IEEE P802.18
Radio Regulatory Technical Advisory Group (RR-TAG)

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| Radio Regulatory Technical Advisory Group MinutesNovember Mixed-Mode Plenary Session 2022 |
| Date: 18 November 2022 |
| Author: |
| Name | Company | Address | Phone | email |
| Amelia Andersdotter | Sky Group/Comcast | Belgium |  | amelia.ieee@andersdotter.cc |
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Abstract

This document constitutes the minutes of the IEEE 802.18 Technical Advisory Group from the November IEEE 802 Mixed Mode Plenary Session 2022, with on-site participants in Bangkok, Thailand, and remote participants through Webex. "Local time" in this document means "local time" in Bangkok, Thailand.

**C:** means question or comment from participant.

**Chair:** means statement by the chair as chair.
Highlight means action point.

Chair: Edward Au (Huawei)

Co-Vice-chairs: Stuart Kerry (OK-Brit/Self) and Al Petrick (Skyworks Solutions)

Secretary: Amelia Andersdotter (Comcast)

IEEE SA Program Manager: Jodi Hassz (IEEE SA)

* IEEE 802.18, RR-TAG website: <https://www.ieee802.org/18/>

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**Opening plenary**

1. Chair calls the meeting to order at 10:38 local time.

Agenda slide deck [18/22-0126r2](https://mentor.ieee.org/802.18/dcn/22/18-22-0126-02-0000-rr-tag-2022-november-plenary-agenda.pptx)

1. Chair presents administrative items
	* This meeting is part of the IEEE 802 mixed mode plenary session in Bangkok, Thailand, 13 November to 18 November 2022.
		+ You **must** pay the registration fee in order to attend
		+ If you have not already done so, you can register w/Face to Face Events – Registration website at:

https://web.cvent.com/event/840c257d-5d52-4eff-94b4-39d2aafda56b/

* + - If you do not intend to register for this session you must leave this meeting and, if you have logged attendance on IMAT, please email the 802.18 chair or a vice chair to have your attendance canceled
		- At conclusion of each of the 802.18 calls, the Webex log and IMAT will be reviewed.
		- No payment, become dead beat and lose voting rights in all groups, after 60-day grace.
	+ Group officers and voting membership
		- Voters: 48 (8 on LMSC)
		- Nearly Voters: 2
		- Aspirant members: 9
		- [802.18 Voters List](https://www.ieee802.org/18/RRTAG_Voters.pdf)
	+ RR-TAG Policies & Procedures [[802 LMSC WG P&P](https://mentor.ieee.org/802-ec/dcn/21/ec-21-0207-23-0PNP-ieee-802-lmsc-working-group-policies-and-procedures.pdf)]
	+ IEEE 802 meeting and participant’s guidelines and requirements [[link](http://www.ieee802.org/devdocs.shtml)]
	+ IEEE policies and procedures [[link](https://standards.ieee.org/about/policies/opman/)]
	+ Reciprocal credit with IEEE 802.11 Working Group (WG) is granted for only the two meeting slots scheduled for IEEE 802.18 as per agreement between the 802.11 and 802.18 chairs.
	+ **Reminder that IMAT is being used for attendance**
	+ Online meeting procedures reminder

Chair asks group if there are any questions relating to the IEEE policies. No response, no comments on WebEx Chat window.

1. Chair presents the agenda (slide #13). No comments or questions on the agenda.
2. Administrative:

	1. **Motion #1 (internal):** To approve the agenda as shown on previous slide

Moved by: Ian Sherlock

Seconded by: Stuart Kerry

Discussion? None

Vote: Approved with unanimous consent

* 1. Chair presented the meeting minutes from RR-TAG 2022 July Mixed Mode Plenary session. No questions or comment.
	 **Motion #2 (internal):** To approve the meeting minutes of the RR-TAG 2022 July Mixed Mode Plenary session as shown in the document [18-22/0076r1](https://mentor.ieee.org/802.18/dcn/22/18-22-0076-01-0000-july-2022-plenary-minutes.docx), with editorial privilege for the 802.18 Chair.

Moved by: Tim Jeffries

Seconded by: Claudio da Silva

Discussion? None.

Vote: Approved with unanimous consent

1. **Presentation of 802.18 opening report (**[**18-22-0127r0**](https://mentor.ieee.org/802.18/dcn/22/18-22-0127-00-0000-rr-tag-2022-november-plenary-chair-opening-report.ppt)**),** Edward Au (Chair)Chair presented progress since the interim meeting in September.

Chair reminds of the open call for mmWave ad-hoc chair, declaring that the ad-hoc may be disbanded in the absence of leadership volunteers.
2. **New UWB Regulation Framework in Europe (**[**18-22-0141r0**](https://mentor.ieee.org/802.18/dcn/22/18-22-0141-00-0000-new-uwb-regulation-in-europe.pptx)**),** Friedbert Berens (FBConsulting Sarl)Presentation covers two decisions by the ECC ([ECC/DEC/(06)04](https://docdb.cept.org/document/397) and [ECC/DEC/(07)01](https://docdb.cept.org/document/407)) on emission masks and related mitigation/requirements for UWB below 10,6 GHz. Previously ECC/DEC/(06)04 has only permitted access systems with trigger-before-transmit, but this is now amended in 6-8,5 GHz technologies used for V2X and V2V. More applications have been permitted.
Discussion:

**C:** The last version of ECC/DEC/(06)04 is from 2019. When will this new decision be on the website?
**A:** It's anticipated that it will be approved in a matter of hours. Afterwards there is also the process of European Commission and ETSI.
**C:** Do you think this will impact IEEE 802.15 and their priorities or work?
**A:** It has limited influence on the actual work in .15, except there're now higher emission limits indoors. But in ETSI it could have an impact on ITS frameworks. The 6-8,5 GHz might not be fully in line with the current IEEE 802 channelization plan, but this is a discussion we should continue. We will discuss bands above 8,5 GHz in CEPT for the next UWB regulation update cycle.
**Chair:** Tomorrow the WNG for IEEE 802.15 is AM2, correct?
**A:** Yes, that is correct. We will hold a discussion there.

(*update after the session: ECC/DEC/(06)04 was approved by the ECC with 22 authorities announcing they will implement the decision, 0 disapproving the decision, and 0 abstentions on 15 November 2022*)
3. **Status of ongoing consultations (**[**18-22/0035r45**](https://mentor.ieee.org/802.18/dcn/22/18-22-0035-45-0000-status-of-ongoing-consultations-and-tag-documents-for-approval.docx)**)** contains the status of ongoing consultations along with internal deadlines for EC approval and external approval.
4. **Proposed Response to Australia ACMA consultation (18-22-0142r1),** Dave Halasz (Morse Micro) Presentation of the draft response.

**C:** Are we asking for protection for license-exempt technologies in narrow-band operations?
**A:** We are pointing to EC work and ETSI regulations under development, to respond to their statement that they did not do coexistence analysis.
**Chair:** Will the revision 2 with editorial fixes be uploaded until Thursday?
**A:** Yes.
**Chair:** Then we can run a motion for this consultation response on Thursday in order to allow me to open the Executive Committee (EC) Ballot.
5. **Chair presents the foreseen agenda for the closing plenary.**Reminds the group of the open call for mmWave ad-hoc chair.

Reminds the group of development on the IEEE Spectrum Statement. Calls attention to reflector communication and EC recommendation.
6. **Any other business**
	1. Reminder for those who did not sign into IMAT.
	2. Update from ETSI BRAN

	EN 301598 on TV White Space the committee has received a second set of questions from the European Commission in the European Commission review procedure. The harmonized standard is already published, and these questions impede the publication of the specification in the Official Journal of the European Union. Because the harmonized standard is published, there is no opportunity to change the wording of the standard.

	EN 302502 Fixed outdoor deployments was also discussed. Similar (see weekly teleconference minutes contained in doc. [18-22-0108r0](https://mentor.ieee.org/802.18/dcn/22/18-22-0108-00-0000-weekly-teleconference-minutes-1-september-2022.docx)).

	EN 303687 for 6 GHz. The European Commission has relaunched its assessment procedure, but the assessment results will only reach ETSI BRAN after its last meeting in 2022. This will delay adoption of the document. Guido Hiertz (ETSI BRAN chair) reminds the group that review procedures and assessment procedures are not the same thing (see weekly teleconference minutes contained in doc. [18-22-0108r0](https://mentor.ieee.org/802.18/dcn/22/18-22-0108-00-0000-weekly-teleconference-minutes-1-september-2022.docx) for in-depth explanation).

	EN 302567 on WAS/RLAN for 60 GHz has been submitted to the assessment procedure.

	TR 103721 on 5,8 GHz co-existence was discussed. Some countries have automotive use-cases in these bands.

	EN 301893 on 5 GHz was discussed, together with energy detection thresholds (see weekly teleconference minutes contained in doc. [18-22-0143r0](https://mentor.ieee.org/802.18/dcn/22/18-22-0143-00-0000-weekly-teleconference-minutes-3-november-2022.docx)). A technical 30 day electronic vote on different options for setting the energy detection thresholds will begin on 5 December.
7. **Recess at 12:05pm local time

Closing plenary**
8. **Chair calls meeting to order at 08:02 local time**Agenda slide-deck: [18-22-0126r3](https://mentor.ieee.org/802.18/dcn/22/18-22-0126-03-0000-rr-tag-2022-november-plenary-agenda.pptx)
9. **Chair presents administrative items**See above para. 2)

Reminder of registration fee was presented.

Chair asked group if there were any questions on the policies, procedures or conditions applicable to this meeting. No questions or comments.
10. **Administrative motions**

	1. **Motion #3 (internal):** To approve the agenda as shown on previous slide

Moved by: Ian Sherlock

Seconded by: kiwin Palm

Discussion? None

Vote: Approved with unanimous consent

1. **mmWave ad-hoc chair appointment

Chair:** I have not received any nominations for a new ad-hoc chair. If there are no last minute nominations Chair will prepare a motion for a future meeting in early December to disband the group.
2. **Proposed Response to Australia ACMA consultation (**[**18-22-0142r2**](https://mentor.ieee.org/802.18/dcn/22/18-22-0142-02-0000-acma-response.docx)**),** Dave Halasz (Morse Micro) and Hassan Yaghoobi (Intel)Changes to the draft incorporating comments in the consultation draft response on the 5,9-6,4 GHz question. A number of editorial comments have also been incorporated.

**C:** ETSI BRAN does not do regulatory compliance specifications, so in the sentence which first mentions EN 303 687, we should leave the word regulatory aside.

Nobody objects.

**C:** Regulatory requirements are established in the ECC. The harmonized standards developed by ETSI allow self-conformance assessments.

Final version of the consultation is uploaded on mentor.

**Chair:** I will put the revised document for a motion.

**Motion #4 (External):** Move to approve document [18-22/0142r3](https://mentor.ieee.org/802.18/dcn/22/18-22-0142-03-0000-acma-response.docx) in response to Australia ACMA’s consultation “New arrangements for low interference potential devices” for review and approval by the IEEE LMSC (802 EC) for submission to Australia ACMA by the response deadline. The IEEE 802.18 Chair is authorized to make editorial changes as necessary.
Moved: Rich Kennedy
Seconded: Amelia Andersdotter
Discussion: None
Attendees: 29
Voters (present): 21
Result: 18 Y/0 N/1 A
Remark: Chair did not vote
3. **ISUS ad-hoc status report**ISUS ad-hoc chair Amelia Andersdotter presented an overview of activities in the ad-hoc group so far. She presented the recommendation or request from the Executive Committee (EC) to develop a new policy statement reflective of current state of development of wireless technologies in IEEE 802.

Ad-hoc chair asked if the timing of the meeting could be changed. Inconclusive discussions. Ad-hoc chair will coordinate with relevant parties.
4. **Spectrum for Ambient Power IoT Communication (**[**18-22-0144r1**](https://mentor.ieee.org/802.18/dcn/22/18-22-0144-01-0000-questions-on-regulation-requirements-for-amp-iot.pptx)**),** Weijie Xu (Oppo)

Presentation introduces the AMP TIG work in IEEE 802.11. It raises three questions relating to regulatory requirements for carrier signals, total transmission power and back-scattering uplink signal.

Discussion on Q1:

**C:** From the European point of the view the answer is simple. You would not be able to do this in the 2,4 GHz band at all, but there are other bands where this is allowed.
**C:** In many cases to get the range from the uplink devices to the AP, the energy source is closer to the IoT device than to the AP. You may not be able to harvest this energy from the AP.
**C:** Regulations for the 900 MHz bands were recently updated in Europe.
**C:** The FCC regulations are similar to the European ones.
**C:** In Europe we make a distinction between spectrum regulations which are developed by ECC/CEPT as recommendations for CEPT member states to implement. Within the European Union (EU), you can have market requirements which EU member states forced to implement. So you have on the one hand spectrum requirements that may or may not apply for any particular CEPT state, and market requirements on devices that may or may not be limited to transmission requirements that always apply for a particular EU state. Market requirements have sometimes been developed with very specific details of existing technologies leading them not to be very forward-looking.
**ETSI BRAN Chair:** We have lots of discussions on this in ETSI BRAN. Come to ETSI BRAN.

Laughter.

**C:** I would say ETSI TG 28, but we can discuss this.
**C:** The majority of the Asia-Pacific countries follow the ETSI or the FCC and customize it to local needs. That includes China. Many things already mentioned about the European regulations would apply in East Asia as well.

Discussion on Q2:

**C:** This would be largely the same answer as we discussed previously.

Discussion on Q3:

**C:** I do not see the regulatory issue for Europe in this case. There might be a difference between 2,4 GHz and 5 GHz. In the 2,4 GHz band, we define an initiating device and a responding device, and the responding device needs to remain silent for a time interval. This might interfere with your idea. On your reflective modes, I would have to come back to you.
**C:** The safe way of doing this in Europe is to develop your own harmonized standard that covers the specific requirements that you need for your technology. In this case, it's a short-range device and I think we have more open harmonized standards in this field - technology neutral - than what some participants feel is the case for ETSI BRAN.
**C:** I have strong concerns relating to semi-passive with reflection amplifier mode. You will have a lot of out-of-band emissions if you use the systems described in the IEEE 802 Tutorial sessions earlier in the plenary week. This is likely to fall foul of regulations.
**C:** The US perspective would be similar. For passive modes you would be good to go. For active modes, if you put gain into the equation, you run into problems.
**C:** My understanding is that RFID is limited to specific bands in different regions across the world. So if you want to use this technology in other bands you need to open that discussion.
**C:** In the case of .11ah we had a seven-year process to first develop an IEEE 802.11, and then open a work item in ETSI. This was very painful, and sticking inside current regulations is likely preferable.
5. **General discussion items**
	1. **Europe**UK Ofcom released an updated Spectrum Roadmap.
	2. **Americas**Skipped.
	3. **Asia/Pacific**Skipped.
	4. **Other regions/ITU-R**Skipped.
6. **Reminder about next meeting (Baltimore, Maryland US, January 2023 Wireless Interim)**Chair will keep group updated on registration information, expected the week after the plenary.
7. **Reminder of future teleconferences**

The chair announces the cancellation of the mmWave ad-hoc calls.

The Wireless Standards Frequency Table ad-hoc group leaders announce that the group does not require scheduled calls as of now.

ISUS Ad-hoc chair will coordinate between .15 and .11 participants on finding a suitable time-slot.

**Motion #5 (Internal):** The 802.18 Chair or Chair designee is directed to conduct, as necessary, the following weekly teleconference calls through 25 May 2023:
 RR-TAG calls on Thursdays at 15:00 ET for 55 mins

 ISUS ad-hoc calls on Mondays at 11:00 ET for 60 minutes

 Moved: Stuart Kerry
 Seconded: Ian Sherlock
 Discussion:
 Chair remarks that ISUS ad-hoc call timing might be changed.
 Vote: Approved with unanimous consent

1. **Any other business**

Straw polls requested from the IEEE 802 LMSC leadership.

**Straw poll #1:** If the 2023 March Plenary Session were held at the Hilton Atlanta, GA as an in-person only session, would you attend?

Result: 15 Yes/3 No/3 Abstain.

**Straw poll #2:** If the 2023 March Plenary Session is held in as a mixed-mode session, will you attend:
Result:

Attend In-person: 14

Attend Virtually (remotely): 5

Will not attend plenary: 1
Abstain: 1

Chair will forward results to the LMSC EC.

Reminder to sign into IMAT.

1. **Final administrative items**
	1. Next weekly teleconference call scheduled for: 1 December 2022, 15h00 ET.
		* 1. Call in info: https://mentor.ieee.org/802.18/dcn/16/18-16-0038-28-0000-teleconference-call-in-info.pptx
			2. Next IEEE 802.18 interim meeting will be conducted during the IEEE 802 wireless interim is 15-20 January 2023, Baltimore, Maryland, USA. It is a credited session.
			3. Currently, RR-TAG weekly teleconferences are scheduled until 25 May 2023.
			4. All late changes/cancellations will be sent out to the 802.18 list server.
			5. Overall IEEE 802 schedule: <https://ieee802.org/16/cal-temp.html> or only 802.18: [IEEE 802.18 TAG Calendar](https://calendar.google.com/calendar/embed?src=c2gedttabtbj4bps23j4847004@group.calendar.google.com&ctz=America%2FNew_York)
	2. Adjourn:
* Any objection to Adjourn? None heard.
* Adjourn at 9:59 local time

**ATTENDANCE (Plenary Attendance Names and Affiliations) [Report by Stuart Kerry]:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Voting Attendees:** | **15-Nov** | **17-Nov** | **Credit>75%** |
| 1 | **Andersdotter** | Amelia | Sky Group/Comcast | **x** | **x** | **TRUE** |
| 2 | **Au** | Edward (Kwok Shum) | Huawei Technologies Co., Ltd | **x** | **x** | **TRUE** |
| 3 | **Baykas** | Tuncer | Ofinno | **x** | **x** | **TRUE** |
| 4 | **Berens** | Friedbert | FBConsulting Sarl | **x** | **x** | **TRUE** |
| 5 | **Boldy** | David | Broadcom Corporation | **x** | **x** | **TRUE** |
| 6 | **da Silva** | Claudio | Meta Platforms, Inc. | **x** | **x** | **TRUE** |
| 7 | **de Vegt** | Rolf | Qualcomm Incorporated | **x** | **x** | **TRUE** |
| 8 | **Eitan** | Alecsander | Qualcomm Incorporated | **x** | **x** | **TRUE** |
| 9 | **Fang** | Yonggang | MediaTek | **x** | **x** | **TRUE** |
| 10 | **Gilb** | James P.K. | General Atomics Aeronautical Systems and Gilb Consulting, UoSD, GenXCom | **x** | **x** | **TRUE** |
| 11 | **Godfrey** | Tim | Electric Power Research Institute, Inc. (EPRI) | **x** |  | **FALSE** |
| 12 | **Hiertz** | Guido | Ericsson GmbH | **x** | **x** | **TRUE** |
| 13 | **Ikegami** | Tetsushi | Meiji University | **x** | **x** | **TRUE** |
| 14 | **Jeffries** | Timothy | FutureWei Technologies, Inc. | **x** | **x** | **TRUE** |
| 15 | **Jones** | Vincent Knowles IV | Qualcomm Incorporated | **x** | **x** | **TRUE** |
| 16 | **Kasher** | Assaf | Qualcomm Incorporated | **x** | **x** | **TRUE** |
| 17 | **Kennedy** | Richard | Bluetooth SIG | **x** | **x** | **TRUE** |
| 18 | **Kenney** | John | TOYOTA InfoTechnology Center U.S.A. | **x** | **x** | **TRUE** |
| 19 | **Kerry** | Stuart | OK‐Brit, Self | **x** | **x** | **TRUE** |
| 20 | **Kürner** | Thomas | TU Braunschweig | **x** | **x** | **TRUE** |
| 21 | **Lansford** | James | Qualcomm Incorporated | **x** |  | **FALSE** |
| 22 | **Levy** | Joseph | InterDigital, Inc. | **x** | **x** | **TRUE** |
| 23 | **Palm** | kiwin (Stephen) | Broadcom Corporation | **x** | **x** | **TRUE** |
| 24 | **Petrick** | Al | Skyworks Solutions Inc. | **x** | **x** | **TRUE** |
| 25 | **Pirhonen** | Riku | NXP Semiconductors | **x** | **x** | **TRUE** |
| 26 | **Porat** | Ron | Broadcom Corporation | **x** | **x** | **TRUE** |
| 27 | **Robert** | Joerg | TU-Ilmenau/Fraunhofer IIS | **x** | **x** | **TRUE** |
| 28 | **Sand** | Stephan | German Aerospace Center (DLR) | **x** | **x** | **TRUE** |
| 29 | **Sato** | Naotaka | Sony Group Corporation | **x** | **x** | **TRUE** |
| 30 | **Shellhammer** | Steve | Qualcomm Technologies, Inc. |  | **x** | **FALSE** |
| 31 | **Sherlock** | Ian | Texas Instruments | **x** | **x** | **TRUE** |
| 32 | **Stanley** | Dorothy | Hewlett Packard Enterprise | **x** |  | **FALSE** |
| 33 | **Verso** | Billy | Qorvo | **x** |  | **FALSE** |
| 34 | **Wang** | Lei | FutureWei Technologies, Inc. | **x** | **x** | **TRUE** |
| 35 | **Yaghoobi** | Hassan | Intel Corporation | **x** | **x** | **TRUE** |
|  |  |  |  |  |  |  |
| **Non-Voting Attendees:** | **15-Nov** | **17-Nov** | **Credit>75%** |
| 1 | **Chang** | Eason | MediaTek | **x** |  | **FALSE** |
| 2 | **Grosswindhager** | Bernhard | NXP Semiconductors | **x** |  | **FALSE** |
| 3 | **Halasz** | Dave | Morse Micro | **x** | **x** | **TRUE** |
| 4 | **He** | Chuanfeng | Oppo |  | **x** | **FALSE** |
| 5 | **Max** | Sebastian | Ericsson AB | **x** | **x** | **TRUE** |
| 6 | **Pettersson** | Charlie | Ericsson AB | **x** | **x** | **TRUE** |
| 7 | **Qi** | Yinan | Oppo |  | **x** | **FALSE** |
| 8 | **Rahmani** | Mohammad | Spark Microsystems | **x** |  | **FALSE** |
| 9 | **Shen** | Andy | Futurewei, U.S. Subsidiary of Huawei | **x** | **x** | **TRUE** |
| 10 | **Shigenobu** | Sasaki | Niigata University, Japan | **x** | **x** | **TRUE** |
| 11 | **Sun** | Bo | Sanechips |  | **x** | **FALSE** |
| 12 | **Wang** | Skukun | Oppo |  | **x** | **FALSE** |
| 13 | **Wilhelmsson** | Leif | Ericsson AB | **x** |  | **FALSE** |
| 14 | **Xu** | Weijie | Oppo |  | **x** | **FALSE** |
| 15 | **Yang** | Steve TS | MediaTek |  | **x** | **FALSE** |