Huawei Technologies Co. Ltd |
| Sun, Bo | ZTE Corporation |
| Sun, Sheng | Huawei Technologies Co. Ltd |
| Sun, Yingxiang | Huawei Technologies Co., Ltd |
| Takai, Mineo | Space-Time Engineering |
| Tanaka, Yusuke | Sony Corporation |
| Teran, Jesus Gutierrez | IHP GmbH |
| Tian, Tao | Unisoc Comm. |
| Trainin, Solomon | Qualcomm Incorporated |
| Turkmen, Halise | Vestel |
| Uln, Kiran | Cypress Semiconductor Corporation |
| van Wageningen, Andries | Signify |
| Van Zelst, Allert | Qualcomm Incorporated |
| Varshney, Prabodh | Nokia |
| Verenzuela, Daniel | Sony Corporation |
| Verma, Sindhu | Broadcom Corporation |
| Wang, Hao | Self |
| Wang, Xiaofei | InterDigital, Inc. |
| Wendt, Matthias | Signify |
| Wentink, Menzo | Qualcomm Incorporated |
| Wilhelmsson, Leif | Ericsson AB |
| Winser, Paul | Blu Wireless |
| Xin, Yan | Huawei Technologies Co. Ltd |
| Xue, Ruifeng | Cisco Systems, Inc. |
| YAGHOOBI, HASSAN | Intel Corporation |
| Yang, Lin | Qualcomm Incorporated |
| Yang, Xun | Huawei Technologies Co. Ltd |
| yi, yongjiang | Futurewei Technologies |
| yim, choon sik | RCN |
| Yona, Yair | Qualcomm Incorporated |
| Yoshikawa, Yuki | Canon |
| Yu, Heejung | Yeungnam University |
| Yu, Jian | Huawei Technologies Co. Ltd |
| Yukawa, Mitsuyoshi | Canon, Inc. |
| ZEGRAR, Salah Eddine | Istanbul Medipol University; Vestel |
| ZHANG, JIAYIN | Huawei Technologies Co. Ltd |
| Zhang, Meihong | Huawei Technologies Co., Ltd |
| Zhou, Yifan | Huawei Technologies Co., Ltd |
| Zou, Tristan | Qualcomm Incorporated |
| Zuo, Xin | Tencent |