Minutes of 802.18 (RR-TAG) Meeting

(Warsaw, Poland, in May, 2018)

IEEE 802.18

Radio Regulatory-TAG

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| Radio Regulatory Technical Advisory Group Minutes |
| Date: 7-11 May, 2018 |
| Name | Affiliation | Address | Phone | email |
|  |
| Author(s):  |
| Allan Zhu | Huawei Technologies | San Jose, CA | (718)877-9645 | chunhui.zhu@huawei.com |
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| Officer presiding:  |
| Jay Holcomb | Itron, Inc. | Liberty Lake (Spokane) WA |  |  |

Abstract

Minutes of IEEE 802 RR-TAG Interim meeting in Warsaw, Poland, in May, 2018

**Tuesday, May 7th, 2018, AM2**

1. The Chair, Jay Holcomb, called the meeting to order at 10:34 local.
	1. About 25 people in the room
2. The Chair used the agenda meeting plan document 18-18/0050r01.
3. Chair reviewed Slide 2, Call to Order / Administrative Items
	1. Chair goes through the 4 administration slides embedded in this slide.
4. Chair reviewed slide #3-4, Other Guidelines for IEEE WG Meetings and Participation in IEEE 802 Meetings.
5. Chair reviewed Slide 5, the agenda
	1. Call to Order
		1. Attendance server is open
	2. Administrative items
	3. Approve agenda & last minutes
	4. Discussion items
		1. FCC NPRM Section 7
		2. FCC NOI/PN 4GHz
		3. EU Items
		4. WiFi / UWB points
		5. IEEE EU position statement
		6. IEEE 802 Fellowship request
		7. Thursday’s agenda
	5. Actions required
		1. IEEE EU Position Statement inputs
		2. WiFi / UWB inputs
		3. What happens during the call
	6. AOB and Adjourn.
6. Motion passed to approve the meeting agenda on Slide #6
	1. Motion: To approve the agenda as presented on previous slide
	2. Moved by: Stuart Kerry (Arris/Ruckus)
	3. Seconded by: Thomas Kuerner (TU Braunschwig)
	4. Discussion?
	5. Vote: Unanimous consent
7. Motion passed to approve March 2018 meeting minutes on Slide #6
	1. Motion: To approve the minutes from the IEEE 802.18 meeting at the Chicago (Rosemont) Wireless Plenary in document: <https://mentor.ieee.org/802.18/dcn/18/18-18-0024-00-0000-meeting-minutes-march-2018-o-hare.docx> Posted: 23-Mar-2018 16:54:50 ET
	2. Moved by: Tim Jeffries (Huawei Technologies)
	3. Seconded by: Stuart Kerry (Arris/Ruckus)
	4. Discussion?
	5. Vote: Unanimous consent
8. Chair asked the group if anyone has an interest in being the 802.18 Vice-Chair?
	1. Needs to be a member of the SA and send a declaration of term commitment and affiliation letters to the EC.
9. Chair went through slide #7 on FCC NPRM– Section 7.
	1. NPRM Revision of Section 7 on expediting access for new technologies
		1. <https://mentor.ieee.org/802.18/dcn/18/18-18-0021-00-0000-nprm-fcc-18-18.docx>
		2. <https://www.fcc.gov/ecfs/search/filings?proceedings_name=18-22&sort=date_disseminated,DESC>
	2. It was published in Federal Register on 04 April
		1. <https://www.federalregister.gov/documents/2018/04/04/2018-06741/encouraging-the-provision-of-new-technologies-and-services-to-the-public>
		2. This document has a comment period that ends in 45 days. (21 May 2018)
	3. Is there anything we want to comment on?
		1. Would need to approve by Thursday
	4. The .18 chair highlighted the NPRM and the 6 seek comments (18-18/0021r01)
	5. Went through it last week, not a lot of interest
	6. Chair went through the document again and created r2 (18-18/21r2), maybe 2 -3 points could be considered
		1. Clearer guidelines of what they considered new, e.g. moving/adjusting a known technology to the THz?
		2. How would the FCC be sure the integrity of new rules are to the same standards as the process is today that can take much longer than a year?
		3. From the member not present from earlier: 90 days is plenty when expiration/recall/modification is possible, otherwise it is tough when OET is on vacation.
	7. Two members were asked to put a few sentences together on the first 2 bullets for possible comments to review Thursdays.
10. The summary of FCC NPRM– Section 7 is from Slide #8 to Slide #10.
11. Chair reviewed Slide 11-14, FCC NOI 4 GHz
	1. EXPANDING FLEXIBLE USE OF THE 3.7 GHZ TO 4.2 GHZ BAND, DA 18-396
		1. [https://www.fcc.gov/ecfs/search/filings?q=delegated\_authority\_number:(\*18%5C-396\*)&sort=date\_disseminated,DESC](https://www.fcc.gov/ecfs/search/filings?q=delegated_authority_number:(*18%5C-396*)&sort=date_disseminated,DESC)
		2. <https://mentor.ieee.org/802.18/dcn/18/18-18-0041-00-0000-fcc-noi-expanding-flexible-use-of-3-7-4-2-ghz-band-gn-18-122-da-18-396.pdf>
	2. By this Public Notice, the Wireless Telecommunications Bureau, International Bureau, and the Office of Engineering and Technology establish GN Docket No. 18-122, which is captioned “Expanding Flexible Use of the 3.7 GHz to 4.2 GHz Band.” We encourage parties that submit filings related to the potential for more intensive use of the 3.7-4.2 GHz Band to submit those filings in this docket.
	3. Summary of discussion from May 03 teleconference
		1. This is the old TV down link band.
		2. Sounds like the EU already re-purposed this band years ago to terrestrial mobile. At the time it was a significant effort.
		3. EU 3.4 - 3.8 GHz is a pioneer band for 5G.
		4. In NAM, there are many fixed links yet in this band.
		5. For IEEE 802, do we want to use this band?
			* Remember, before 802.11 had no interest in the band below this, with it just NAM.
			* Though would they now, or 802.15, or ?
	4. Summary of discussion from April 26 teleconference
		1. Commlawblog.com has discussed some on this. e.g. could this lead to something like CBRS?
		2. There is discussion from the satellite folks to give up some of the adjacent band to possibly help with CBRS and terrestrial use. More to this with several pieces.
		3. There is an ITU-R connection here also with global use.
		4. This summer will see the NPRM for this band. This NOI is to help setup for the NPRM.
	5. FEASIBILITY OF ALLOWING COMMERCIAL WIRELESS SERVICES, LICENSED OR UNLICENSED, TO USE OR SHARE USE OF THE FREQUENCIES BETWEEN 3.7-4.2 GHz, DA 18-446; GN Docket No. 18-122
		1. <https://www.fcc.gov/ecfs/search/filings?proceedings_name=18-122&sort=date_disseminated,DESC>
		2. <https://mentor.ieee.org/802.18/dcn/18/18-18-0049-00-0000-fcc-pn-expanding-flexible-use-of-3-7-4-2-ghz-band-gn-18-122-da-18-446.pdf>
		3. Comments due: 31 May 2018; Reply comments due: 15 June 2018
		4. We would need to approve by teleconference next week, 17 May 2018.
	6. We have been approached by Encina Communication Corp.
		1. They have interest in the 3.7 – 4.2 GHz band and plan to make a detailed filing on how the Commission can make the entire 500 MHz available for PtP, PtMP, nomadic (Wi-Fi) and mobile without causing harmful interference to existing FS and FSS operators or blocking new applicants.
		2. C: can we get their material earlier than May 17?
		3. C: is this an individual or a company-based activity? Do they have patents on this?
		4. C: we need to let them know the IEEE’s policy; contribution is individual-based and they have to follow IEEE’s patent policy.
	7. They will join our teleconference next week, 17 May.
		1. Same call to approve our comments.
	8. It was requested the .18 chair send to Encina now:
		1. A copy of IEEE SA guidelines for meetings, the opening administrative items, e.g. Essential Patents and participation is on an individual basis, etc.
		2. Request for the submission ahead of time, in IEEE 802 normal submission format.
	9. 802.15.4 HRP UWB PHY channels 2 and 4 are centred at 3993 MHz
		1. Need to confirm if 802.15.6 and 80215.8 also have UWB channels here.
	10. We note that there is currently no federal allocation for the 3.7–4.2 GHz band. Nonetheless, we seek comment on the following questions:
		1. How should we assess the operations and possible impacts of sharing on Federal and non-Federal users already operating in this band?
		2. How might sharing be accomplished, with licensed and/or unlicensed operations, without causing harmful interference to Federal and non-Federal users already operating in this band, and in which parts of the band would such sharing be feasible?
		3. What other considerations should the Commission take into account in preparing the 3.7 - 4.2 GHz Report?
	11. Does IEEE 802 have anything to reply to this Public Notice docket?
		1. The discussion headed down path to maybe wait till later, reply comments, ex partes or even the NPRM.
		2. With one point outstanding if we do want to comment now, the UWB unlicensed is already there working with the current environment. Similar to the UWB concern at 6 GHz.
		3. Will review again Thursday.
	12. C: suggest we wait for the NPRM is out to make concrete comments;
12. Chair reviewed Slide 15, EU Items
	1. **Anything to share on the EU front?** Yes, see below.
	2. **Anything IEEE 802 should respond to?** Nothing specific was mentioned.
	3. CEPT continues with major focus on 6GHz.
	4. 60 GHz –extending with 66 - 71 GHz looks like this will be accepted, with an un-licensed piece. Want to keep our use-cases visible there.
		1. Request from CEPT for input on this.
	5. SRDoc - TR 103 583 Request for band beyond 66 GHz still in process.
		1. Sharing mechanism it not LBT and is being worked on.
		2. The SRDoc needs more work, and it is unclear with SE-19.
	6. EN 302 567, 60GHz Harmonized Std.
		1. Pending since no Rcvr sensitivity.
		2. Also, need to add the adjacent channel rejection.
		3. The basic could be done in weeks, then the process of a few months to finish.
	7. SE45 – doing technical evaluations of RLANs @ 6GHz, e.g. sharing with incumbents.
		1. RLAN request is to be co-primary. With UWB still as secondary.
13. Chair reviewed Slide 17-18 WiFi / UWB coexistence in 6GHz
	1. IEEE 802.19 and other WG chairs are working on IEEE 802 single voice.
	2. From a high level, could we start to list out some of the following?
		1. Do not want to get into detail, just high level points to consider to help.
	3. What criteria should be considered?
		1. Power out needed, different for each technology.
		2. Bandwidth considerations.
		3. Channel sense, e.g. LBT.
		4. Incumbent protection.
		5. Interference types, blocks .vs. range decrease.
		6. Operational ranges themselves.
		7. Different modulation types
		8. Tuning range of UWB (global considerations)
	4. What Use Cases should be considered?
		1. Higher speed (wider BWs) for WiFi users, e.g. streaming video, etc.
		2. Global availability (S. Korea just this week consultation on 6 – 10.2 GHz for UWB)
		3. UWB applications - Many (See 15-17/0660).
		4. Where devices are used, height, indoor/outdoor, etc.
		5. Review 15.2 co-existence of WiFi / BT / …
		6. Co-located in a device, and non-co-located.
14. Chair reviewed Slide 18, IEEE EU Position Statement
	1. IEEE European Public Policy Position Statement on Spectrum Management
		1. <https://mentor.ieee.org/802.18/dcn/18/18-18-0028-00-0000-draft-ieee-european-public-policy-position-statement-on-spectrum-management.pdf>
		2. We are being asked to review this statement, similar to the one in November, though some focus for the EU. Guidance is to review and comment in detail.
			* Document 18-18/0028rxx, latest revision is our current markup.
		3. Please send comments to .18 chair, to integrate, to be reviewed by the TAG.
	2. Becoming clearer the starting premise of the current paper is from several years ago and input is coming in the premise has changed in recent years.
		1. With that trying to understand how to propose edits to the paper.
	3. Went through 18-18/0028r01 review copy, the remaining sections we have not reviewed and found a couple of specific areas that need clarity.
	4. And brought audience up to speed on point premise of paper is from a few years back and had agreement with those that spoke up.
	5. Some general questions:
		1. Should the IEEE SA (the position statement we reviewed in November and January) and the IEEE EU collaborate on these 2 separate position statements in some fashion?
		2. Then move above them. (.18 should still review)
		3. What was original driver to do the statement?
		4. Who is the general audience it is written for?
		5. As it is, there is a concern if it is sent out and organizations our members are working with, CEPT, BRAN, etc. it will cause confusion, and more.
	6. Request that anyone with specific input to continue to please pass on to the .18 chair, sooner.
	7. .18 chair will clean up the review revision of the paper (should end up r02) and ask the IEEE 802 chair for further guidance on next steps.

1. Chair reviewed Slide 22, Thursday Agenda
	1. Reminder of IEEE policies we are under
		1. Attendance server is open
		2. Remember to state your name, affiliation, employer and/or clients first time you speak.
	2. Items from Tuesday or new.
		1. FCC NPRM on Section 7 – possible comments to approve today?
		2. FCC PN on 3.7 – 4.2 GHz – possible comments to finish next week?
		3. Any further Criteria or Use Cases for the WiFi/UWB 6 and 4 GHz coexistence?
		4. Review Fellowship paper.
		5. FCC releases proposed rules for 4.9 GHz band. Actions Required
	3. Actions Required
	4. AOB
	5. Adjourn
2. We recessed at 12:20PM.

**Thursday, May 9th, 2018, AM2**

1. The Chair, Jay Holcomb, called the meeting to order at 8:05 local.
	1. About 19 people in the room
2. The Chair used the agenda meeting plan document 18-18/0050r02.
3. The Chair presented Slide 23, Thursday Agenda
	1. Reminder of IEEE policies we are under.
		1. Attendance server is open.
		2. Remember to state your name, affiliation, employer and/or clients first time you speak.
	2. Items from Tuesday or new.
		1. FCC NPRM on Section 7 – possible comments to approve today?
		2. FCC PN on 3.7 – 4.2 GHz - possible comments to finish next week?
		3. Any further Criteria or Use Cases for the WiFi/UWB 6 and 4 GHz coexistence?
		4. Review Fellowship paper.
		5. FCC releases proposed rules for 4.9 GHz band.
	3. Actions Required
	4. AOB
	5. Adjourn
4. Chair reviewed Slide 16, 4GHz
	1. The .18 chair did send a template for a submission and all the IEEE administrative policies to Encina
	2. Per discussions since Tuesday, UWB inputs will hold on this PN, while 802.19 is working the process.
	3. So, any change of mind, do we still hold and not do comments at this time? Yes –
		1. We will not do comments at this time
	4. Next will be the teleconference next week and Encina joining.
5. Chair reviewed Slide 7, Section 7
	1. TBD
	2. Chair and others drafted a response on Section 7 NPRM
		1. Doc: 18-18/0054r0 (<https://mentor.ieee.org/802.18/dcn/18/18-18-0054-00-0000-ieee-802-comments-fcc-nprm-et-18-22-expedite-rules-section-7.docx>)
		2. Chair reviewed the document.
		3. A few minor edits and we made a clean r02 to approve.
		4. Motion passed on Slide 11
			* Motion: Move to approve the comments in 18-18/0054r02 to FCC’s NPRM (GN Docket No. 18-22), the Commission proposes guidelines and procedures to implement section 7. With the chair of 802.18 to have editorial privileges and send to the EC for review/approval and submission to the FCC by 31 May 2018.
			* Moved by: Stuart Kerry, Arris/Ruckus
			* Seconded by: Thomas Kuerner, TU Braunschwig
			* Discussion? None
			* Vote: \_13\_\_Y / \_0\_\_N / \_0\_\_A
			* Motion passed.
6. Chair review Slide 18, WiFi/UWB
	1. Nothing new. There was no further discussion beyond Tuesday.
7. Chair reviewed Slide 22, Fellowship Request
	1. Fellowship request on reaching out to all regulators
		1. <https://mentor.ieee.org/802.11/dcn/18/11-18-0580-01-coex-enhancing-collaboration-between-ieee-802-and-world-regulators-on-unlicensed-spectrum-regulations.pptx>
	2. Chair reviewed document 11-18/0580r01
	3. A start is to keep in touch with the fellowship attendees.
		1. They are welcome to our meetings and calls.
	4. Could something be added to the IEEE newsletter/communication for the regulators, to answer the newsletter input?
	5. Can IEEE be more pro-active with some of the other (e.g. regional) regulators?
		1. The challenge is to identify which we can, and being a volunteer / individual organization, the time and money from the volunteers?
	6. Many regulators don’t have IEEE has a point of contact like they do with WFA or other implementing orgs do.
8. Chair reviewed Slide 24, FCC FNPRM 4.9 GHz
	1. PUBLIC SAFETY AND HOMELAND SECURITY BUREAU ANNOUNCES COMMENT AND REPLY COMMENT DATES FOR THE SIXTH FURTHER NOTICE OF PROPOSED RULEMAKING ON THE 4.9 GHZ BAND AND CONSOLIDATES DOCKET NUMBERS FOR ALL FUTURE 4.9 GHz BAND MATTERS
		1. WP Docket No. 07-100, PS Docket No. 06-229, WT Docket No. 06-150, DA 18-468
		2. <https://www.federalregister.gov/documents/2018/05/07/2018-09416/49-ghz-band?utm_campaign=subscription%20mailing%20list&utm_source=federalregister.gov&utm_medium=email>
		3. PN: <https://apps.fcc.gov/edocs_public/attachmatch/DA-18-468A1.pdf>
		4. <https://mentor.ieee.org/802.18/dcn/18/18-18-0051-00-0000-fcc-pn-4-9-ghz-da-18-468-fcc-18-33-wp-07-100.docx>
		5. FNPRM: <https://ecfsapi.fcc.gov/file/03231913715191/FCC-18-33A1.pdf>
		6. <https://mentor.ieee.org/802.18/dcn/18/18-18-0052-00-0000-fcc-fnprn-4-9-ghz-fcc-18-33-wp-07-100.pdf>
		7. [https://www.fcc.gov/ecfs/search/filings?q=(proceedings.name:((07%5C-100\*))%20OR%20proceedings.description:((07%5C-100\*)))&sort=date\_disseminated,DESC](https://www.fcc.gov/ecfs/search/filings?q=(proceedings.name:((07\-100*))%20OR%20proceedings.description:((07\-100*)))&sort=date_disseminated,DESC)
		8. Comments Due: July 6, 2018; (Approve by 21 June) Reply Comments Due: August 6, 2018
	2. At this time, not seeing IEEE 802 has an interest, with the narrow bandwidth of this proceeding.
	3. The .18 chair will do a quick review and highlight possible discussion areas at an upcoming teleconference.
9. Chair reviewed Slide 25, Actions Required
	1. Comments to the NPRM on section 7
		1. .18 chair will work the EC Ballot and uploading to the FCC.
	2. Comments for the IEEE EU position paper on Spectrum Management.
		1. All please continue to send proposed revisions to the .18 chair as you can.
		2. .18 chair will review with IEEE 802 chair.
	3. WiFi / UWB 6 and 4 GHz co-existence.
		1. All please continue to send possible criteria and high level use cases to .18 chair.
	4. NPRM on 4.9 GHz
		1. The .18 chair will do a quick review and highlight possible discussion areas at an upcoming teleconference.
	5. Teleconferences
		1. The .18 chair will bring up in July plenary to move the teleconferences 30 mins later.
10. Chair reviewed Slide 26, Any Other Business
	1. Note: in the 802.19 co-existence <1 GHz meeting it was brought up for IEEE 802 as a whole to put together a document on basic spectrum parameters that would be good for all IEEE 802 standards to co-exist (less interference….)
	2. Actually, need to have this for all IEEE 802 to just work in the spectrum, e.g. BWs needed. Not just coexistence.
	3. Point being that 802.18 can refer to / use when responding to regulators on different consultations, to encourage regulators in general to configure their spectrum to allow all the IEEE 802 standards in a more consistent/friendly way.
	4. For the many in attendance, it was felt many regulators would appreciate at least knowing this.
	5. Additional point to add to the doc, duty cycle is not for the protocol/standard/amendment being discussed, it is a regulation to allow others (and their packet lengths) to have access to the spectrum.
11. Chair reviewed Slide 27, Adjourn
	1. **The next face to face meeting of the 802.18 RR-TAG will be at the IEEE 802 Plenary 10-12 July 2018 at the Manchester Grand Hyatt, San Diego, CA, USA**
		1. Usual time slots, Tuesday AM2 and Thursday AM1-2
	2. **Next teleconference: 17 May 2018 – *14:30* ET**
		1. Call in info: <https://mentor.ieee.org/802.18/dcn/16/18-16-0038-09-0000-teleconference-call-in-info.pptx> or the latest.
		2. Note: If the call-in link doesn’t work send the Chair an email right away.
		3. All changes/cancellations will be sent out to the 802.18 list server.
	3. **Note: there will not be a teleconference on 24 May**
	4. **Adjourn:**
		1. Agenda is complete; Any objection to Adjourn.
		2. None heard, we are Adjourned at 09:15
12. Chair adjourned the meeting at 09:15PM. The Thursday AM2 meeting was cancelled.