IEEE 802.18

Radio Regulatory-TAG

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| Radio Regulatory Technical Advisory Group Minutes |
| Date: 17jun21 |
| 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, 17jun21

Chair calls the meeting to order at 15:02et

1. Chair presents slides 2 – 6 of 802.18-21/0072r01, 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
		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: Hassan Yaghoobi (Intel)

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/21/18-21-0068-00-0000-minutes-10jun21-rrtag-teleconference.docx> 14-Jun-2021 16:14:35 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 was in Madrid, Spain, the LMSC(EC) on 05Mar21 **approved to cancel the in-person 802 Plenary.**
			1. At the EC teleconference Tuesday (06Apr), approved 09-23 July 21 dates.
			2. Also the registration fee was approved. The plan:
			3. $50 – till 30June $75 registration fee after 30june. **<<<<** just one fee for all WGs/TAGs combined
			4. registration is open: **REGISTRATION WEBSITE:**[**https://cvent.me/D5LYLq**](https://cvent.me/D5LYLq)
			5. reminder sent on 28june (2 days, before fee increases) and on 30june last day before fee increases.
			6. reminder sent on 05 july – notifying of $75 fee started 01july
			7. For .18 will plan on: 15 & 22Jul21 (normal Thursday’s 1500et, looking at 2 hour slot the 22nd. )
				1. Do not want to overlap with .19 with the 2 hr slot.
				2. The extra hour will focus on IEEE 802 WRC-23 AIs viewpoints
				3. Looking at other WGs/TAGs:

.11: 12-20 jul 21 time slot over .18: 13:30-15:30 (times from May interim)

.15: 13-21 jul 21 time slot over .18: 15:00-17:00 (times from May interim)

.19: tbc: 12th 4et mon & 15th 4et thurs is the normal times

.24: tbc wed 10:30et, normal time, though which wed?

* + 1. For **Sept 2021,** it will be an electronic Wireless Interim, with a ($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)
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. **The EC 6 GHz Decision was officially approved at 10 a.m. CET today (17th), the OJEU (Official Journal of the European Union) will publish the EC decision making implementation mandatory in 27 countries (including Russia) by year end 2021.**
		1. <https://circabc.europa.eu/sd/a/fc782b77-e02f-4022-aaa0-cc305b42a575/RSCOM20-42%28final%29%206%20GHz%20RLAN.docx>
	4. **ETSI –** [**<BRAN>**](https://portal.etsi.org/tb.aspx?tbid=287&SubTB=287) **next call #110 18-25jun21**
		1. New very full agenda is coming, start election of ETSI BRAN chair in this meeting. Current Chair started mid-term due to retirement of previous chair.
		2. 5, 6, 60 GHz, papers, with CDC in the 5.8GHz band,
		3. 6 Ghz new paper on client to client communications
		4. Then input on multi-AP systems consumer use (“home mesh”, not the typical mesh, nor multiple-APs feeding a single STA. stay tuned for better detail) (4 contributions). The document is TS 103 754.
			1. BRAN is calling the Mesh AP work: "BRAN MAP Performance testing" ("BRAN Multiple Access Points Performance Testing") - WI: DTS/BRAN-230027.
			2. Once announced, does that affect going through notified bodies?
				1. They are independents IMs. Anything on the market goes through ECC. ECC tasked ETSI to write a harmonized standard for the band. The documents are almost identical expect for clause 3 of the EU decision. It states any other services operating in the band, must consider the operating characteristics of RLANs.
			3. Remember the UK is not in the EU or EC anymore.
		5. 10jun: BRAN-EN 303 687 rapporteur's meeting #3 regarding NB FH, meeting tomorrow (11jun), to set up for plenary next week. Seems to be a difference of opinion on LDT (Local Descriptor Table), DAA (Detect-and-Avoid) and others. Would like consensus before the plenary. 6 contributions: <https://portal.etsi.org/Contribution.aspx?MeetingId=41975>
		6. EN 301 893 (5 GHz), EN 303 687 (6 GHz), User Access Restrictions (UAR), Country Determination Capability
	5. **CEPT – ECC** [**<WGSE>**](https://cept.org/ecc/groups/ecc/wg-se/client/introduction/) **next call #89 27Sep-01Oct21**
	6. **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.
	7. **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
	8. **CEPT – ECC** [**<FM57>**](https://cept.org/ecc/groups/ecc/wg-fm/fm-57/client/introduction/) **next call #16 12-13Jul21 (provisional)**
		1. New rapporteur from France, this will affect style and substance.
			1. FAUSSURIER Emmanuel via Fm-57 <fm-57@list.cept.org>
		2. Side item UK is out now and FM57 (and other groups) working through that.
2. Chair presents slides 12-13, **Other regions (outside EU-Stds and USA), items to share**

* 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).
		6. **Mexico consultation has delayed the close, either a 10, 20 or 30 days. 30 days would be 05August.**
			1. Mexico – IFT – Public Consultation on the Preliminary Draft Agreement whereby which the plenary of the Federal Telecommunications Institute classifies the frequency band 5925-7125 MHz as a free spectrum and issues the technical operating conditions of the band
				1. Rules for LPI over 1200MHz; VLP is also across the 1200 MHz, not like USA.
				2. Link to Mexico IFC website announcement and document links: (in Spanish). Was to close 24 June.
				3. [Consulta Pública sobre el Anteproyecto de Acuerdo mediante el cual el Pleno del Instituto Federal de Telecomunicaciones clasifica la banda de frecuencias 5925-7125 MHz como espectro libre y emite las condiciones técnicas de operación de la banda | Instituto Federal de Telecomunicaciones – IFT](http://www.ift.org.mx/industria/consultas-publicas/consulta-publica-sobre-el-anteproyecto-de-acuerdo-mediante-el-cual-el-pleno-del-instituto-federal-de-9)
			2. Next week (24th) may have more on Mexico. and what the delay will be, they are to decide on the 23rd.
	2. **Reminders from before:**
	3. NZ – RSM – has a consultation regarding their spectrum plan for future use of 5925 - 7125 MHz
		1. <https://www.rsm.govt.nz/projects-and-auctions/consultations/planning-for-wlan-use-in-the-6-ghz-band/>
		2. <https://mentor.ieee.org/802.18/dcn/21/18-21-0069-00-0000-rsm-nz-wlan-use-in-the-6-ghz-band-discussion-document.docx>
		3. Initially, RSM proposes to make the bottom 500 MHz of the 6 GHz frequency band (5925 - 6425 MHz) available for WLAN use.
		4. 24 dBm (11 dBm/MHz) for indoor use only
		5. 14 dBm (1 dBm/MHz) for all locations (includes user devices, outdoor access points)
		6. RSM are also considering radio licensing or an AFC based approach to allow higher output power.
		7. comments can be submitted to Radio.Spectrum@mbie.govt.nz with the subject line “Consultation Submission - WLAN use in the 6 GHz band”. **Submissions due: 28 June 2021, 5:00pm**
	4. Brazil – ANATEL – also has a consultation to update the testing procedures due to the updates in the technical requirements in the past year or two, It does include 6GHz and the ITS band.
		1. **It is Portuguese and will end 05aug21.**
	5. 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>
1. Chair presents slide 14, **ITU-R items to share**
	1. FCC - World Radiocommunication Conference Advisory Committee; Informal Working Groups
		1. The fourth meeting of WAC will be held on Tuesday, September 28, 2021 at 11:00 a.m. (et)
		2. <https://www.fcc.gov/document/wrc-advisory-committee-schedules-4th-meeting-and-meetings-its-iwg>
		3. <https://mentor.ieee.org/802.18/dcn/21/18-21-0071-00-0000-fcc-wrc-23-wac-schedules-4th-meeting-and-meetings-of-its-iwg.docx>
		4. Public Notice was sent out before asking for interested parties to fill out an application to become a voting participants. Maybe Contact: Dante Ibarra at (202) 418-0610, email: Dante.Ibarra@fcc.gov, if we want to be a member.
		5. Though, open for all to listen in and send in live questions, though must be on the committee to vote.
		6. **WAC Web site:** [**https://www.fcc.gov/wrc-23**](https://www.fcc.gov/wrc-23)
		7. **To subscribe to iwg1, iwg2, iwg3, iwg4 or wac23 see:** [**https://www.fcc.gov/wrc-23-advisory-committee-listserve-0**](https://www.fcc.gov/wrc-23-advisory-committee-listserve-0)
		8. iwg2 is the terrestrial services and they cover wireless
	2. **802.11 ITU AHG – contributions to WP 5A on M.1450 and M.1801.**
		1. There were 2 contributions on updates for these recommendations at there meeting today , 17jun21. They are in response to the formal liaison status that was published for WP 5A, asking for comments on the recommendations.
		2. The content of documents is similar to what was submitted in the last 2 rounds. Minor changes: Update text to reflect IEEE 802.11ay-2021 publication, along with other minor text changes. WP 5A knows most of the updates. Therefore, additional contributions to the Liaison are not needed.
		3. Next ITU AHG call will be during 12-19July plenary, with goal to finalize these 2 contribution updates.
		4. Plan is like last year; approve in .11 ITU AHG and WG, then to .18 and EC over the next few months. Then to WP 5A in time for their 15-26 November. 2021 meeting.
		5. 802.11 WG Chair: IEEE 802.11ay-2021 --approved by the IEEE – SA board. Publication expected -- July 2021.
	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. Reference:
		4. 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
		5. 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.
		6. 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
2. Chair presents slide 15, **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. On 09June 3GPP-TG was replaced by a protocol group. more to come on specific tasks, though starting with,
			1. Protocols TG will be focused on Incumbent to AFC and AFC/AFC communications.
			2. The Protocols TG leadership will determine the work projects. The leadership of this group is from CBRS.
		3. before: WinnForum and Wi-Fi Alliance deepening the cooperation between the groups.
	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. **WS1 still the most active on interference and will be picking up soon more effort.**
			1. Majority of activities come out of MSG WS#1 – 802.24 chair can share details of the activities. WS#1 completed a detailed test report of 6 GHz RLANs and Southern Communications. Currently reviewing interference test results for interested government parties interested in AFC. WS#1 expecting activities expected to take on additional work activities very soon.
			2. 27may: WS1 is working on a final report and looking for contributions for the final report.
				1. There is no firm date to finish up but trying to get to done
3. Chair presents slide 16, **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/21/18-21-0036-04-0000-frequency-table-template.xlsx>
	4. 03jun: Some emails working on Status of the standard/amendment of: Published, Approved, Project, and other emails on 802.11 specifics.
		1. <https://mentor.ieee.org/802.18/dcn/21/18-21-0064-00-0000-frequency-table-input-802-11-phys.xlsx>
	5. 27may: From last ad hoc, most all captured in rev05 if the spreadsheet. Some highlights:
		1. Some highlights:
			1. There will be multiple rows for a given frequency range, one for each standard/amendment.
			2. Adding the year to the standard and the amendment was worked through and is leading to the approved date, not the published date. (the date on the cover page.)
			3. Also, a discussion on the Standard or Project column, what about if approved but not published yet, that should be noted. Also, should pre-Par amendments be lists, or study groups. Maybe this is a status column? Will review this further.
		2. Also reviewed a 2nd spreadsheet with 802.11 clauses with frequencies for setting for the actual frequency ranges:
			1. <https://mentor.ieee.org/802.18/dcn/21/18-21-0064-00-0000-frequency-table-input-802-11-phys.xlsx>
	6. The next meeting will be **next week 22jun21.** (call-in in backup slides here)
4. Chair presents slides 17, **General Discussion.**
	1. **FCC Proposed Rules** - **Allocation of Spectrum for Non-Federal Space Launch Operations**
		1. **FR Document:** [2021-11063](https://urldefense.com/v3/__https%3A/www.federalregister.gov/documents/2021/06/10/2021-11063/allocation-of-spectrum-for-non-federal-space-launch-operations?utm_campaign=subscription*mailing*list&utm_source=federalregister.gov&utm_medium=email__;Kys!!F7jv3iA!kxFpaFesaLb0jtRneMv9R1lRJzXIeSiFxtOtrOKdDFxygjYmK9myrwzxuHZCA_6D9g$); **Citation:** 86 FR 30860; [PDF](https://urldefense.com/v3/__https%3A/www.govinfo.gov/content/pkg/FR-2021-06-10/pdf/2021-11063.pdf?utm_campaign=subscription*mailing*list&utm_source=federalregister.gov&utm_medium=email__;Kys!!F7jv3iA!kxFpaFesaLb0jtRneMv9R1lRJzXIeSiFxtOtrOKdDFxygjYmK9myrwzxuHZCkZFdWA$)Pages 30860-30887 *(28 pages);* [Permalink](https://urldefense.com/v3/__https%3A/www.federalregister.gov/d/2021-11063?utm_campaign=subscription*mailing*list&utm_source=federalregister.gov&utm_medium=email__;Kys!!F7jv3iA!kxFpaFesaLb0jtRneMv9R1lRJzXIeSiFxtOtrOKdDFxygjYmK9myrwzxuHauU-4wzA$)
		2. Abstract: In this document, the Federal Communications Commission (Commission) takes steps towards establishing a spectrum allocation and licensing framework that will provide regulatory certainty and improved efficiency and that will promote innovation and investment in the United States commercial space launch industry. In the Further Notice of Proposed Rulemaking, the Commission seeks comment on the definition of space launch operations, the potential allocation of spectrum for the commercial space launch industry, including the 420-430 MHz, 2025-2110 MHz, **and 5650-5925 MHz bands.** In addition, the Commission seeks comment on establishing service rules, including licensing and technical rules and coordination procedures, for the use of spectrum for commercial space launch operations. Finally, the Commission seeks to refresh the record on potential ways to facilitate Federal use of commercial satellite services in what are currently non-Federal satellite bands and enable more robust federal use of the 399.9-400.05 MHz band.
		3. Comments are due on or before July 12, 2021; reply comments are due on or before August 9, 2021.
		4. Chair figure latest time for comments to FCC- NPRM on space launch operations:
		5. If .18 approved by 24June, could do an EC motion. (To wait till 01Jul meeting, would need EC early close.)
5. Chair presents slide 18, **Actions required.**
	* nothing specific today
	* All – input for a table of countries implementing 6GHz and a brief summary of their rules, consultations, etc.
	* All – ongoing – bring to RR-TAG info they hear, e.g. different country consultations, on the WRC-23 AIs we are interested in.
6. Chair presents slide 19 Any Other Business
	1. nothing brought up
7. Chair presents slide 20, Adjourn.
	1. Next “weekly” teleconference (sched’d to 02sep21): 24jun21–*15:00–<15:55* ET
		1. Call in info: <https://mentor.ieee.org/802.18/dcn/16/18-16-0038-17-0000-teleconference-call-in-info.pptx> (new call-in starting 14Jan21)
			1. Also, see back up slide in this agenda.
		2. 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>
	3. Adjourn:
		1. Any objection to Adjourn.
		2. None heard, Adjourn at 15:40et
* **The next face to face meeting is tbd.**
* **The next IEEE 802 plenary will be electronic in July 2021**
* **The next IEEE 802.18 (wireless) interim will be electronic in Sept 2021**
* **Thank You**
1. Attendance

Voting members:

Boldy David Broadcom Corporation

Ecclesine Peter Cisco Systems, Inc.

Holcomb Jay Itron Inc.

Jeffries Timothy FutureWei Technologies, Inc.

Kain Carl USDOT, Noblis, Inc.

Kerry Stuart OK‐Brit, Self

Levy Joseph InterDigital, Inc.

Lynch Michael MJ Lynch & Associates, LLC.

Nikolich Paul Self, HPE, Huawei, Wyebot, UNH BCoE, YAS BBV, Origin Wireless

Petrick Al Skyworks Solutions Inc.

Rolfe Benjamin Blind Creek Associates

Stanley Dorothy Hewlett Packard Enterprise

Verso Billy Qorvo

Yaghoobi Hassan Intel Corporation

Non-Voting

Kennedy Richard Self