IEEE 802.18

Radio Regulatory-TAG

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| Radio Regulatory Technical Advisory Group Minutes |
| Date: 20-27jan22 |
| 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)

Abstract

Minutes of the IEEE 802 RR-TAG teleconference

These are the Minutes of the IEEE 802 RR-TAG teleconference Thursday, 20-27jan22

1. Chair presents slide 2, Registration for the Jan ‘22 IEEE 802 electronic wireless interim session
	1. This meeting is part of IEEE 802 electronic January 2022 wireless interim session
	2. You must pay the registration fee in order to attend
	3. If you have not already done so, you can register w/MTG Events – Registration website at: <https://touchpoint.eventsair.com/ieee-802-wireless-interim-session-jan-2022>
	4. Late Registration:  **After Friday 23:59 et 14 January 2022 \* $US 125.00 for all attendees**
	5. 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 cancelled
	6. At conclusion of each of the 802.18 calls, the Webex log and IMAT will be reviewed.
	7. No payment, become dead beat and lose voting rights in all groups, after 60-day grace.
2. Chair called the meeting to order at 15:02 et
3. Chair presents slides 3 – 8 of 802.18-22/0006r01, the call to order and administrative items
	1. Includes IEEE 802 meeting and participant’s guidelines and requirements.
4. Chair presents slides 8, the agenda:
	1. Call to Order
		1. Attendance is on IMAT (w/VC & webex checks)
		2. This interim does count for participation credit. Need 75%.
		3. Remember to mute when not speaking, thanks.
		4. Please request Q in the chat window, thanks.
	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 for both weeks
		1. EU Items
		2. Other Regions Items
		3. ITU-R Items
		4. General Discussion Items
	5. Actions required.
		1. Chair start epolls on May ’22 wireless interim
		2. Anything new today
		3. ongoing: WRC-23 AI Viewpoints & Freq. table fill in
	6. AOB
	7. Recess
5. Chair presents slides 9 - 13 Administrative – Motions and more
	1. **Motion: To approve the agenda as presented on previous slide**

Moved by: Mike Lynch (MJLynch Assoc.)

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

Discussion? None

Vote: Approved by unanimous consent

* 1. **Motion:** To approve the minutes in document <https://mentor.ieee.org/802.18/dcn/21/18-21-0136-02-0000-minutes-electronic-plenary-11-18nov21-rr-tag-yvr.docx> 29-Nov-2021 15:00:16 ET, with editorial privilege for the 802.18 chair.

Moved by: Stephen Palm (Broadcom)

Seconded by: Edward Au (Huawei)

Discussion? None

Vote: Approved by unanimous consent

* 1. **Administrative moving forward**
		1. **The ad hoc on how to do sessions long-term has some questions for 802 members**. Will look to review in .18 more next week, **though the heads up for now:**
			1. **What aspects of remote operation have worked during COVID?**
				1. Highlight real examples
				2. Identify why remote operation was successful in these cases
			2. **What aspects of remote operation have NOT worked during COVID?**
				1. Highlight real examples
				2. Identify why remote operation was NOT successful in these cases
			3. **What could be done to turn any failures into successes?**
				1. Describe some real turnaround examples (if any)
				2. … or hypothesize about how this could be done
			4. For anyone with thoughts they might like to share, please pass on to Andrew Myles (in any form to amyles@cisco.com.)
		2. For **Jan 2022 Electronic** Wireless Interim – (was Panama) - Opening was Friday 14Jan21 10:00et
		3. WCSC Sept. call, the Jan 2022 Wireless Interim will be electronic/virtual.
		4. **FEES & DEADLINES**
			1. **Late Registration:  After 23:59 PM Eastern Time Friday January 14, 2022 $US 125.00 for all attendees**
			2. **MTG Events - REGISTRATION WEBSITE:** [**Link to website.**](https://urldefense.com/v3/__https%3A/touchpoint.eventsair.com/ieee-802-wireless-interim-session-jan-2022__;!!F7jv3iA!nrBVgCSpfikQRI3YkHn54N92xnRzChCl3roGsrfxTk71DDFhWPhLLIq9WHi8ySM27w$)🡸different from last couple of virtual meetings
		5. .18 will be our normal weekly times and call-in, Thursday’s 20th and 27th Jan22,
			1. **and the .18 chair has declared this an accredited interim and will have voting participation credit.**
		6. **Next 802 technical plenary is thursday, 03mar21 @ 09:00et.** [**https://1.ieee802.org/category/technical-plenary/**](https://1.ieee802.org/category/technical-plenary/)
		7. For **March 2022** Plenary (was Orlando)
			1. Decision point was on LMSC/EC call Tuesday/07dec21 and Plenary will stay electronic:
			2. **However, contract negotiations on the March 2022 cancellation will result in a significant penalty fee not anticipated on December 7th, 2021.**
			3. **Registration for the March 2022 Plenary was suspended immediately until the new Fee Structure for the plenary to address the high penalty fee was determined this week at the 04jan21 LMSC/EC call.**
				1. **$400 until Friday, January 28, 2022 (fully refundable. until January 28th)**
				2. $600 until Friday, February 25, 2022 (refundable with cancellation fee. January 28th to February 25th)
				3. $800 after Friday, February 25, 2022 (non-refundable. after February 25th)
				4. **note:** Those individuals who had previously registered will be contacted directly by the IEEE 802 EC Executive Secretary for further instructions.
			4. Plenary info: <http://802world.org/plenary/>
			5. Face to Face Registration Website: <https://cvent.me/yG5GY2>
			6. Plenary dates to be 04-18 March (Avoids conflict with IEEE-SA Meetings March 22-24.)
				1. .18 will be our normal weekly times and call-in, Thursday’s 10th and 17th March2022.
		8. **For May 2022 Wireless Interim – Warsaw, Poland**
			1. Will have two Mentor epolls: starting Thursday 20jan22 and ending Wednesday 26jan22 (back up is webex poll next week, 27jan22)
			2. This is to help IEEE 802 WCSC at their 02feb22 call to determine if the May 2022 Wireless Interim should be electronic/virtual, mixed—mode or face-to-face in Warsaw, Poland (poll like we did before)
				1. everyone can vote being a straw poll.
			3. Note: *Expectations* for May and Sept 2022 registration fees (similar to pre-pandemic) :
				1. $850/$1,100/$1,350 in person (+$300 not in hotel)
				2. $950/$1450 Mixed Mode
				3. $400/600/800 Electronic/Virtual ? what time zone

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* + - 1. 1. If the 2022 May Wireless Interim Session is held in Warsaw, Poland as an in-person only session, will you at
				1. Yes/No (802.15 - 30/37 -22dnv) (802.24 - 5/3 -2dnv)

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* + - 1. 2. If the 2022 May Wireless Interim Session is held in Warsaw, Poland as a mixed-mode session, will you attend:
				1. 1-Attend In-person
				2. 2-Attend Virtually (remotely)
				3. 3-Will not attend plenary (802.15 - 28/37/8 -17dnv) (802.24 - 4/4/0 -2dnv)
	1. **LMSC P&P sections 3.1 and 4.0: 802 EC election/appointments**
		1. All 802 executive committee members are elected or appointed and confirmed at the first Plenary session of each even numbered year.
	2. **For anyone to be considered for the 802.18 Chair, Vice Chairs or the appointed positions**
		1. ***Please send nominations or self nominations to the .18 Chair before Wednesday 02 March 2022 - end of day aoe.***
		2. 802.18 elections will be at the first 802.18 meeting of the Plenary, 10mar22.
* **The .18 Chair position is open;**
* **The .18 Vice-Chairs Stuart Kerry and Al Petrick are seeking re-election.**
	1. **All potential EC members, Chair and Vice Chairs**
		1. Please remember to submit your letters of endorsement and disclosure of affiliation to the IEEE 802 Recording Secretary, John D’Ambrosia, as soon as possible, but no later than the call to order of the March 2020 opening LMSC meeting.
		2. For Chair, Vice Chair and Secretary, you need to be a member of the IEEE SA
		3. The TAG/WG chair & vice chairs are subject to confirmation by IEEE 802 EC.
	2. **Responsibilities / expectations for all offices are in the back up slides in this slide deck**
1. Chair presents slides 14 - 15, **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 #113, 04-14feb22 (dates are set through 2024.) Many other calls also setup.**
		1. Have had 1 ad hoc on 5 & 6 GHz stds so far this year.
			1. Next Monday is a focused 6 GHz standard ad hoc, with several contributions, w/goal to have ready for #113.
			2. Client to client is the main topic to work out.
	3. **ETSI – ERM** [<TG-UWB>](https://portal.etsi.org/tb.aspx?tbid=729&SubTB=729)  **next call, meeting #54, 22-23Jul20**
		1. Use cases documents to finish mid-year, to extend the band above, 8.5GHz to 10.6 or 12.4GHz.
		2. w/notch from 10.6 to 10.7GHz being discussed, as this is a passive band. This is for terrestrial.
	4. **At 5 GHz passive is over oceans, fyi.**
	5. **CEPT–**[**<ECC>**](https://cept.org/ecc/groups/ecc/client/introduction/) **(and general items) next call, #58 01-04mar22, hybrid/ECO/tbd**
		1.

* 1. **CEPT – ECC** [**<SE45>**](https://cept.org/ecc/groups/ecc/wg-se/se-45/client/introduction/) **next call #15, 03-04mar22, web-meeting**
	2. **CEPT – ECC** [**<WGFM>**](https://cept.org/ecc/groups/ecc/wg-fm/client/introduction/)  **next meeting #101 07-11Feb22, web or hybrid/ECO**
		1. Anything to share today?
	3. **CEPT – ECC** [**<CG-UWB>**](https://cept.org/ecc/groups/ecc/wg-fm/srdmg/cg-uwb/client/introduction/) **next meeting #4, 04Feb22**
		1. CG-UWB as part of SRDMG has prepared draft versions of the updated UWB regulation and CEPT Report to the EU commission
		2. Plan: finalize draft regulation (update of ECC Decision (06)04) and a CEPT Report for May/June WGFM meeting.
		3. Next meeting 4. February 2022
		4. Main points in draft regulation:
			1. -> Fixed outdoor usage in the band 6GHz to 8.5GHz for some application
			2. —> Indoor higher power of -31.3dBm/MHz in the band 6GHz to 8.5GHz mainly for location tracking and sensing application
			3. —> Vehicular usage in cars with -41.3dBm/MHz
		5. Link: <https://cept.org/ecc/groups/ecc/wg-fm/srdmg/cg-uwb/client/introduction/>
		6. Further planning:
			1. Updated regulation on CEPT level until end 2022
			2. Updated EU harmonized regulation end 2022/beginning 2023
	4. nice site: CEPT 6 GHz status across the countries: <https://docdb.cept.org/implementation/16737>
		1. 16dec: showing 3 -4 countries note, updating this site is very slow, beware.
1. Chair presents slide 16, **Other regions (outside EU-Stds and USA), items to share**
	1. APAC update:
	2. <https://mentor.ieee.org/802.18/dcn/22/18-22-0001-00-0000-apac-update-january-2022.pptx>
	3. Anything else to share today for other regions?
	4. **Next week could see:** 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>
		2. One point is sharing with passive services.
		3. Range target is > 275GHz, though do mention above 100GHz.
		4. UWB is looking at 100-260GHz.
	5. Anything else to share today for other regions? nothing heard
2. Chair presents slides 17, **ITU-R items to share**
	1. Anything to share? nothing heard
	2. **standing by for this spring (2022):** Additional WP 1A light communications and 2 WP 5A submissions from IEEE 802.
	3. **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. Soon, 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
	4. For miscellaneous links for ITU-R, SGs, WPs and calendars, see back up slides in agenda.
3. Chair presents slide 18, **General Discussion Items**
	1. **USA-FCC Open Commission Meeting; 27jan22-10:30 am – 12:30 pm EST, one of the topics:**
		1. Facilitating Better Use of 'White Space' Spectrum; <https://www.fcc.gov/document/facilitating-better-use-white-space-spectrum>
		2. Much on the data base operation and working with wireless microphones.
4. Chair presents slide 19, **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>
		* 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
		2. General activity picking up. will discuss next week.
		3. **13jan:** Test and Cert WG met this week, decided go forward w/path previously discussed for equipment certification – bringing devices to test labs, then field trails, then to public. Similar to CBRS/3.6 GHz equipment (not the SASs). How this will work is yet to be seen.
			1. WFA is looking to go to the cloud for the testing, not the bench. And, this is not with AFC yet.
	2. **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. General activity picking up. will discuss next week.
		3. 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. **General: 16dec: A public notice is expected in January about work needed on improving the ULS data.**
5. Chair presents slide 20, **General Discussion Items – ongoing fyi - Table of IEEE 802 Stds Frequency Ranges**
	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/21/18-21-0036-10-0000-frequency-table-template.xlsx>
	4. **From ad hoc call on 11jan22**
		1. Filled in a few spots for 802.11 and added an index column on the main tables.
		2. Moving forward have copied into a new 2022 document, <https://mentor.ieee.org/802.18/dcn/22/18-22-0009-00-0000-ieee-802-wireless-standards-table-of-frequency-ranges.xlsx>
		3. **And working on a process to get comment collection on the spreadsheet from other IEEE 802 members.**
	5. **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**
	6. **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.
	7. The **next meeting will be 22feb22.** (call-in in agenda backup slides)
6. Chair presents slide 21, Actions / AOB / Recess
	1. **Actions required:**
		* chair – start mentor epoll on May ‘22 wireless interim.
		* chair – at 02feb22 WCSC, ask about what time zone if May Wireless Interim is electronic?
	2. **AOB before recess to next Thursday, 27jan21?**
		1. Lawsuit against the FCC, could not take the 40 MHz away from ITS.
		2. DC Court of Appeals on 25jan22 – there are oral arguments.
	3. Remember, must be registered and to log attendance in **IMAT** (and participation credit available)
	4. **Recessed at 15:57 until next Thursday 27jan22, 15:00et/19:00utc**
7. Chair presents slide 22, **2nd – call - Thursday (27jan22) Agenda**
8. Chair calls the meeting to order at 15:03 et
9. Chair presents 802.18-22/0006r02, the call to order and administrative items for 2nd call of session.
	1. **Reminder we are still under all IEEE policies as shown last Thursday (20jan22)**
		1. **Attendance is on IMAT (w/VC and webex checks)**
		2. **Remember to mute when not speaking, thanks.**
		3. **Please request Q in the chat window.**
		4. Someone to take a few notes: \_Peter E.\_
		5. Attendance and request queue in chat window, Stuart K.
	2. **Routine items or from last week or new**
	3. Other Regions Items **(note: order)**
	4. **Administration items**
	5. **Discussion items**
		1. EU Items
		2. ITU-R Items w/liaisons
		3. General Discussion Items
	6. **Actions required**
		1. Anything new today
		2. ongoing: WRC-23 AI Viewpoints & Freq. table fill in
	7. **AOB**
	8. **Adjourn**
	9. **Any objections to accepting the agenda?**
		1. None heard
		2. **Results:** Approved by unanimous consent
10. **Chair presents slides 23-26, Administrative–moving forward**
	1. The ad hoc on how to do sessions long-term has some questions for 802 members. Spent just a few minutes on each. Just high-level points, anyone can send Andrew more detail.
		1. **What aspects of remote operation have worked during COVID?**
			1. Highlight real examples
			2. Identify why remote operation was successful in these cases
				1. Smaller groups like .18 normally have calls and have been able to conduct business efficiently, and not much difference from pre-covid days.
				2. For .18, we have had less conflicts that need to be worked out, therefore conference calls are easier in general.
				3. New folks have come on board and seems easier to join in for what .18 does and how it operates with calls, list server emails, and all.

Also considering, they do not have the experience of in-person sessions to compare to.

* + - * 1. For other folks, most already knew each other from (many) prior in-person sessions, so can operate well on conference calls.
	1. **What aspects of remote operation have NOT worked during COVID?** Nothing came up in the short time allowed, with focus on above.
		1. Highlight real examples
		2. Identify why remote operation was NOT successful in these cases
	2. **What could be done to turn any failures into successes?** Nothing came up in the short time allowed, with focus on above.
		1. Describe some real turnaround examples (if any)
		2. … or hypothesize about how this could be done
	3. **other inputs that came up, not fitting into above, so FYI:**
		1. EC meetings have worked well.
		2. Do other questions need to be asked, e.g. financial?
		3. Is 6 in-person meetings a year really needed?
			1. in other words, how many is needed to gain and maintain the personal connections and what is gained/needed by in-person sessions?
	4. For anyone with thoughts they might like to share, please pass on to Andrew Myles (in any form/amyles@cisco.com.)
	5. Will send to SEC for all.
	6. **For anyone with thoughts they might like to share, please pass on to Andrew Myles (in any form/****amyles@cisco.com****.)**
	7. For **March 2022 Plenary** (was Orlando)
		1. Decision point was on LMSC/EC call Tuesday/07dec21 and Plenary will stay electronic:
		2. However, contract negotiations on the March 2022 cancellation will result in a significant penalty fee not anticipated on December 7th, 2021.
		3. Registration for the March 2022 Plenary was suspended immediately until the new Fee Structure for the plenary to address the high penalty fee was determined this week at the 04jan21 LMSC/EC call.
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			4. **note:** Those individuals who had previously registered will be contacted directly by the IEEE 802 EC Executive Secretary for further instructions.
		4. Plenary info: <http://802world.org/plenary/>
		5. Face to Face Registration Website: <https://cvent.me/yG5GY2>
		6. Plenary dates to be 04-18 March (Avoids conflict with IEEE-SA Meetings March 22-24.)
			1. .18 will be our normal weekly times and call-in, Thursday’s 10th and 17th March2022.
	8. For **May 2022 Wireless Interim** – (Warsaw-tbd) – results of the straw poll:
		1. This is to help IEEE 802 WCSC on their 02feb call to determine if the May 2022 Wireless Interim should be electronic/virtual, mixed—mode or face-to-face in Warsaw, Poland (like we did before)
			1. everyone can vote being a straw poll.
	9. Note: Expectations for May and Sept 2022 registration fees (similar to pre-pandemic) :
		1. $850/$1,100/$1,350 in person (+$300 not in hotel)
		2. $950/$1450 Mixed Mode
		3. $400/600/800 Electronic **? what time zone**

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* 1. 1. If the 2022 May Wireless Interim Session is held in Warsaw, Poland as an in-person only session, will you at
		1. Yes . **14** .11; 65 .15; 30 .19; 19 .24; 5
		2. No . **14** 99 37 15 3
		3. --- abs11 (54dnv) (22dnv)

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* 1. 2. If the 2022 May Wireless Interim Session is held in Warsaw, Poland as a mixed-mode session, will you attend:
		1. 1-Attend In-person **11** .11; 55 .15; 28 .19; 16 .24; 4
		2. 2-Attend Virtually (remotely) **14** 107 37 15 4
		3. 3-Will not attend plenary **3** 13 (58dnv) 8 (17dnv) 3 0
1. **Administrative–elections in March – reminder**
	1. **LMSC P&P sections 3.1 and 4.0: 802 EC election/appointments**
		1. all 802 executive committee members are elected or appointed and confirmed at the first Plenary session of each even numbered year.
	2. **For anyone to be considered for the 802.18 Chair, Vice Chairs or the appointed positions**
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		2. 802.18 elections will be at the first 802.18 meeting of the Plenary, 10mar22.
	3. **The .18 Chair position is open;**
	4. **The .18 Vice-Chairs Stuart Kerry and Al Petrick are seeking re-election.**
	5. **All potential EC members, Chair and Vice Chairs**
		1. Please remember to submit your letters of endorsement and disclosure of affiliation to the IEEE 802 Recording Secretary, John D’Ambrosia, as soon as possible, but no later than the call to order of the March 2020 opening LMSC meeting.
		2. For Chair, Vice Chair and Secretary, you need to be a member of the IEEE SA
		3. The TAG/WG chair & vice chairs are subject to confirmation by IEEE 802 EC.
	6. **Responsibilities / expectations for all offices are in the back up slides in the agenda slide deck**
2. **Chair presents slides 27-28, 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/>
	2. Remember–BRAN documents can be found in the 802.11 private area documents (daily refresh)
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	3. **ETSI –** [<BRAN>](https://portal.etsi.org/tb.aspx?tbid=287&SubTB=287) **next call #113, 04-14feb22 (dates are set through 2024.) Many other calls also setup.**
		1. 2 more calls this wek on 5 & 6 GHz and making good progress, going thought the clauses and cleaning up inconsistencies.
			1. 5GHz still discussing 5.8 GHz in the standard.
			2. 6GHz still discussing remaining technical items, in particular client-to-client operation
			3. The co-existence report for 5.8GHz doing well.
		2. New item: funding for EC assessment for harmonized standards is a concern, is assessment required or volunteer?
		3. **20jan:** Have had 1 ad hoc on 5 & 6 GHz stds so far this year.
			1. Next Monday is a focused 6 GHz standard ad hoc, with several contributions, w/goal to have ready for #113.
			2. Client to client is the main topic to work out.
	4. **ETSI – ERM** [<TG-UWB>](https://portal.etsi.org/tb.aspx?tbid=729&SubTB=729)  **next call, meeting #60, 14-16feb22**
		1. **20jan:** Use cases documents to finish mid-year, to extend the band above, 8.5GHz to 10.6 or 12.4GHz.
		2. w/notch from 10.6 to 10.7GHz being discussed, as this is a passive band. This is for terrestrial.
	5. **CEPT–**[**<ECC>**](https://cept.org/ecc/groups/ecc/client/introduction/) **(and general items) next call, #58 01-04mar22, hybrid/ECO/tbd**
		1.

* 1. **CEPT – ECC** [**<SE45>**](https://cept.org/ecc/groups/ecc/wg-se/se-45/client/introduction/) **next call #15, 03-04mar22, web-meeting**
	2. **CEPT – ECC** [**<WGFM>**](https://cept.org/ecc/groups/ecc/wg-fm/client/introduction/)  **next meeting #101 07-11Feb22, web or hybrid/ECO**
		1. Anything to share today?
	3. **CEPT – ECC** [**<CG-UWB>**](https://cept.org/ecc/groups/ecc/wg-fm/srdmg/cg-uwb/client/introduction/) **next meeting #4, 04Feb22**
		1. **20jan:** CG-UWB as part of SRDMG has prepared draft versions of the updated UWB regulation and CEPT Report to the EU commission
			1. Plan: finalize draft regulation (update of ECC Decision (06)04) and a CEPT Report for May/June WGFM meeting.
			2. Next meeting 4. February 2022
			3. Main points in draft regulation:
				1. -> Fixed outdoor usage in the band 6GHz to 8.5GHz for some application
				2. —> Indoor higher power of -31.3dBm/MHz in the band 6GHz to 8.5GHz mainly for location tracking and sensing application
				3. —> Vehicular usage in cars with -41.3dBm/MHz
			4. Link: <https://cept.org/ecc/groups/ecc/wg-fm/srdmg/cg-uwb/client/introduction/>
			5. Further planning:
				1. Updated regulation on CEPT level until end 2022
				2. Updated EU harmonized regulation end 2022/beginning 2023
	4. nice site: CEPT 6 GHz status across the countries: <https://docdb.cept.org/implementation/16737>
		1. 16dec: showing 3 -4 countries note, updating this site is very slow, beware.
1. Chair presents slide 29 - 30, **Other regions (outside EU-Stds and USA), items to share**
	1. **Malaysia MCMC has updated the class assignment that has been effective since January 19, 2022.**
		1. Of significant change is the update of the use of 6 GHz (5925 MHz to 6425 MHz) for short range devices as shown in pages 10 and 11 of this updated assignment. (200mW eirp indoors / 25mW eirp outdoors)
		2. For details, please refer to: <https://www.mcmc.gov.my/skmmgovmy/media/General/CA-No-1-of-2022_-signed_19012022.pdf>
	2. **Canada ISED began a consultation on January 19 that asks public opinions on its proposed revision to the Table of Frequency Allocations following the outcome of the WRC-19 meeting and updated domestic requirements.**
		1. You would refer to Section 6 for the followings that I believe are of interest to us:
		2. 1)  Table 7 for a summary of proposed changes to 66~71 GHz
		3. 2)  Table 14 for a summary of proposed changes to 275~3000 GHz
		4. 3)  Tables 15 and 17 for a summary of proposed changes to 5091~5350 MHz
		5. 4)  Tables 16 and 18 for a summary of proposed changes to 5470~5725 MHz
		6. For details, please refer to: <https://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf11746.htm>
		7. <https://mentor.ieee.org/802.18/dcn/22/18-22-0012-00-0000-proposed-revisions-to-the-canadian-table-of-frequency-allocations-2022-edition.pdf>
	3. **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>
		2. Current draft response to review and approve today:
			1. <https://mentor.ieee.org/802.18/dcn/22/18-22-0011-00-0000-ofcom-thz-discussion-document-ieee802-response-docx.docx>
	4. Anything else to share today?
	5. Motion: Move to approve document <https://mentor.ieee.org/802.18/dcn/22/18-22-0011-02-0000-ofcom-thz-discussion-document-ieee802-response.docx> in response to Ofcom Unlocking the potential of Terahertz radio spectrum paper. For review and approval by the LMSC (EC) for submission to Ofcom by 28Feb22. The Chair of 802.18 is authorized to make editorial changes as necessary.
	6. **Voters: \_27\_\_\_**(w/chair)
	7. **\_33\_\_ on the call**
	8. **Moved by: Ben Rolfe (Blind Creek Assoc)**
	9. **Seconded by: Stuart Kerry (OK-Brit, self)**
	10. **Discussion? none**
	11. **Vote: \_26\_Y / \_0\_N / \_0\_A**
	12. **Motion - Passes**
2. Chair presents slides 31, **ITU-R items to share**
	1. Anything to share today? none heard
	2. **standing by for this spring (2022):** Additional WP 1A light communications and 2 WP 5A submissions from IEEE 802.
	3. **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)
			1. <https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0041PDFE.pdf>
			2. <https://mentor.ieee.org/802.18/dcn/20/18-20-0107-01-0000-res-811-wrc-19-wrc-23-agenda-items.docx>
	4. **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. 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
	5. For miscellaneous links for ITU-R, SGs, WPs and calendars, see back up slides in agenda.
3. Chair presents slide 32, **General Discussion Items - –**
	1. none
4. Chair presents slide 33, **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>
		* 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
		2. General activity picking up.
	2. **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. Has gone through interference reporting and resolution from CBRS for the history and how it has worked. What came up is a 5min Data Base vs daily Data Base.
			1. This paper shows good data and is available on the site above or at:
			2. <https://groups.wirelessinnovation.org/wg/6GHz-MSG-WS1/document/download/16868>
	3. **General: 16dec: A public notice is expected in January about work needed on improving the ULS data.**
5. Chair presents slide 34, **General Discussion Items – ongoing fyi - Table of IEEE 802 Stds Frequency Rnages**
	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/21/18-21-0036-10-0000-frequency-table-template.xlsx>
	4. **From ad hoc call on 11jan22**
		1. Filled in a few spots for 802.11 and added an index column on the main tables.
		2. Moving forward have copied into a new 2022 document, <https://mentor.ieee.org/802.18/dcn/22/18-22-0009-00-0000-ieee-802-wireless-standards-table-of-frequency-ranges.xlsx>
		3. And working on a process to get comment collection on the spreadsheet from other IEEE 802 members.
	5. **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
	6. **The next meeting will be 22feb22. (call-in in agenda backup slides**
6. Chair presents slide 35, **Actions Required**
	* **chair - email to SEC/AndrewM on the long-term meeting plans request for input, from a .18 perspective.**
	* **chair – at 02feb22 WCSC, ask about what time zone if May Wireless Interim is electronic?**

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 36 Any Other Business
	1. remember to sign into IMAT.
2. Chair presents slide 37, Adjourn.
	1. **Next “weekly” teleconference (sched’d to 19may22): 03feb22 –*15:00–<15:55* et**
		1. Call in info: <https://mentor.ieee.org/802.18/dcn/16/18-16-0038-20-0000-teleconference-call-in-info.pptx>
		2. Also, see back up slide in this agenda.
		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:
		1. Any objection to Adjourn.
		2. None heard, Adjourn at 15:53et
	4. **The IEEE 802.18 Plenary will be electronic in March 2022**
	5. **The next IEEE 802.18 Wireless Interim will be in May 2022, venue is tbd.**
	6. **Thank You**
3. Attendance

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Voting Attendees:** |  |  | **20-Jan** | **27-Jan** |
| 1 | **Au** | Edward (Kwok Shum) | Huawei Technologies Co., Ltd | **x** | **x** |
| 2 | **Berens** | Friedbert | FBConsulting Sarl | **x** |  |
| 3 | **Boldy** | David | Broadcom Corporation | **x** | **x** |
| 4 | **de Vegt** | Rolf | Qualcomm Incorporated | **x** | **x** |
| 5 | **Ecclesine** | Peter | Cisco Systems, Inc. | **x** | **x** |
| 6 | **Furuichi** | Sho | Sony Corporation | **x** | **x** |
| 7 | **Godfrey** | Tim | Electric Power Research Institute, Inc. (EPRI) | **x** |  |
| 8 | **Hiertz** | Guido | Ericsson GmbH |  | **x** |
| 9 | **Holcomb** | Jay | Itron Inc. | **x** | **x** |
| 10 | **Ikegami** | Tetsushi | Meiji University | **x** | **x** |
| 11 | **Jeffries** | Timothy | FutureWei Technologies, Inc. | **x** | **x** |
| 12 | **Jones** | Vincent Knowles IV | Qualcomm Incorporated | **x** | **x** |
| 13 | **Kain** | Carl | USDOT, Noblis, Inc. | **x** | **x** |
| 14 | **Kenney** | John | TOYOTA InfoTechnology Center U.S.A. | **x** | **x** |
| 15 | **Kerry** | Stuart | OK‐Brit, Self | **x** | **x** |
| 16 | **Lansford** | James | Qualcomm Incorporated | **x** | **x** |
| 17 | **Levy** | Joseph | InterDigital, Inc. | **x** | **x** |
| 18 | **Lynch** | Michael | MJ Lynch & Associates, LLC. | **x** | **x** |
| 19 | **Nikolich** | Paul | Self, HPE, Huawei, Wyebot, UNH BCoE, YAS BBV, Origin Wireless  | **x** |  |
| 20 | **Palm** | Stephen | Broadcom Corporation | **x** | **x** |
| 21 | **Petrick** | Al | Skyworks Solutions Inc. | **x** | **x** |
| 22 | **Pirhonen** | Riku | NXP Semiconductors | **x** | **x** |
| 23 | **Robert** | Joerg | TU-Ilmenau/Fraunhofer IIS | **x** | **x** |
| 24 | **Rolfe** | Benjamin | Blind Creek Associates | **x** | **x** |
| 25 | **Sand** | Stephan | German Aerospace Center (DLR) | **x** | **x** |
| 26 | **Sherlock** | Ian | Texas Instruments | **x** | **x** |
| 27 | **Verso** | Billy | Qorvo | **x** | **x** |
| 28 | **Wang** | Lei | FutureWei Technologies, Inc. | **x** | **x** |
| 29 | **Ward** | Lisa | Rohde & Schwarz | **x** | **x** |
| 30 | **Yaghoobi** | Hassan | Intel Corporation |  | **x** |
| 31 | **Yucek** | Tevfik | Qualcomm Incorporated | **x** | **x** |
|  |  |  |  |  |  |
| **Non-Voting Attendees:** |  |  |  |
| 1 | **Baykas** | Tuncer | Kadir Has University | **x** | **x** |
| 2 | **da Silva** | Claudio | Meta Platforms, Inc. | **x** | **x** |
| 3 | **Fang** | Yonggang | MediaTek | **x** | **x** |
| 4 | **Haasz** | Jodi | IEEE SA |  | **x** |
| 5 | **Halasz** | Dave | Morse Micro | **x** |  |
| 6 | **Hamilton** | Mark | Ruckus/CommScope | **x** |  |
| 7 | **Kasher** | Assaf | Qualcomm Incorporated | **x** | **x** |
| 8 | **Kozarev** | Aleksandra | MaxLinear | **x** |  |
| 9 | **Kürner** | Thomas | TU Braunschweig | **x** | **x** |