IEEE 802.18

Radio Regulatory-TAG

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| Radio Regulatory Technical Advisory Group Minutes | | | |
| Date: 24feb22 | | | |
| 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)](mailto:stuart@ok-brit.com) and [Al Petrick (Skyworks Solutions)](mailto:apetrick@ieee.org)

* 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, 24feb22

1. Chair calls the meeting to order at 15:03 et
2. Chair presents slides 2 – 6 of 802.18-22/0023r01, the call to order and administrative items
   1. Includes IEEE 802 meeting and participant’s guidelines and requirements.
3. Chair presents slides 7, 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 then administration items
   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 - 10 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 in document <https://mentor.ieee.org/802.18/dcn/22/18-22-0016-00-0000-minutes-10feb22-rrtag-teleconference.docx> 13-Feb-2022 19:27:49 ET, with editorial privilege for the 802.18 chair.

Moved by: Edward Au (Huawei)

Seconded by: Al Petrick (Skyworks)

Discussion? None

Vote: Approved by unanimous consent

* 1. For next week: in ieee-policies.pdf 9.21 formal date format to be:
     1. e-mail: DD MMM YYY (10 Jun 2020)
     2. correspondence: DD Month YYYY (10 June 2020)
     3. for computer yyyy-mm-dd (2020-06-10).
  2. **Administrative moving forward** 
     1. 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 28~~~~th~~~~})~~
           2. $**600 until Friday, February 25, 2022 UTC – 19:00et/16:00pt**

**refundable w/cancellation fee. January 28th to February 25th)**

* + - * 1. $800 after Friday, February 25, 2022 (non-refundable. {after February 25th})
        2. **note:** Those individuals who had previously registered will be contacted directly by the IEEE 802 EC Executive Secretary for further instructions.
      1. Plenary info: <http://802world.org/plenary/>
      2. **Face to Face Registration Website:** [**https://cvent.me/yG5GY2**](https://cvent.me/yG5GY2)
      3. 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.
    1. For the 8-13 **May 2022 Wireless Interim** in Warsaw, Poland, the WCSC voted (02feb22) to head in the direction of mixed-mode (9-1-0). More details will be worked on at the 02mar22 WCSC call.

* + 1. **LMSC P&P sections 3.1: 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.
       1. **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.
       2. **The .18 Chair position is open;**
       3. **The .18 Vice-Chairs Stuart Kerry and Al Petrick are seeking re-election.**
       4. **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 2022 opening LMSC meeting. (Letters received from Stuart Kerry)
          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.
       5. **Responsibilities / expectations for all offices are in the back up slides in this slide deck**

1. Chair presents slides 11 - 12, **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 #114 03-10june22**, Sophia-Antipolis, FR-tbd, in discussion will have >30 day notice.
      1. 1 ad hoc so far on TS 103 754 mesh AP performance testing was approved. Next is ETSI helpdesk will review then will be published.
      2. EN 303 687 (6GHz) ETSI helpdesk is reviewing the draft, then after that to the EC for assessment. as reported, it may not be assessed, then if not it will move on to ENAP for 90 days.
      3. **More ad hocs will be coming, 21mar–112e on TR 103 721 (mitigation at 5.8 GHz; 21mar–113e on EN 303 687 (6 GHz); 22mar–113d on EN 303 722 (60 GHz); 31mar–113b on TS 103 754 (mesh AP performance testing)**
      4. **17feb:** Looks like about 11 ad hocs setup over the next few months. (ad hocs can make decisions)
         1. ad hocs cover much, e.g. 5 GHz, 6 GHz, and mesh performance TS.
         2. ETSI BRAN was not able to come to an agreement on liaison statement to ITU-R on M.1450. An ad hoc is being setup, in May time frame to focus on this.
         3. This is cellular and WLAN working on how to approach what info from published and un-published standards that can be sent to ITU-R. (focus was on the 6 GHz standard is still in draft.) Reminder: once a draft goes to ENAP, it becomes public and assessable.
         4. Key is M.1450 will likely be used in WRC-23 and in M.1450 has pointers/URLs that need to be assessable.
         5. BRAN is running a poll when to have the ITU-R ad hoc <https://terminplaner4.dfn.de/bkie1ARdLo1Sk7rs>
         6. EN 303 687, 6 GHz, is now entering the next stage, which has the client to client removed.
         7. Next step is to inform EC for an assessment and set a deadline.
         8. If deadline is not met, will have an ad hoc to approve to got to ENAP w/o the EC assessment.
         9. New draft versions on 5 and 60 GHz standards were approved and can progress through process.
         10. Received from ECC/WGFM, request to remove air to ground at 5.8 GHz, to open up that spectrum.
         11. Notes in (22)113011r7 Chairman’s Welcome has more and will be in .11 private area.
         12. Also the meeting minutes are in BRAN(22)113002r1, which will be in .11 private area.
      5. **10feb:** Have been meeting since last Friday, have accepted 16 docs of 39 discussed, all good progress.
         1. EN 301 893 5 GHz, review basically completed of draft, the quality has greatly improved, thanks to rapporteur.
         2. The EN 303 687 6GHz std, will benefit from what was done on the 5 GHz update.
         3. 6 GHz 2 topics still going; NBFH (getting settled) and Client to Client comms which a proposal is available. (however still some concern on protection levels, working to overcome.)
         4. Not seeing it go to ENAP out of this meeting.
         5. Have advanced on TS 103 754 on mesh comms, close to being ready.
         6. EN 303 753-3rd 60GHz std, accepted many inputs, not ready for next stage just yet.
         7. Did received from WGFM just now, spectrum for airplane use for entertainment @5.8GHz. is it still needed? basically, the technology has gone away.
         8. EC assessment of stds before going to OJEU, still a funding question… Originally was voluntary and did not need to send all stds through them. However, has been treated as mandatory and is out of EC budget Euros,.
         9. BRAN will turn stds in and give the EC a chance, but will move on even if not assessed, so released but not in OJEU. (generally, from ETSI draft HS + 320 days to publication)
         10. Monday, 14feb22, is closing plenary - A liaison statement on ITU-R M-1450 recommendation will be addressed,
   3. **CEPT –** [**<ECC>**](https://cept.org/ecc/groups/ecc/client/introduction/) **(and general items) next call #58 28feb-04mar22, web meeting**
   4. **CEPT – ECC** [**<SE45>**](https://cept.org/ecc/groups/ecc/wg-se/se-45/client/introduction/) **next call #15 03-04mar22, web-meeting**
      1. Agenda is on CBTC, communications-based train control, train to track side.
   5. **CEPT – ECC** [**<WGFM>**](https://cept.org/ecc/groups/ecc/wg-fm/client/introduction/) **next meeting #102 06-10jun22**
      1. **10feb:** Did not pass along the WI on high power outdoor 6425-7125MHz (different one from above), so pushed to the next meeting, June 2022.
         1. RF Crossing (French) borders is the reason for the push.
   6. **CEPT - ECC WGFM** [**<SRDMG>**](https://cept.org/ecc/groups/ecc/wg-fm/srdmg/client/meeting-calendar/)  **next meeting 20-21apr22 ECO office** 
      1. WI\_04 has been assigned on 6425 – 7125 Std. Power.
      2. It was proposed by ANFR, then WGFM assigned to SRD/MG who will address this WI next, then back to WGFM. (So not to SE45………)
2. Chair presents slide 13 **Other regions (outside EU-Stds and USA), items to share**
   1. **UK-Ofcom Discussion papers on Ofcom’s future approach to mobile markets**
   2. Start: 09 February 2022; Status: Open; End: 08 April 2022; this is the big one, heading toward 6G, and 2 consultations:
   3. **The first one: on mobile market**
      1. <https://www.ofcom.org.uk/consultations-and-statements/category-3/ofcoms-future-approach-to-mobile-markets>
      2. Over the past ten years there has been a huge shift towards the use of mobile devices in our everyday lives, at home and at work. Most calls are now made from mobile phones rather than landlines and UK adults now spend on average two hours a day online on their smartphones.
      3. It includes 5 different files, they are zip’d up in:
      4. <https://mentor.ieee.org/802.18/dcn/22/18-22-0019-00-0000-uk-ofcom-mobile-strategy-consultation.zip>
      5. One of the files is the response form with 8 questions. As in the past we would not have to answer each one, just the ones we have interest in.
   4. **The second one, on mobile data**
      1. <https://www.ofcom.org.uk/consultations-and-statements/category-3/discussion-paper-meeting-future-demand-for-mobile-data>
      2. Mobile data traffic has grown by an average of 40% year on year in recent years and we expect that growth to continue (acknowledging there is there is a high degree of uncertainty about the rate of growth, particularly beyond 2030).
      3. It includes 2 different files, they are zip’d up in:
      4. <https://mentor.ieee.org/802.18/dcn/22/18-22-0022-00-0000-uk-ofcom-mobile-data-strategy-consultation.zip>
      5. One of the files is the response form with 1 question. As in the past we would not have to answer each one, just the ones we have interest in.
   5. Anything else to share today? none heard
3. Chair presents slides 14, **ITU-R items to share**
   1. **WP 5A next meting is 23may to 03jun22 in Geneva**. Contributions are due: \_\_\_\_\_\_\_\_\_
      1. .18 will see the M.1450 / M.1801 contributions from .11 later in March and goal to have though EC in April, likely their 05apr22 (first Tuesday) call.
      2. Current .11 drafts:
         1. <https://mentor.ieee.org/802.11/dcn/22/11-22-0379-01-0itu-proposed-modifications-to-itu-r-m-1801-2.docx>
         2. <https://mentor.ieee.org/802.11/dcn/22/11-22-0378-00-0itu-proposed-modifications-to-itu-r-m-1450-5.docx>
   2. **USA FCC WAC last week, did approve the 6 GHz document, Doc 43, next to NTIA, then to CITEL.**
   3. **ITU-T – Monday has a global standards symposium maybe an interest to some;** [**https://gss.itu.int/**](https://gss.itu.int/)
   4. **10feb:** Looking toward WRC-23: The next CTEL is on 25-29 April – hosted by Mexico, virtual
      1. FCC WAC meets next week, to look at a couple of USA draft proposals on AI 1.2; 3, 6 (top ½ of the band) and 10 GHz for IMT identification.
         1. Proposal is no change for the 6 GHz band, 6425 -7125.
      2. Region 1 - 6425-7125 MHZ, different countries/telcoms looking what they need, may not follow recommendations.
      3. Region 2, 3 study is with 6425-7025 and 7025-7125 MHz.
   5. **standing by for this spring(2022):** Additional WP 1A light communications and 2 WP 5A submissions from IEEE 802.
   6. **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
   7. For miscellaneous links for ITU-R, SGs, WPs and calendars, see back up slides in agenda.
4. Chair presents slide 15, **General Discussion Items**
   1. none today
5. Chair presents slide 16, **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. **Moving ahead and in the next 4 weeks will have canvased the 3rd party test labs to then start up some testing.** 
         1. **This is in parallel with what the WFA is doing on this.**
      3. **17feb:** Winnforum met with the FCC OET and some of the FCC folks are new and don’t have the background of what was done with CBRS. Watch docket 21-352, <https://www.fcc.gov/ecfs/search/filings?proceedings_name=21-352&sort=date_disseminated,DESC>, for the AFC work.
      4. **10feb:** AFC lab test .vs. field test, 5 papers on this yesterday; getting 3rd party to run some tests, Discussion includes test vectors, etc. Discussions picking up on what tests will be needed and how it will work, by different entities with different ideas.
      5. **03feb:** Winnform is also looking at AFC for 3rd party lab testing, considering this is 1 of 2 different views .
         1. And now how to coordinate with the FCC working on AFC accreditation.
   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. **WS1 – interference call today. 2 viewpoints on this, APCO&others / NCTA & others, first time to have an open discussion and getting on the table. Here is one, behind UN/PW:** <https://groups.wirelessinnovation.org/wg/6GHz-MSG-WS1/document/16974>
      3. **17feb:** In last week’s call – question discussed was what to do with items that didn’t reach consensus for the output report?
      4. **10feb:** Incumbents want some statements with some documents on the participation and how we got to where the MSG is today – published; the other side has not responded. This will be hard to get consensus.
      5. **27jan:** 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:** 
      1. **17feb:** FCC is asking for the AFC applicants for their supplementals. The first has come in today and the remainder of the 13 applicants will be sending in their supplements, then a Public Notice (PN) will come on these.
         1. Propagation models is one of the items being discussed and what is best for AFC.
      2. **03feb:** FCC getting inputs and setting up interviews on companies for the AFC accreditation
      3. **16dec**: A public notice is expected in January about work needed on improving the ULS data.
6. Chair presents slide 17, **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 22feb22**
      1. Worked on comment collection epoll text and process. Will discuss with 802 Executive Secretary.
      2. The Co-leads have the epoll text updated and a comment collection spreadsheet draft to present at the WCSC call next week, 02mar22.
      3. Looking at proposing adding the link to the IEEE 802 Wireless Stds Table of Frequency Ranges to the IEEE 802 web page under the Orientation link.
   5. **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.
   6. **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
   7. **The next meeting will be 22feb22. (call-in in agenda backup slides) (May be cancelled if epoll is running)**
7. Chair presents slide 18, Actions required

* **all – send .18 chair any nominations/self nomination for chair or vice-chairs for 802.18 for next 2 years, by 02mar22 (next week.)**
* **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 19, Any Other Business
   1. none heard
2. Chair presents slide 20, Adjourn.
   1. **Next “weekly” teleconference (sched’d to 19may22): 03mar22** 
      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 15:37et
   4. **The next IEEE 802.18 Plenary will be electronic 4-18March 2022**
   5. **The next IEEE 802.18 Wireless Interim will be in May 2022, venue direction is mixed-mode**
   6. **Thank You**
3. Attendance
4. **Weekly Meeting Attendance Names and Affiliations:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Voting Attendees:** | |  |  | **24-Feb** |
| 1 | **Au** | Edward (Kwok Shum) | Huawei Technologies Co., Ltd | **x** |
| 2 | **Auluck** | Vijay | Self | **x** |
| 3 | **Ecclesine** | Peter | Cisco Systems, Inc. | **x** |
| 4 | **Hiertz** | Guido | Ericsson GmbH | **x** |
| 5 | **Holcomb** | Jay | Itron Inc. | **x** |
| 6 | **Kain** | Carl | USDOT, Noblis, Inc. | **x** |
| 7 | **Kenney** | John | TOYOTA InfoTechnology Center U.S.A. | **x** |
| 8 | **Kerry** | Stuart | OK‐Brit, Self | **x** |
| 9 | **Levy** | Joseph | InterDigital, Inc. | **x** |
| 10 | **Lynch** | Michael | MJ Lynch & Associates, LLC. | **x** |
| 11 | **Petrick** | Al | Skyworks Solutions Inc. | **x** |
| 12 | **Pirhonen** | Riku | NXP Semiconductors | **x** |
| 13 | **Rolfe** | Benjamin | Blind Creek Associates | **x** |
| 14 | **Yaghoobi** | Hassan | Intel Corporation | **x** |
| 15 | **Yucek** | Tevfik | Qualcomm Incorporated | **x** |
|  |  |  |  |  |
| **Non-Voting Attendees:** | | |  |  |
| 1 | **Baykas** | Tuncer | Kadir Has University | **x** |
| 2 | **Fang** | Yonggang | MediaTek | **x** |
| 3 | **Haasz** | Jodi | IEEE SA | **x** |
| 4 | **Richardson** | Judah | Self | **x** |
| 5 | **Scott** | Andy | NCTA – The Internet & Television Association | **x** |