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| an Working Group | **IEEE DYSPAN-SC 1900.5** |  |
| Title | ***Meeting minutes 0273 for the P1900.5 Meetings of July 7, 2023*** |  |
| DCN | ***5-24-0003-00-mins*** |  |
| Date Submitted | ***01/11/2024*** |  |
| Source(s) | ***Eric Lindahl (AMT66)***  ***email:*** [***eric@sciumo.com***](mailto:eric@sciumo.com) |  |
|  |  |  |
| Abstract | ***Minutes for the IEEE 1900.5 meetings held on July 7, 2023*** |  |
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**1. Administrivia**

**1.a Roll Call**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 7/7/23 | WG Status | First Name | Last Name | Affiliation |
| X | Member | Julia | Andrusenko | Rampart Communications |
| X | Member | Carlos | Caicedo | Syracuse University (Vice Chair) |
|  | Member | David | Chester | L3Harris |
|  | Member | Brent | Josefiak | L3Harris |
|  | Member | Mitch | Kokar | VIStology & Northeastern University |
| X | Member | Alex | Lackpour | Drexel University |
| X | Member | Eric | Lindahl | AMT66 |
| X | Member | Reinhard | Schrage | SchrageConsult |
|  | Member | Kael | Stilp | MITRE |
| X | Member | John | Stine | MITRE (Chair) |
|  | Member | Timothy | Woods | ANDRO Computational Solutions, LLC |
|  | Participant | Daniel | Zahirniak | Joint Electronic Warfare Center (JEWC) |
|  | Member | Ed | Coyle | Georgia Institute of Technology |
|  | Participant | Karen | Haigh |  |
| X | Member | Shastri | Jayram | University of Johannesburg |
|  | Participant | Sean | Furman | ANDRO Computational Solutions, LLC |
|  | Participant | Joel | Johnson | L3Harris |
|  | Participant | Chad | Lau | L3Harris |
|  | Participant | Jakub | Moskal | Vistology |
|  | Participant | Becca | Rousseau | MITRE |
|  | Member | Tony | Rennier | Foundry Inc. |
|  | Participant | Mark | Silvius | SSC |
| X | Participant | Jesse | Caulfield | Keybridge Wireless |
|  | Observer | Jennifer | Santulli | IEEE |

Quorum achieved Yes

**1.b. Approval of Agenda**

Approval of Agenda from 5-23-0014-03-agen

* Mover: Alex

Second: Eric

Vote: UC

**1.c. Copyright slides**

Copyright policy slides were presented. No comments came forward.

**1.d. Patent slides / Notes on status**

Patent related slides were presented. No issues came forward

**1.e. Approval of recent minutes**

Approval of WG minutes: 1/6/23

Missing

* Motion to approve 3/3/23 WG minutes contained in Doc #: 5-23-0013-00-mins
* Mover: Carlos
* Second: Alex
* Motion to approve 5/5/23 WG minutes contained in Doc #: 5-23-0011-00-mins
* Mover: Alex
* Second: Carlos
* Motion to approve 6/2/23 WG minutes contained in Doc #: 5-23-0012-00-mins
* Mover: Reinhard
* Second: Carlos

**2. Status of 1900.5 Revision**

* 6/2/23
  + Decision was made to request an extension of the PAR
  + Decided to forego trying to do the coverage of he CBRS solution
  + Had discussion about the definitions of networks and will spend some time on terminology at the next meeting

**3. Status of 1900.5.1**

* 5/5/23
  + Looking at the application of the traceability matrix as seen in the CBRS documents and to match that with the 1900.5.1 standard
    - Example of a 10 MHz channel in CBRS could be defined and enforced by 1900.5.1
    - The traceability would take a different form, not in a spreadsheet since the policies are the expressions of the language. Need to document the connection to classes. Want to match the traceability matrix. Will go over these issues in the next 1900.5.1 ad hoc. Will schedule ad hoc on 25 May.
  + The augmented language should have a macro type of approach which allows ML and pattern recognition via a dynamic programming type of solution
  + Want to make it more easily consumed by users
* 6/2/23
  + Ad hoc needs to rescheduled because of a RAF bomb
    - Would like to reschedule for June 15th
    - Will address relevance of 1900.5.1 to the CBRS, a review of dynamic programming issues, a comparison to CoRaL
    - The augmented 1900.5.1 covers more features and so this will be demonstrated
  + Also looking at the dynamic programming that is part of the 1900.5.1
  + Uploaded PAR to mentor so members can discuss. (Schedule ad hoc for 7 July to discuss)
* 7/7/23
  + Had an ad hoc on 29 June
  + PAR for the augmented language was uploaded on the 9th of May
  + Continuing to work – hope to bring the PAR and working on the policy language – the interpreter and the compiler.
  + Will write down a scope to be pushed forward with the PAR and the new draft

**4. Status of 1900.5.2 Revision**

* 5/5/23
  + Revisions over the past month have focused on the description of canonical location and conversion of SCM locations into those canonical locations before compatibility assessments (Goal is to simplify and speed up compatibility determinations)
    - Circles and cylinders now converted to polygons and polyhedrons
    - Polygons are converted into triangles by standard procedure
    - Large locations are subdivided to ensure conformance to the Earth’s curvature
  + Coordination to start adding material to IEEE Opensource
* 6/2/23
  + Added revisions to define the computation of centroids. Changed the definition of paths, removing the time and period from the structure so that the SCMSchedule is the only place for the definition of time. Added a rules table to replace the previous enumerated rules.
  + Discussions and revision to computations to decide when to use height rated propagation maps versus 3D propagation maps
* 7/7/23
  + CRG meeting and we are working the comments.
  + Worked through some comments

**5. Opensource Repository**

* Lead – Eric Lindahl
* Maintainer – Carlos Caicedo, Becca Rousseau
* 6/2/23
  + Rescheduled meeting and met with IEEE on 12 May
  + Spent a lot of time getting access (Eric, Becca, and Alex)
  + We will need to make appointment for major updates.
  + Josh needs to work on the PURL and will provide canonical name spaces.
* 7/7/23
  + Alex and Eric will contact on the PURL status as well as support 1900.8

**6. Review of other DySPAN-SC activities**

* Met on 20 Jun–notes follow
* Reinhard Schrage volunteered to serve as treasurer.
* Selected updates
  + 1900.6 – Creating a PAR to work on the baseline standard. Would bring in any amendments. Want one standard and so one document.
  + 1900.8 – Goal is to create a standard for collecting RF data to input into RF ML algorithms. Work focuses on the data and its associated meta data. Need to ensure all use cases are addressed.
* Updating the 1900 web site
  + Added a spectrogram to the website and want to use it to convey the idea of whitespace
  + The Secretary’s (Alex Lackpour’s) role is to update our web site. Recommended reviewing and editing our website as a word document and he would then make changes based on the word document to the web page
* Two potential new projects
  + DySPAN-SC will be gauging the interest to standardize CIL – was developed by the DARPA Spectrum Collaboration Challenge (SC2) – Carlos to take the lead on that
    - Sherman et al wrote a paper on VITA 49 carrying SCM – adapted CIL could carry SCMs and want to contrast it with the approach with VITA 49. It will likely move forward with standardization.
    - Challenge is the CIL is just code, there is no documentation
    - Not certain where it should be standardized but most likely within IEEE 1900.5 WG
  + Standards linked to the National Spectrum Consortiums (NSC): SSC’s MICCA radio control channel technology – issue is that it needs both the government and the prime contractor, SSC, to permit to be standardized – Alex is taking the lead on this activity.
    - Submitting a paper to MILCOM – describes the functions of the control channel technology and some experimentation results
* Still hoping for a face-to-face SC meeting at the DySPAN Conference in DC in May 24

**7. Website**

* [**IEEE 1900.5 | DySPAN Standards Committee**](https://sagroups.ieee.org/dyspan/ieee-1900-5/)
* **Word version on mentor – volunteers to update**
  + **Images: Eric,**
  + **Scope: John**
  + **1900.5: Eric and Alex**
  + **1900.5.1: Reinhard**
  + **1900.5.2: John Stine**

**8. 1900.5 marketing opportunities**

* 5/5/23
  + Eric intends to present a paper on SCMs at the AOC Symposium in December, if there is support from DSO
  + Carlos mentioned SCMs at the NSF Spectrum Week
    - The DySPAN Conference will be next year about this time – pitched there being a SCM tutorial at that conference
    - Recommend a tutorial for an earlier opportunity
    - Possible tutorials at the AOC Symposium and MILCOM
* 6/2/23
  + We should seek DoD participation in the 2024 DySPAN conference and seek their guidance on what the WG should be addressing
    - Maybe Tom Rondeau or others in OSD (Brent).
    - Eric may be able to reach out to the JEWC and DSO
  + R&E is interested in establishing standards around the pieces of Hill AFB work – detect and mitigate interference to incumbents. Tony volunteered to introduce the idea to 1900. Some could be in 1900.5 and other projects may be started elsewhere.
* 7/7/23
  + Carlos and John submitted a tutorial proposal on SCMs to MILCOM 23 which will occur in late October
  + Julia – submitted proposal to MILCOM on intelligent algorithms and their applications to communications
  + Keybridge runs CBRS SAS and a TV Whitespace database and are considering a frequency coordination system in the 6 GHz. We want to squeeze performance out of the CBRS SAS. Assignments do not scale well. Looking at alternate methods that scale better and SCM is one of them interested in the spec and data model. Wants to use SCMs as a logical data model – want to come up with equivalent CBRS solution. Answers need to match. Want to turn an n! problem into a log n problem. Aggregate interference is a big issue. Seeks channel assignment and power limitation to optimize the outcomes. Wants computational simplicity.

**8. 1900.5 meeting planning and review**

* ~~P1900.5 Revision Ad-hoc 6/9/23 1330 ET~~
* ~~P1900.5.2 CRG 6/16/23 1300 ET~~
* ~~P1900.5 Revision Ad-hoc 6/23/23 13o0 ET~~
* ~~P1900.5.1 ad hoc 6/29/23 1430 ET~~
* P1900.5 WG Mtg 7/7/23 0800 ET
* P1900.5.1 Ad hoc 7/7/23 0800+ ET
* P1900.5.2 CRG 7/7/23 1300 ET
* P1900.5 Revision Ad-hoc 7/14/23 1330 ET
* P1900.5.2 CRG 7/21/23 1300 ET
* P1900.5 Revision Ad Hoc 7/28/23 1330 ET
* P1900.5.2 CRG 8/4/23 1300 ET
* P1900.5 WG Mtg 8/4/23 1130 ET

**9. AoB**

* **Workshop at the FCC on AI applied to communications** [**https://www.fcc.gov/fcc-nsf-ai-workshop**](https://www.fcc.gov/fcc-nsf-ai-workshop)

Meeting adjourned