IEEE 802.18

Radio Regulatory-TAG

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| Radio Regulatory Technical Advisory Group Minutes |
| Date: 16dec21 |
| Name | Affiliation | Address | Email |
|  |  |  |  |
| Author and Officer presiding:  |
| Jay Holcomb, Chair, RR-TAG | Itron | Liberty Lake, (Spokane) WA | jholcomb@ieee.org |

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

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

Abstract

Minutes of the IEEE 802 RR-TAG teleconference

These are the Minutes of the IEEE 802 RR-TAG teleconference Thursday, 16dec21

1. Chair calls the meeting to order at 15:11 et 🡨 apologies from the Chair for being late.
2. Chair presents slides 2 – 7 of 802.18-21/0146r01, the call to order and administrative items
	1. Includes IEEE 802 meeting and participant’s guidelines and requirements.
3. Chair presents slides 8, the agenda:
	1. Call to Order
		1. Attendance is not on IMAT (VC & webex)
		2. Remember to mute when not speaking, thanks.
		3. Please request Q in the chat window.
	2. Administrative items
		1. Someone to take some notes, \_Peter E.\_
		2. Attendance & monitor chat window, Stuart K
	3. Approve agenda, last minutes & administration
	4. Discussion items
		1. EU Items
		2. Other Regions Items
		3. ITU-R Items
		4. General Discussion Items
	5. Actions required.
		1. \_\_\_\_\_\_
		2. Anything new today
		3. ongoing: WRC-23 AI Viewpoints & Stds. freq. table fill in
	6. AOB
	7. Adjourn
4. Chair presents slides 8 - 9 Administrative – Motions and more
	1. **Motion: To approve the agenda as presented on previous slide**

Moved by: Stuart Kerry (OK-Brit, self)

Seconded by: Vijay Auluck (self)

Discussion? None

Vote: Approved by unanimous consent

* 1. **Motion:** To approve the minutes in document <https://mentor.ieee.org/802.18/dcn/21/18-21-0145-00-0000-minutes-09dec21-rrtag-teleconference.docx> 10-Dec-2021 13:42:53 ET, with editorial privilege for the 802.18 chair.

Moved by: Al Petrick (Skyworks)

Seconded by: Vijay Auluck (self)

Discussion? None

Vote: Approved by unanimous consent

* 1. **Administrative moving forward**
		1. For **Jan 2022 Electronic** Wireless Interim – (was Panama) - Opening is Friday 14Jan21 10:00et
			1. WCSC Sept. call, the Jan 2022 Wireless Interim will be electronic/virtual.
		2. **FEES & DEADLINES**
			1. **Early Registration: Until 23:59 PM Eastern Time Thursday December 30, 2021** $US 50.00 for all attendees
			2. **Standard Registration: After Early, Until 23:59 PM Eastern Time Friday January 14, 2022** $US 75.00 for all attendees
			3. **Late Registration: After 23:59 PM Eastern Time Friday January 14, 2022** $US 125.00 for all attendees
		3. **MTG Events - REGISTRATION WEBSITE:** [**Link to website.**](https://urldefense.com/v3/__https%3A/touchpoint.eventsair.com/ieee-802-wireless-interim-session-jan-2022__;!!F7jv3iA!nrBVgCSpfikQRI3YkHn54N92xnRzChCl3roGsrfxTk71DDFhWPhLLIq9WHi8ySM27w$)🡸 different from the last couple of virtual meetings.
		4. .18 will be our normal weekly times and call-in, Thursday’s 20th and 27th Jan22,
			1. **and the .18 chair declares this an accredited interim and will have voting participation credit.**
		5. There are some issues with certain credit cards, it is being addressed.
		6. For **March 2022** Plenary – (was Orlando)
			1. Decision point was on LMSC/EC call Tuesday/07dec21; will stay electronic and they also approved:
			2. Early: Before 12:00 PM UTC, Friday, January 21, 2022 $US 75.00 for all attendees
			3. Standard: Before 12:00 PM UTC, Friday, February 25, 2022 $US 100.00 for all attendees
			4. Late/On-site: After 12:00 PM UTC, Friday, February 25, 2022 $US 150.00 for all attendees
			5. *Expect* Plenary dates to be 4-18 March (Avoids conflict with IEEE-SA Meetings March 22-24.)
			6. Deadbeat day = June 18, 2022
			7. .18 will be our normal weekly times and call-in, expect Thursday’s 10th and 17th march2022,
		7. **The next 802 technical plenaries are thursdays, 13jan22 and 03mar21 @ 09:00et.**
1. Chair presents slides 10 - 11, **EU items to share**
	1. General EU info: [<ojeu>](https://eur-lex.europa.eu/oj/direct-access.html) [<HStds>](https://ec.europa.eu/growth/single-market/european-standards/harmonised-standards/) <https://www.etsi.org/deliver/etsi_en/>
		1. Remember–BRAN documents can be found in 802.11 private area documents (daily refresh)
			1. for reference, ad hoc meetings can make decisions, rapporteur meetings cannot.
	2. **ETSI –** [<BRAN>](https://portal.etsi.org/tb.aspx?tbid=287&SubTB=287) **next call #112, 13-17dec21; (#113, 04-14feb22)**
		1. 53 Contributions (total of all)
		2. Incoming Liaison from CEPT, 5.8 GHz power out questions on what is in OJEU. BRAN working on response.
		3. Response back to ITU-R being worked on (as reported earlier)
		4. Friday, the current VCs will be voted in and continuing through the next term.
		5. Approved for a new draft of EN 301 893, 5GHz, standard coming up.
		6. Modified WI for EN 303 753 has been approved, this is the 3rd 60GHz standard.
		7. EN 303 687, 6 GHz, some good progress and text for NB FH has been approved. These will be VLP.
		8. Approved TF 103 754, Mesh performance, to go into remote consensus, due 31jan22.
		9. The chair submitted 2 docs, proposing the two meeting to be electronic (Feb. and June)
		10. 47 meetings, 1 std EN 302 567 published. 2 more in ENAP; busy 2021.
		11. Chairman’s notes of the week is in BRAN(21)112014
		12. Meeting #112 will wrap tomorrow, Friday the 17th.
			1. BRAN(21)112044 - Clean proposal for EN 303 687 v0.0.15
			2. Here are all of documents for ETSI TC BRAN meeting #112 <https://portal.etsi.org/Contribution.aspx?MeetingId=38757>
			3. (remember the .11 private area has the BRAN documents.)
		13. After meeting: Both the EN 301 893 and EN 303 687 drafts were approved and will be in the 802.11 members private area.
		14. Also, many ad hocs approved for the next few months [BRAN(21)112046r4 - Future Ad hoc meetings](https://urldefense.com/v3/__http%3A/portal.etsi.org/ngppapp/ContributionCreation.aspx?primarykeys=238141__;!!F7jv3iA!hgsAcMNhHTZFhaELSftE93kIrl6hK2qPC-UfUcxTFd5UjGNXP6_xbHuQsHBTL11FWQ$)
		15. **09dec:** Update on EN 303 722 (60 GHz) goes to ENAP starting tomorrow, the 10th of dec.
			1. Around 30 docs to discuss next week.
			2. BRAN(21)112019, provided by 3 countries authorities, many mixed points are being brought up. e.g. NB FH, Client to Client, in-band blocking, UAR, and etc.
			3. BRAN#112 draft agenda 112001r1, to see more. [https://docbox.etsi.org/BRAN/BRAN/05-CONTRIBUTIONS/2021/BRAN(21)112001r1\_Draft\_agenda\_for\_ETSI\_TC\_BRAN\_meeting\_\_112.xlsx](https://docbox.etsi.org/BRAN/BRAN/05-CONTRIBUTIONS/2021/BRAN%2821%29112001r1_Draft_agenda_for_ETSI_TC_BRAN_meeting__112.xlsx)
		16. **02dec:** Calls this week on 6 GHz and 5 GHz, then tomorrow another call on 6GHz.
			1. The call on meshing this week was very short.
			2. 5 GHz have gotten through about 2/3s of the draft and doing some editorial updates
			3. 6 GHz NB FH still being worked and how to get in the standard. Discussions on blocking ongoing. And, Client to Client comms is close to being accepted in ISM, but not DFS bands that still needs more work.
				1. Having to work out how to prove they are indoors. keep in mind in the EU there is LPI and VLP so as long as you can hear the indoor AP, then your confedered indoor.
				2. 802.11ax E.2.7 explains use of Transmit Power Envelope.
			4. At the recent WP 5A ITU-R meeting, the BRAN chair shared the liaison from BRAN to ITU-R related to the M.1450 recommendation.
			5. Will have 47 total BRAN meetings in 2021
		17. **18nov:**  Call this week on TR 103 721 made good progress.
			1. Calls coming up next week, on 6GHz and 5GHz stds on Tuesday. Thursday a call on 60GHz.
			2. **11nov21:** 3 calls since last report:
			3. TS 103 754 – multiple AP performance measurement, approved a new draft and making good progress
			4. Looking at working with Broad Band Forum, n the TS 103 754 stds.
			5. Resolved the comments on TVWS EN 301 598, from the assessment by the EC and the different consultants. Sent to 90-day ENAP.
			6. ad hoc on 2nd 60GHz standard, EN 303 722, Response on 1st ENAP technical comment resolved, now to 2nd 90-day ENAP.
			7. VC nominations end tomorrow and current VC are standing.
			8. Call next week on TR 103 721 (Feasibility assessment of applying mitigation techniques to WAS/RLAN to enable coexistence in the 5 725 MHz to 5 850 MHz band)
			9. FYI: Sounds like updates to the RED being discussed. Activating article 3.3 for IoT devices with security. protecting privacy, etc.
	3. **CEPT–**[**<ECC>**](https://cept.org/ecc/groups/ecc/client/introduction/) **(and more) next call, #58 01-04mar22, (hybrid 1H22) or just in general**
		1. November meeting: <https://cept.org/ecc/groups/ecc/news/57th-ecc-plenary-meeting-2-5-november/>
			1. New Work item on WAS/RLAN in 6425-7125 MHz: the ECC agreed on the new WI on the basis that, inter alia, no regulatory measures shall be taken under this WI and that the work in preparation for WRC-23 agenda item 1.2 will run independently from the work conducted under this work item.
		2. **02dec:** France has opened the lower ½ of the 6 GHz band. This was quicker than some had thought.
		3. **18nov:** the ECC Report 327 has been published covering the UWB band above 6GHz with the following point:
			* 1. - Fixed outdoor used
				2. - simplified vehicular use cases
				3. - higher power pf -31.3dBm/MHz indoor.
			1. Link: <https://docdb.cept.org/document/22112>
			2. Also review ECC Report 330 on 5.8 GHz coexistence - <https://docdb.cept.org/download/3501>
			3. note: 2 members have volunteered to put together a few slides the EC, ECC, ETSI, CEPT and all interconnect.
	4. **CEPT – ECC** [**<SE45>**](https://cept.org/ecc/groups/ecc/wg-se/se-45/client/introduction/) **next call #15, 03-04mar22, e-meeting**
		1. last on website: SE45-14 met online on 28 October and continued its work to further study OOB emissions below 5935 MHz from Very Low Power (VLP) WAS/RLAN devices in the 6 GHz band, to protect CBTC systems that operate in the band 5915-5935 MHz
	5. **CEPT – ECC** [**<WGFM>**](https://cept.org/ecc/groups/ecc/wg-fm/client/introduction/)  **next meeting #101, 07-11feb22, Tentative, ECO (no virtual)**
		1.
		2. last on website: (04-08oct): WGFM approved for publication, the revision of ECC Recommendations on rail communications ECC/REC/(05)08 and ECC/REC/(08)02. WGFM also published two ECC Reports. **ECC Report 330 on RLAN at 5.8 GH**z and ECC Report 329 on VHF digital maritime voice radio.
	6. nice site: CEPT 6 GHz status across the countries: <https://docdb.cept.org/implementation/>[16737](https://docdb.cept.org/implementation/16737)
		1. 16dec: showing 3 -4 countries. note, updating this site is very slow, beware.
2. Chair presents slide 12, **Other regions (outside EU-Stds and USA), items to share**
	1. Anything to share today? nothing heard
	2. standing by: UK – Ofcom 802.15 SC THz response to paper on THz.
		1. <https://mentor.ieee.org/802.18/dcn/21/18-21-0134-00-0000-uk-ofcom-terahertz-spectrum-paper.docx>
3. Chair presents slides 13, **ITU-R items to share**
	1. Anything to share today? nothing heard
	2. **09dec:** BRAN 112017 is their M.1450 update a submission for discussion. BRAN will review next week.
	3. **02dec:** WP 5A had meetings in the last weeks.
		1. The 2 liaisons from IEEE 802 (802.11), were presented and are being carried forward in the Chairman’s report.
		2. One country brought up is it nomadic or mobile for WiFi (.11ax), which designation? Nomadic seems more appropriate.
		3. So may want to submit a contribution to support the nomadic operation. The .11 ITU ad hoc will work on a liaison to bring to .18 and to the LMSC. Note: the next WP 5A meeting is 23may21-03jun22.
		4. Still questions on are sharing agreements need to be worked on.
		5. Other sections of our liaisons had good responses.
	4. **standing by for this spring(2022):** Additional WP 1A light communications and 2 WP 5A submissions from IEEE 802.
	5. **ongoing: WRC-23 agenda items, the list is on the ITU-R website at:**
		* 1. <https://www.itu.int/en/ITU-R/study-groups/rcpm/Pages/wrc-23-studies.aspx> (updated 26Aug20)
			2. <https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0041PDFE.pdf>
		1. <https://mentor.ieee.org/802.18/dcn/20/18-20-0107-01-0000-res-811-wrc-19-wrc-23-agenda-items.docx>
		2. **IEEE 802 viewpoints on WRC-23 agenda items.**
			1. Doc for viewpoints updated (actions items in notes on this slide in agenda): <https://mentor.ieee.org/802.18/dcn/21/18-21-0039-01-0000-ieee-802-viewpoints-on-wrc-23-agenda-items.pptx>
			2. Sometime, will review actions noted at the July Plenary.
		3. Reference:
			1. btw- the initial AIs to consider IEEE 802 viewpoints:
				1. 1.1 -800-4 990 MHz and Resolution 223. Connection w/ITS going there?
				2. 1.2 -300-3 400MHz, 3 600-3 800MHz, 6 425-7 025MHz, 7 025-7 125MHz and 10.0-10.5GHz for International Mobile Telecommunications (IMT) and resolution 245.
				3. 1.5 -470-960 MHz in Region 1-consider possible regulatory actions, Resolution **235.**
				4. 10 **-**recommend to the Council items for inclusion in the agenda for the next WRC
	6. For miscellaneous links for ITU-R, SGs, WPs and calendars, see back up slides in agenda.
4. Chair presents slide 14, **General Discussion Items**
	1. none today
5. Chair presents slide 15, **General Discussion Items – ongoing fyi - MSGs 6 GHz**
	1. **1. The WInnforum “6 GHz Committee”, all groups meet every 2 weeks except *Incumbent Information, interference and Test & Certification* - weekly (168 people); some docs:** [**https://6ghz.wirelessinnovation.org/work-group-products**](https://6ghz.wirelessinnovation.org/work-group-products)
		* 1. <https://www.wirelessinnovation.org/6ghz-multistakeholder-committee>
			2. For access to documents from the committee, can request to be an observer from the MSG below.
		1. Org: 2 focus areas:
			1. 1) AFC Functional Specification -WG – includes: Interference-TG, Incumbent Info-TG, security and Protocols 3GPP-TG
			2. 2) AFC Test and Certification-WG

* + 1. nothing new today
		2. **09dec21:** Request for petition stay (by 14dec) and petition for rule making by utility and public safety. e.g. concept on beacons causing interference. more to come.
		3. **18nov:** WInnforum met with the OET today to discuss AFC testing. (WFA also meet with OET)
			1. ex partes will be out soon. WInnforum is about 9 slides. One point is asking about more than 1 test lab and how they would work.
		4. **21oct:** TR-1014 (IR3) is in internal ballot, being shared with WFA AFC TG
			1. The process of coordination with the different organization has improve and time to approval is quicker.
			2. <https://www.wi-fi.org/file/afc-specification-and-test-plans> (open to all, just need contact info and privacy agreement)
	1. **2. From the FCC R&O, an informal MSG (“Group”) has also been formed. (260+ people)**
		1. <https://groups.wirelessinnovation.org/wg/6MSG/dashboard>.
			1. Work stream 1 - interference protection and resolution (CableLabs, EPRI, Lake Cty, APCO) Meets biweekly, from 28Jan21-10:00 et,
			2. Work stream 2 - correct incumbent data (ULS) (Comsearch, APCO)
			3. Work stream 3 - AFC and how it provides protection, etc. (Charter, Google, UTC)
			4. Overall Co-chairs: NPSTC, UTC, WFA, WISPA.
		2. 10dec meeting was only 28mins. The RLAN signal characteristics input was moved back to WS1 which met yesterday to work on putting into the final report.
			1. With that effort is still trying to get the final report done, to get to the FCC. The details are taking more time
		3. **09dec:** Tomorrow is a meeting, and what to do with the final report, as consensus was not reach on everything.
		4. **18nov:** WS#1 reviewed final report, made one change and will present to 10Dec MSG full group for approval. <https://groups.wirelessinnovation.org/wg/6GHz-MSG-WS1/document/download/16761> 21dec21 is when AFC applications are due.
	2. **General: A public notice is expected in January about work needed on improving the ULS data.**
1. Chair presents slide 16, **General Discussion Items – ongoing fyi - Table of IEEE 802 Stds Frequency Bands**
	1. **Problem statement**
		1. It is difficult for 802 wireless standards developers to quickly and accurately identify all the frequency bands by the family of 802 wireless standards in a regularly maintained database.
		2. The primary application is to simplify identification of potential frequency bands for coexistence assessment.
	2. **Initial Audiences:**
		1. 1) 802 wireless standards developers
		2. 2) 802.19 wireless coexistence working group
	3. **Ad hoc calls**
		1. **The spreadsheet is going, always look for latest:**
		2. <https://mentor.ieee.org/802.18/dcn/21/18-21-0036-09-0000-frequency-table-template.xlsx>
	4. **From ad hoc call on 23nov21**
		1. Clarified 802.22 orig. std.; filled in many specific freq. ranges for 802.11
		2. Updates a few UWB ranges and added the Light-Ranges Sheet
	5. **From ad hoc call on 28sept21**
		1. Updated most of the 802.15 cells/rows, less UWB ones.
		2. And proposing to swap columns D&E to get the clause numbers for the current standard by the current standards. and clarified what goes in the clause cell.
	6. The activity is entering the phase to fill in the sheet now, so more intense and time consuming.
	7. The **next meeting will be 11jan22.** (call-in in agenda backup slides)
2. Chair presents slide 17, Actions / AOB / Recess
	1. **Actions required:**
		* **Chair to add link to vote’s list up front in agenda (and minutes)**
			1. Done – though put link to full 802.18 web page that has a link to voter’s list.
* **ongoing:**
	+ For IEEE 802 viewpoints on WRC-23 AIs, reach out to those identified, looking for input on the viewpoints.
	1. **Proactive Spectrum Sharing – Contact Rich Kennedy if you can help or have inputs. or want to join the task force.**
1. Chair presents slide 18 Any Other Business
	1. none hear
2. Chair presents slide 19, Adjourn.
	1. **Next “weekly” teleconference (sched’d to 19may22): 06jan22 –*15:00–<15:55* et –**
		* **no calls: 23 or 30dec**
		1. Call in info: <https://mentor.ieee.org/802.18/dcn/16/18-16-0038-19-0000-teleconference-call-in-info.pptx>
		2. Also, see back up slide in this agenda. **(note: new call-in info starts 20jan22)**
		3. All late changes/cancellations will be sent out to the 802.18 list server.
	2. Overall IEEE 802 schedule: <http://ieee802.org/802tele_calendar.html>
		1. or only 802.18: [IEEE 802.18 TAG Calendar](https://calendar.google.com/calendar/embed?src=c2gedttabtbj4bps23j4847004%40group.calendar.google.com&ctz=America%2FNew_York)
	3. Adjourn: 🡸 Happy Holidays all
		1. Any objection to Adjourn.
		2. None heard, Adjourn at 15:36et
	4. **The IEEE 802.18 (wireless) interim will be electronic in Jan 2022 with attendance credit.**
	5. **The IEEE 802.18 plenary will be electronic in March 2022 with attendance credit.**
	6. **Thank You**
3. Attendance

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| --- | --- | --- | --- |
| **Voting Attendees:** |  |  | **16-Dec** |
| 1 | **Auluck** | Vijay | Self | **x** |
| 2 | **Ecclesine** | Peter | Cisco Systems, Inc. | **x** |
| 3 | **Hiertz** | Guido | Ericsson GmbH | **x** |
| 4 | **Holcomb** | Jay | Itron Inc. | **x** |
| 5 | **Kain** | Carl | USDOT, Noblis, Inc. | **x** |
| 6 | **Kenney** | John | TOYOTA InfoTechnology Center U.S.A. | **x** |
| 7 | **Kerry** | Stuart | OK‐Brit, Self | **x** |
| 8 | **Levy** | Joseph | InterDigital, Inc. | **x** |
| 9 | **Lynch** | Michael | MJ Lynch & Associates, LLC. | **x** |
| 10 | **Petrick** | Al | Skyworks Solutions Inc. | **x** |
| 11 | **Rolfe** | Benjamin | Blind Creek Associates/MERL | **x** |
| 12 | **Ward** | Lisa | Rohde & Schwarz | **x** |
| 13 | **Yaghoobi** | Hassan | Intel Corporation | **x** |
| 14 | **Yucek** | Tevfik | Qualcomm Incorporated | **x** |