IEEE 802.18

Radio Regulatory-TAG

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| Radio Regulatory Technical Advisory Group Minutes |
| Date: 08jul21 |
| 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, 08jul21

Chair calls the meeting to order at 15:03et

1. Chair presents slides 2 – 6 of 802.18-21/0084r01, the call to order and administrative items
	1. Includes IEEE 802 meeting and participant’s guidelines and requirements.
2. Chair presents slides 7, the agenda:
	1. Call to Order.
		1. Attendance is not on IMAT
		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 & announcements.
	4. Discussion items
		1. EU Items
		2. Other Regions Items
		3. ITU-R Items
		4. MSGs on 6 GHz
		5. IEEE 802 Stds Table of Frequency Bands
		6. General Discussion Items
	5. Actions required.
		1.
		2. All-ongoing-WRC-23 AIs viewpoints, & restructure ext. influence
		3. Anything new today
	6. AOB and Adjourn
3. 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 from the IEEE 802.18 teleconference in document <https://mentor.ieee.org/802.18/dcn/21/18-21-0082-00-0000-minutes-01jul21-rrtag-teleconference.docx> 05-Jul-2021 20:51:09 ET with editorial privilege for the 802.18 chair.

Moved by: Al Petrick (Skyworks)

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

Discussion? None

Vote: Approved by unanimous consent

* 1. **Administrative moving forward**
		1. For **July 2021,** that wasin Madrid, Spain, the LMSC(EC) on 05Mar21 approved to cancel the in-person 802 Plenary.
		2. At the EC teleconference Tuesday (06Apr), approved electronic plenary form 09-23 July 21 dates.
		3. Also, the registration fee was approved. **$75 registration fee after 30june.** <<<just one fee for all WGs/TAGs combined
			1. registration is open: **REGISTRATION WEBSITE:**[**https://cvent.me/D5LYLq**](https://cvent.me/D5LYLq)
			2. Will add to the agenda that registration fee is required and if not paid would ask to leave the call.
			+ .chair - 11 has a slide for the plenary to remind folks of registration, chair will review and add to .18 agenda.
		4. For .18 will plan on: 15 & 22Jul21 (normal Thursday’s 1500et, looking at 2-hour slot the 22nd. )
			1. The extra hour will focus on IEEE 802 WRC-23 AIs viewpoints.
			2. Looking at other WGs/TAGs:
				1. .11: 12-20 jul 21 time slot over .18: 13:30-15:30 (11az, 11bh)
				2. .15: 13-21 jul 21 time slot over .18: 15:00-17:00 (SG4ab-NG-UWB)

* + 1. **From plenary announcement:** also per earlier discussions, this would be a great time to ask all .18 voting members to check their affiliation in the voters list on the 802.18 web site, [https://www.ieee802.org/18/RRTAG\_Voters.pdf](https://urldefense.com/v3/__https%3A/www.ieee802.org/18/RRTAG_Voters.pdf__;!!F7jv3iA!nEuOkVitFVRw_Qm9zNCzAU62sjb8Xc938eoHxAwSXpzBwUFBETuwZ3CVIdNGb8XWJQ$), and confirm their affiliation.  If an update is needed, then inform the 802.18 VC by sending an email directly to him at stuart@ok-brit.com.
	1. For **Sept 2021,** it will be an electronic Wireless Interim, with one ($50, $75, $125) registration fee for all groups.
		1. Dates are Friday 10sep to our .18 meeting on 23sep21. .18 will meet our normal Thursday’s, 16th and 23rd.
		2. Looking at a wireless opening meeting Friday 10sep21 at 0900et (similar to what was done at f2fs)
		3. From WCSC yesterday (7th): $50 – 14jul-27aug; $75 – 28aug-09sep; $125 >09sep;
		4. The 802 level meetings and .19 will require Webex registration ahead of time. Experimenting with fee required to attend.
			1. What is lead time to register? what is the process /screens?
		5. Sept (and July (now)) Chairs of all WG/TAGs are to report all attendees to meetings to compare against who paid fees.
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/**](https://www.etsi.org/deliver/etsi_en/)
	2. **Remember – BRAN documents can be found in the 802.11 private area documents (daily refresh)**
	3. **Is the EC 6 GHz Decision on the OJEU yet? yes**
		1. [**https://mentor.ieee.org/802.18/dcn/21/18-21-0083-00-0000-european-commission-decision-eu-2021-1067-for-6ghz-in-ojeu.pdf**](https://mentor.ieee.org/802.18/dcn/21/18-21-0083-00-0000-european-commission-decision-eu-2021-1067-for-6ghz-in-ojeu.pdf)
	4. **ETSI –** [**<BRAN>**](https://portal.etsi.org/tb.aspx?tbid=287&SubTB=287) **next meeting #111 27sep-01oct21**

 **ad hocs #110a-f; 05aug; 09, 01,02,06,07sep21**

* + 1. nothing shared.
		2. 24ju: For those with an ETSI account or access to .11 private area there is a clean next draft of the 6 GHz standard, (and the 5GHz clean draft will also be there.)
			- 1. [BRAN(21)110053r1 - Clean proposal for EN 303 687 v0.0.13](https://portal.etsi.org/LoginRedirection.aspx?ReturnUrl=%2fngppapp%2fContributionCreation.aspx%3fprimarykeys%3d227862)
			1. CDC and test of CDC document still being worked, RFC 5985, HART. Will be an Annex B in the 5 GHz standard.
			2. In the 6 GHz Standard CDC will be in Note tables. **Note the differences of 5GHz and 6GHz docs and philosophies.**
			3. Later input: ad hocs 01,02,06sept21 on 6GHz EN 303 867; and 07sep21 on White Space Devices EN 301 598
			4. EN 301 893 (5 GHz), EN 303 687 (6 GHz), User Access Restrictions (UAR), Country Determination Capability (CDC)
	1. **Note:** message from CEPT president, that looking at allowing some physical face-2-face meetings sometime after 01sept but have to allow remote attendees so a hybrid. and the face2face portion will have restrictions.
	2. **CEPT – ECC** [**<WGSE>**](https://cept.org/ecc/groups/ecc/wg-se/client/introduction/) **next call #89 27Sep-01Oct21**
	3. **CEPT – ECC** [**<SE45>**](https://cept.org/ecc/groups/ecc/wg-se/se-45/client/introduction/) **next call #14 28-29oct21**
		1. nothing was shared.
		2. 03jun: The group started 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.
	4. **CEPT – ECC** [**<WGFM>**](https://cept.org/ecc/groups/ecc/wg-fm/client/introduction/) **next call #100, 04-08Oct21**
		1. nothing was shared.
		2. 03jun: WGFM approved for public consultation, a new draft ECC Report on 5.8 GHz RLAN and a draft new ECC Report on digitising Maritime VHF communications. The meeting also agreed the public consultation of a new ECC Decision on HD GB-SAR and a new ECC Decision on FSS uplink in Q&V bands. Additionally, there were several amendments agreed for public consultation to Recommendations for SRD and FRMCS.
		3. Approved by WG FM for public consultation
			1. Draft new ECC Report on RLAN at 5.8 GHz
			2. Draft revision of ERC/REC 70-03 Annex – several
		4. To be approved by the ECC for publication
			1. Draft revision of ECC/DEC/(04)08 on RLAN at 5 GHz
			2. Draft CEPT Report 79 on RLAN at 5 GHz
	5. **CEPT – ECC** [**<FM57>**](https://cept.org/ecc/groups/ecc/wg-fm/fm-57/client/introduction/) **next call #16 14-15Sep21**
		1. nothing was shared.
		2. 17jun: New rapporteur from France, this will affect style and substance.
			+ 1. FAUSSURIER Emmanuel via Fm-57 <fm-57@list.cept.org>
			1. Side item UK is out now and FM57 (and other groups) working through that.
1. Chair presents slide 12, **Other regions (outside EU-Stds and USA), items to share**
	1. nothing shared
	2. **Reminders from before:**
		1. **Saudi Arabia – CITC - here is the consultation, 21/0074, we were watching out for**
			1. CITC web site:  <https://www.citc.gov.sa/en/new/publicConsultation/Pages/144207.aspx>
			2. mentor:   [https://mentor.ieee.org/802.18/dcn/21/18-21-0074-00-0000-saudi-arabia-radio-spectrum-allocation-and-use-regulation-for-wlan-applications.docx](https://urldefense.com/v3/__https%3A/mentor.ieee.org/802.18/dcn/21/18-21-0074-00-0000-saudi-arabia-radio-spectrum-allocation-and-use-regulation-for-wlan-applications.docx__;!!F7jv3iA!ihonf3szuXi8klzcD8lPdP8QvhvjngLH23vpHlhWdH17kAzWtKhvz9m880QjGhCgsg$)
			3. **Views/comments can be submitted by 07aug21** to (Spectrum.Strategy@citc.gov.sa).
			4. The Communications and Information Technology Commission (CITC) published a public consultation on “Radio Spectrum Allocation and Use Regulation for WLAN Applications”.
			5. The document introduces updates to the allocation and use regulations of the WLAN frequency bands in Saudi Arabia and identifies new spectrum for the use of WLAN applications in (6) and (60) GHz bands. These updates aim to enable the latest wireless technologies in the Kingdom which include the sixth generation of Wi-Fi technologies (WiFi - 6e), WiGig technology, virtual and augmented reality (VR / AR) and Internet of Things (IoT).
		2. Canada – ISED – is seeking comments on: RSS-248, issue 1, “Radio Local Area Network (RLAN) Devices in the 5925-7125 MHz band” which sets out the certification requirements for licence-exempt low-power RLAN devices operating indoors in the frequency band 5 925 - 7 125 MHz. **Comments due 16 Aug 21**.
			1. <https://www.rabc-cccr.ca/ised-radio-standards-specifications-rss-248-issue-1-june-2021-draft-radio-local-area-network-rlan-devices-in-the-5925-7125-mhz-band/>
			2. <https://mentor.ieee.org/802.18/dcn/21/18-21-0070-00-0000-canadian-6-ghz-consultation-rss-248.pdf>
2. Chair presents slide 13, **ITU-R items to share**
	1. **There is a LS from WP5D regarding the update of Recommendation M.2012 to Rev. 6.**
		1. This liaison provides guidance on the revision procedure and the detailed step-by-step schedule to External Organizations regarding updates of the terrestrial radio interfaces in the development of Revision 6 of Recommendation ITU-R M.2012 – *Detailed specifications of the terrestrial radio interfaces of International Mobile Telecommunications-Advanced (IMT-Advanced).*
		2. Schedule: For the Revision 6 of Recommendation ITU-R M.2012 a completion date of the WP 5D meeting #44, currently planned for June 2023, has been chosen.
		3. <https://mentor.ieee.org/802.18/dcn/21/18-21-0086-00-0000-ls-for-updating-itu-r-m-2012-to-rev-6.docx>
	2. **Standing by: ITU-R WP 1A LS to IEEE and IEC -** Request for information on standards referenced in the working document towards a preliminary draft new Recommendation, on Optical Wireless Communications.
		1. Report ITU-R SM.2422 and IEEE Std 802.15.7-2011 on “Short Range Wireless Optical Communication Using Visible Light are mentioned.
		2. There next e-meeting is 03-12nov21
		3. On Mentor: <https://mentor.ieee.org/802.18/dcn/21/18-21-0080-00-0000-request-for-information-itu-r-wp-1a.docx>
		4. 802.11bb will work on some draft text and bring to .18;
		5. Will also check with .15 what they want to do and then need to compare .11 and .15 inputs.
	3. IEEE 802 viewpoints on WRC-23 agenda items. **ad hoc: 5 folks stepped up. Are there any others to help?**
		1. Doc for viewpoints: <https://mentor.ieee.org/802.18/dcn/21/18-21-0039-00-0000-ieee-802-viewpoints-on-wrc-23-agenda-items.pptx>
		2. **Next discussions will be during July 2021 electronic plenary**.
		3. Depending on what we want to do with viewpoints, need to work with IEEE staff if sending to ITU-R. Has to be filed by IEEE-USA or by individual companies. Not to be filed by IEEE-SA.
		4. Reference:
		5. Key item was to review what we can on responses to consultations many countries are doing on topics related to WRC-23 AIs, e.g. on 6 GHz that is included in AI 1.2
		6. Though this process could work for other Agenda Items that maybe of interest to us also.
			1. It does seem the Arab states are engaging quicker than other regions, e.g. on 6 GHz.
			2. Oman has a consultation out on Wi-Fi 6;
				1. <https://www.tra.gov.om/En/ViewPublicConsultations.jsp?code=33>
			3. FCC WAC has a *preliminary* view on AI 1.2, we should look at this.
				1. <https://www.fcc.gov/us-contributions-sent-citel-pccii-wrc-23>
			4. Don’t forget the actual ITU-R WPs will be working AIs they have.
		7. Reference:
			1. Updated WRC-23 Agenda Item list: [https://mentor.ieee.org/802.18/dcn/20/18-20-0107-01-0000-res-811-wrc-19-wrc-23-agenda-items.docx](https://mentor.ieee.org/802.18/dcn/20/18-20-0107-00-0000-res-811-wrc-19-wrc-23-agenda-items.docx)
			2. 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
3. Chair presents slide 14, **MSG 6 GHz**
	1. **The WInnforum “6 GHz Committee”, all groups meet every 2 weeks except interference-weekly (168people)**
		* 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. New org: 2 (now) focus areas:
			1. 1) AFC Functional Specification -WG – includes: Interference-TG, Incumbent Info-TG, security (new) and Protocols 3GPP-TG
			2. 2) AFC Test and Certification-WG
		2. GITHUB is up with data from mid-June ULS, for others to work on their processes.
		3. The data base will continue to enhanced with things like terrain models. etc.
		* Chair add notes back in for plenary, from last week.
	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.
			5. nothing was shared.
4. Chair presents slide 15, **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/21/18-21-0036-06-0000-frequency-table-template.xlsx>
	4. 22june ad hoc: some updates to the spreadsheet:
		1. The caption of Amendment Column has been changed to: PHY Amendment (Date of Initial Approval)
		2. The caption of Clause number Column has been changed to: Clause Number in the Current Standard
		3. There are now four possible entries in Status Column Project, Approved, Published, Integrated
		4. Set an initial trigger point, 30 days after a Standard Boards meeting, for maintenance/update of the table. This should be 4 times per year and will fine tune the process as needed.
		5. Also discussed the future consideration of frequency range applications and regulatory authorizations. Then added some columns on the Freq-Ranges-Other-Info worksheet, Application(s), Country/Region, Regulatory Authorization
			1. Will use frequency range to tie the Standards-Frequency-Ranges to the Freq-Ranges-Other-Info worksheets.
			2. Both worksheets can be sorted by any column and can have Applications as column A in the Other worksheet for the ongoing effort.
			3. It was brought up regulators have a 5-year roadmap on spectrum in their region and international interest and put them out for consultation. Their plans may include, high/low bands, changes and reflect activities in ITU-R and others. The plan is based on services: public safety, cellular, digital divide etc.
				1. Finding a range of applications and services is the optimal way to **define new bands** vs starting with a frequency. In the Freq-Ranges-Other-Info worksheet, the starting point should be applications not frequency band. For example, one country alone could have issues with wireless broadband access, short range devices etc.
				2. This is setting the effort up for after we find all the frequency ranges in the standard’s today.
	5. The next meeting will be **next week 27jul21.** (call-in in backup slides here)
5. Chair presents slides 16, **General Discussion – any feedback?**
	1. **FCC NPRM on 60GHz coming:** The FCC tentative agenda for the July open meeting has an NPRM on 60 GHz, see the Radar Sensing Technology in the list on: <https://www.fcc.gov/document/fcc-announces-tentative-agenda-july-open-meeting-8>
		1. Allowing Expanded Flexibility and Opportunities for Radar Operation in the 57-64 GHz band
			1. Notice of Proposed Rulemaking – ET Docket No. 21-264 <https://docs.fcc.gov/public/attachments/DOC-373482A1.pdf>
		2. <https://mentor.ieee.org/802.18/dcn/21/18-21-0079-00-0000-fcc-nprm-allowing-expanded-flexibility-for-radar-operation-in-57-64-ghz-band.docx> 44 comments
		3. Background: Section 15.255 of the Commission’s rules sets forth the operational policies and technical parameters for unlicensed device operation in the 57-71 GHz band. Unlicensed devices that operate here generally include indoor/outdoor communication devices such as WiGig wireless local area networking (WLAN) devices and outdoor fixed point-to-point communication links, as well as field disturbance sensors (FDS) (e.g., radar devices) that are used in fixed applications or operate on a mobile basis but are restricted to short-range interactive motion sensor (SRIMS) use.
		4. Recent technological advancements for FDS/radar devices has led to increased demand for unlicensed mobile radar operations in the 57-64 GHz portion of the band. However, FDS/radar deployment to date is limited because the current rules limit the power limit to 30 dB below that of unlicensed communication devices in the band and restrict mobile operation to SRIMS applications. The Office of Engineering and Technology previously granted waivers to Google in 2018 and to a number of parties in early 2021 to operate mobile radars at higher power than permitted in the rules, but only in specific, narrowly defined situations. Moreover, in its January 14, 2021 meeting, the FCC’s Technology Advisory Committee recommended that the Commission initiate a rulemaking proceeding to take a comprehensive review of unlicensed use under Section 15.255; other interested parties have also encouraged this approach.
		5. Will monitor until the July open meeting, though if anyone wants us to consider comments, please send some text along to get started.
	2. **FCC NPRM for Wireless Microphones: TV Bands, 600 MHz Guard Band, 600 MHz Duplex Gap, and the 941.5-944 MHz, 944-952 MHz, 952.850-956.250 MHz, 956.45-959.85 MHz,** 1435-1525 MHz, **6875-6900 MHz and 7100-7125 MHz Bands**
		1. **FR Document:** [2021-10716](https://urldefense.com/v3/__https%3A/www.federalregister.gov/documents/2021/07/01/2021-10716/wireless-microphones-in-the-tv-bands-600-mhz-guard-band-600-mhz-duplex-gap-and-the-9415-944-mhz?utm_source=federalregister.gov&utm_medium=email&utm_campaign=subscription*mailing*list__;Kys!!F7jv3iA!j87MsttnSpmKFqGfoadDmPUhrBzJed2NK7q_uNXa2NLBjWF_ciMxm-zV9QhcdNn8aQ$); **Citation:** 86 FR 35046; [PDF](https://urldefense.com/v3/__https%3A/www.govinfo.gov/content/pkg/FR-2021-07-01/pdf/2021-10716.pdf?utm_campaign=subscription*mailing*list&utm_source=federalregister.gov&utm_medium=email__;Kys!!F7jv3iA!j87MsttnSpmKFqGfoadDmPUhrBzJed2NK7q_uNXa2NLBjWF_ciMxm-zV9QjDsurfdA$)Pages 35046-35058 *(13 pages);* [Permalink](https://urldefense.com/v3/__https%3A/www.federalregister.gov/d/2021-10716?utm_medium=email&utm_campaign=subscription*mailing*list&utm_source=federalregister.gov__;Kys!!F7jv3iA!j87MsttnSpmKFqGfoadDmPUhrBzJed2NK7q_uNXa2NLBjWF_ciMxm-zV9QjeioLFkA$)
		2. Comments are due **August 2, 2021.** Reply comments are due August 30, 2021.
		3. **Abstract:** In this document, the Commission aims to enhance the spectral efficiency of wireless microphones by permitting a recently developed type of wireless microphone system, termed herein as a Wireless Multi-Channel Audio System (WMAS), to operate in certain frequency bands. This emerging technology would enable more wireless microphones to operate in the spectrum available for wireless microphone operations, and thus advances an important Commission goal of promoting efficient spectrum use. The Commission proposes to revise the applicable technical rules for operation of low-power auxiliary station (LPAS) devices to permit WMAS to operate in the broadcast television (TV) bands and other LPAS frequency bands on a licensed basis. The Commission also proposes to update the existing LPAS and wireless microphone rules to reflect the end of the post-Incentive auction transition period and update references to international wireless microphone standards.
		4. If anyone wants us to consider comments, please send some text along to get started, we would need to approve by 15july.
6. Chair presents slide 17, **Actions required.**
	* chair – add link to OJEU and upload to mentor the decision
	* chair – plenary agenda add 1) review affiliation on voters list (.18 web site) and let VC know if changes are needed. 2) reminder registration fee is required for the plenary.
* chair - add WIinnforum notes from last week for plenary agenda and its additional attendees.
* chair - review slide form .11 on fee reminder for RR-TAG agenda.
	+ All – input for a table of countries implementing 6GHz and a brief summary of their rules, consultations, etc.
		1. Note: seems this been Overcome By Events. After some review, not seeing the output will be that beneficial for effort.
		2. Okay to drop, at least for now? **yes, drop for now.**
	+ All – ongoing – bring to RR-TAG info they hear, e.g. different country consultations, on the WRC-23 AIs we are interested in.
1. Chair presents slide 18 Any Other Business
	1. none heard
2. Chair presents slide 19, Adjourn.
	1. Next “weekly” teleconference (sched’d to 02sep21): **05Aug –*15:00–<15:55* et –**

**{no call on 29july}**

* + 1. Call in info: <https://mentor.ieee.org/802.18/dcn/16/18-16-0038-18-0000-teleconference-call-in-info.pptx>
			1. Also, see back up slide in this agenda.
		2. All late changes/cancellations will be sent out to the 802.18 list server.
		3. **Next 2 weeks are the plenary – same call-in (and basic agenda) as weeklies.**
	1. Overall IEEE 802 schedule: <http://ieee802.org/802tele_calendar.html>
	2. **Adjourn:**
		1. Any objection to Adjourn.
		2. None heard, Adjourn at 15:36et
* **The next face to face meeting is tbd.**
* **The next IEEE 802.18 (wireless) interim will be electronic in Sept 2021**
* **Thank You**
1. Attendance

Voting members:

|  |  |  |
| --- | --- | --- |
| **Auluck** | Vijay | Self |
| **Ecclesine** | Peter | Cisco Systems, Inc. |
| **Holcomb** | Jay | Itron Inc. |
| **Jeffries** | Timothy | FutureWei Technologies, Inc. |
| **Kerry** | Stuart | OK‐Brit, Self |
| **Levy** | Joseph | InterDigital, Inc. |
| **Petrick** | Al | Skyworks Solutions Inc. |
| **Rolfe** | Benjamin | Blind Creek Associates |
| **Yaghoobi** | Hassan | Intel Corporation |
| **Yucek** | Tevfik | Qualcomm |