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

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| Radio Regulatory Technical Advisory Group MinutesJanuary Mixed-Mode Wireless Interim Session 2023 |
| Date: 27 January 2023 |
| 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 January Mixed Mode Wireless Interim Session 2023, with on-site participants in Baltimore, Maryland, USA and remote participants through Webex. "Local time" in this document means "local time" in Baltimore, Maryland, USA.

**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 meeting**

1. Chair calls the meeting to order at 10:31 local time.

Agenda slide deck [18/22-0156r1](https://mentor.ieee.org/802.18/dcn/22/18-22-0156-01-0000-rr-tag-2023-january-wireless-interim-agenda.xlsx) with supplementary materials in [18/22-0157r1](https://mentor.ieee.org/802.18/dcn/22/18-22-0157-01-0000-2023-january-rr-tag-supplementary-materials.pptx)

1. Chair presents administrative items
	* This meeting is part of the IEEE 802 mixed mode wireless interim session in Baltimore, Maryland, USA on 15 January 2023 until 20 January 2023.
		+ 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/42bd3c17-b02d-4d4b-beb8-727d49ca7af1/register

* + - 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 (as of 30 Nov 2022)
		- Voters: 49 (8 on LMSC)
		- Nearly Voters: 3
		- Aspirant members: 7
		- [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 in the “RR-TAG Opening” tab of the document [18-22/0156r1](https://mentor.ieee.org/802.18/dcn/22/18-22-0156-01-0000-rr-tag-2023-january-wireless-interim-agenda.xlsx).

Moved by: Stuart Kerry

Seconded by: Ian Sherlock

Discussion? None

Vote: Approved with unanimous consent.

* 1. Chair presented the meeting minutes from RR-TAG 2022 November Mixed Mode Plenary session. No questions or comment.
	 **Motion #2 (internal):** To approve the meeting minutes of the RR-TAG 2022 November plenary session as shown in the document 18-22/0146r0, with editorial privilege for the 802.18 Chair.

Moved by: Andy Scott

Seconded by: Al Petrick

Discussion? None.

Vote: Approved with unanimous consent.

1. **Presentation of 802.18 opening report (**[**18-22-0158r0**](https://mentor.ieee.org/802.18/dcn/22/18-22-0158-00-0000-rr-tag-2023-january-interim-chair-opening-report.ppt)**),** Edward Au (Chair)Chair presented progress since the plenary meeting in November 2022.
2. **Status of ongoing consultations and TAG documents for approval (**[**18-22-0035r53**](https://mentor.ieee.org/802.18/dcn/22/18-22-0035-53-0000-status-of-ongoing-consultations-and-tag-documents-for-approval.docx)**),** Edward Au (Chair)Chair presents updates since the last weekly teleconference on 12 January 2023.
3. **Status ISUS Ad-hoc group for drafting a new proposal for IEEE-SA spectrum allocation and management policy statement, (**[**18-22/0087r8**](https://mentor.ieee.org/802.18/dcn/22/18-22-0087-08-ISUS-draft-statement.docx)**)** Amelia Andersdotter (ad-hoc leader)

Presentation on the activities of the ad-hoc group. Walk-through of current state of the draft, and the logic of the order in which items are included and the purpose of different sections. Request for feedback on entire draft as well as specific parts. Explanation of timeline and current targets.

**C:** Should we also be including 60 GHz use-cases?
**Ad-hoc leader:** If we are able to do so without mentioning frequency bands. To simplify the document it might be better to stick to general use-cases, because we risk having to put an entire frequency allocation table with lots of numbers if we start with one band.

Many calls for simplification of the text (i.e. reducing lists, simplifying). Ad-hoc leader mentions that feedback is expected from IEEE 802.15 later in the afternoon.

Discussion on editorial comments, and calls for simplification. Many volunteers for reviewing and contributing to the document. Hesitation on feasibility of the 19 January 2023 deadline for motioning the document in the working group, but target is kept with a view to comments raised being mostly of editorial nature. Ad-hoc leader will collect feedback in person, offline and through the reflector until the closing meeting on Thursday 19 Jan 2023.
4. **Update from ETSI/BRAN,** Guido Hiertz (ETSI BRAN Chair, Ericsson)

Technical vote on 5 GHz harmonized standard could be avoided. A compromise was reached where power detection thresholds are scaled.

The results of the assessment of harmonised standard on 6 GHz are available since 21 December 2022. The document is available to 802.11 members through reciprocal document access.

The presenter gives an overview of the structure of an assessment. The assessors have criticized the absence of a specific definition of extreme conditions as well as the use of randomly selected center frequencies. There is criticism against using a non-European standard as a normative reference.

The assessment will be discussed in ETSI BRAN during an ad-hoc BRAN meeting on 23 and 27 January 2023 and 10 February 2023. For a reminder of the role of the assessment in the ETSI harmonized standard development and adoption procedure, please refer to minutes contained in document [18-22-0161r0](https://mentor.ieee.org/802.18/dcn/22/18-22-0161-00-0000-weekly-teleconference-minutes-15-december-2022.docx).

**Discussion:**

**Q:** Will there be a discussion on client-to-client, as has been discussed in ECC?
**A:** There is such a demand, with some concerns from regulators whether this is appropriate.
5. **AoB**No other business
6. **Recess at 12:14 pm local time

Closing meeting**
7. **Chair calls meeting to order at 08:17 local time**Agenda slide-deck: [18-22-0157r2](https://mentor.ieee.org/802.18/dcn/22/18-22-0157-02-0000-2023-january-rr-tag-supplementary-materials.pptx) with supplementary materials in [18-22-0156r3](https://mentor.ieee.org/802.18/dcn/22/18-22-0156-03-0000-rr-tag-2023-january-wireless-interim-agenda.xlsx)Guido Hiertz is Acting Secretary.
8. **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.
9. **Administrative motions**

	1. **Motion #3 (internal):** To approve the agenda as shown in deck 18-220157r2

Moved by: Ian Sherlock

Seconded by: kiwin Palm

Discussion? None

Vote: Approved with unanimous consent

1. **Letter of Comments on BEREC report (**[**11-23- 0124r1**](https://mentor.ieee.org/802.11/dcn/23/11-23-0124-01-aiml-letter-of-comments-on-berec-report.docx)**),** Tongxin Shu (Huawei)Amelia Andersdotter resumes secretary role.The draft response is presented to the group. **Discussion:

Q:** Are the benefits you describe in these documents attributable to AI/ML?
**A:** We can't tell yet, but we're still researching this.
**C:** We have some evidence that there can be improvements, but I don't think we can yet say that we've demonstrated improvements. We could say that the research is promising.
**Q:** In your text on dynamic reinforcement learning for dynamic spectrum access it's not clear what you are asking for.
**A:** DRL-techniques are promising for dynamic spectrum access so it's something that should be taken into account. We could add that these should be considered as a policy option.
**C:** We want to mention that there is also research ongoing in license-exempt bands.Further discussion on contents and wording.

**Chair:** It may be possible to send our eventual report to the regulator as a liaison, rather than submitting a response to this consultation.
**Chair:** I do not have the feeling that this document is ready for motion. We can try at a later stage to make a liaison statement with the IEEE 802.11 AI/ML TIG report.
2. **Proposed Response to MIIT of China Consultation on UWB (**[**18-23-0014r1**](https://mentor.ieee.org/802.18/dcn/23/18-23-0014-01-0000-proposed-response-to-miit-of-china-consultation-on-uwb.docx)**),** Dries Neirynck (Ultra Radio Ltd), Ben Rolfe (BCA), Riku Pirhonen (NXP Semiconductors), BiIly Vero (Qorvo)The draft response is presented to the group.

**Discussion:**

**Q:** Table 2 is what you will want the MIIT to consider?
**A:** Yes.
**Chair:** Will have to make adjustments to make it clearer what is the ask of the regulator in this response.

	1. **Motion #4 (External):** Move to approve document [18-23/0014r1](https://mentor.ieee.org/802.18/dcn/23/18-23-0014-01-0000-proposed-response-to-miit-of-china-consultation-on-uwb.docx) in response to China MIIT’s consultation on the “900MHz Frequency Band Radio Frequency Identification (RFID) Equipment Radio Management Regulations (Draft for Comments)” and “Ultra Wideband (UWB) Equipment Radio Management Regulations (Draft for Comments)” for review and approval by the IEEE 802 LMSC for submission to China MIIT by the response deadline. The IEEE 802.18 Chair is authorized to make editorial changes as necessary.

	Moved: Riku Pirhonen
	Seconded: Dorothy Stanley
	Discussion:
	 **C:** For clarification, is this both UWB and 900 MHz or only one of them?
	 **C:** It's two drafts on two topics in the same consultation.

Attendees: 31
Voters: 21
Result: Approved (12 Yes, 0 No, 6 Abstain).
Remarks: Chair did not vote.

1. **ISUS ad-hoc status report (draft:** [**18-23-0015r0**](https://mentor.ieee.org/802.18/dcn/23/18-23-0015-00-ISUS-isus-clean-version-of-spectrum-statement.docx)**, with track-changes:** [**18-22-0087r10**](https://mentor.ieee.org/802.18/dcn/22/18-22-0087-10-ISUS-draft-statement.docx)**), Amelia Andersdotter (Sky Group/Comcast)**A clean revised draft was presented incorporating changes since Tuesday 17 January 2023 opening meeting of IEEE 802.18 (18-23-0015r0). Latest draft incorporates changes relating to 802.15 technologies and many editorial suggestions from IEEE 802.11 members.

Discussion on further use-cases (AR/VR, indoor and outdoor use-cases), disposition of paragraphs. A list of industry bodies previously included in the draft is dropped.

The document cannot be motioned for EC ballot with too many editorial comments remaining to be resolved. Ad-hoc leader will hold a final ISUS ad-hoc on 27 January 2023 to complete editorial remarks before putting the document for IEEE 802.18 approval.
2. **Any other business**

No other business

1. **Final administrative items**
	1. Next weekly teleconference call scheduled for: 26 January 2023, 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 plenary meeting will be conducted during the IEEE 802 Plenary Session on 12-17 March 2023 in Atlanta, Georgia, USA.
			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 10:03 local time

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

|  |  |  |  |
| --- | --- | --- | --- |
| **Voting Attendees:** | **17-Jan** | **19-Jan** | **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** | **FALSE** |
| 4 | **Boldy** | David | Broadcom Corporation | **x** | **x** | **TRUE** |
| 5 | **da Silva** | Claudio | Meta Platforms, Inc. | **x** | **x** | **TRUE** |
| 6 | **de Vegt** | Rolf | Qualcomm Incorporated | **x** | **x** | **TRUE** |
| 7 | **Eitan** | Alecsander | Qualcomm Incorporated | **x** | **x** | **TRUE** |
| 8 | **Fang** | Yonggang | MediaTek | **x** | **x** | **TRUE** |
| 9 | **Godfrey** | Tim | Electric Power Research Institute, Inc. (EPRI) | **x** | **x** | **TRUE** |
| 10 | **Hiertz** | Guido | Ericsson GmbH | **x** | **x** | **TRUE** |
| 11 | **Ikegami** | Tetsushi | Meiji University | **x** | **x** | **TRUE** |
| 12 | **Jeffries** | Timothy | FutureWei Technologies, Inc. | **x** | **x** | **TRUE** |
| 13 | **Kain** | Carl | USDOT, Noblis, Inc. | **x** | **x** | **TRUE** |
| 14 | **Kasher** | Assaf | Qualcomm Incorporated | **x** | **x** | **TRUE** |
| 15 | **Kennedy** | Richard | Bluetooth SIG | **x** |  | **FALSE** |
| 16 | **Kerry** | Stuart | OK‐Brit, Self | **x** | **x** | **TRUE** |
| 17 | **Kürner** | Thomas | TU Braunschweig | **x** |  | **FALSE** |
| 18 | **Lansford** | James | Qualcomm Incorporated | **x** | **x** | **TRUE** |
| 19 | **Levy** | Joseph | InterDigital, Inc. | **x** | **x** | **TRUE** |
| 20 | **Max** | Sebastian | Ericsson AB | **x** |  | **FALSE** |
| 21 | **Nikolich** | Paul | Self, HPE, Huawei, Wyebot, UNH BCoE, YAS BBV, Origin Wireless  | **x** | **x** | **TRUE** |
| 22 | **Palm** | kiwin (Stephen) | Broadcom Corporation | **x** | **x** | **TRUE** |
| 23 | **Petrick** | Al | Skyworks Solutions Inc. | **x** | **x** | **TRUE** |
| 24 | **Pirhonen** | Riku | NXP Semiconductors |  | **x** | **FALSE** |
| 25 | **Porat** | Ron | Broadcom Corporation | **x** |  | **FALSE** |
| 26 | **Robert** | Joerg | TU-Ilmenau/Fraunhofer IIS | **x** | **x** | **TRUE** |
| 27 | **Rolfe** | Benjamin | Blind Creek Associates | **x** |  | **FALSE** |
| 28 | **Sand** | Stephan | German Aerospace Center (DLR) | **x** |  | **FALSE** |
| 29 | **Scott** | Andy | NCTA – The Internet & Television Association | **x** | **x** | **TRUE** |
| 30 | **Sherlock** | Ian | Texas Instruments | **x** | **x** | **TRUE** |
| 31 | **Stanley** | Dorothy | Hewlett Packard Enterprise | **x** | **x** | **TRUE** |
| 32 | **Verso** | Billy | Qorvo | **x** |  | **FALSE** |
| 33 | **Wang** | Lei | FutureWei Technologies, Inc. | **x** | **x** | **TRUE** |
| 34 | **Ward** | Lisa | Rohde & Schwarz | **x** |  | **FALSE** |
| 35 | **Yaghoobi** | Hassan | Intel Corporation | **x** | **x** | **TRUE** |
|  |  |  |  |  |  |  |
| **Non-Voting Attendees:** | **17-Jan** | **19-Jan** | **Credit>75%** |
| 1 | **Asai** | Yusuke | NTT ASLabs | **x** | **x** | **TRUE** |
| 2 | **Carney** | Bill (William) | Sony Corporation | **x** |  | **FALSE** |
| 3 | **Gan** | Ming | Huawei |  | **x** | **FALSE** |
| 4 | **Guo** | Ziyang | Huawei |  | **x** | **FALSE** |
| 5 | **Haasz** | Jodi | IEEE SA |  | **x** | **FALSE** |
| 6 | **Halasz** | Dave | Morse Micro | **x** | **x** | **TRUE** |
| 7 | **Kitazawa** | Shoichi | Muroran Institute of Technology | **x** | **x** | **TRUE** |
| 8 | **Liu** | Peng | Huawei |  | **x** | **FALSE** |
| 9 | **Lopez** | Miguel | Ericsson AB | **x** | **x** | **TRUE** |
| 10 | **Pettersson** | Charlie | Ericsson AB | **x** | **x** | **TRUE** |
| 11 | **Riegel** | Maximilian (Max) | Nokia | **x** |  | **FALSE** |
| 12 | **Shu** | Tongxin | Huawei | **x** | **x** | **TRUE** |
| 13 | **Wilhelmsson** | Leif | Ericsson AB | **x** | **x** | **TRUE** |
| 14 | **Yang** | David (Xun) | Huawei | **x** |  | **FALSE** |
| 15 | **Yu** | Jian | Huawei | **x** | **x** | **TRUE** |