

Approved by General Counsel

TR-34 Meeting Report

Date(s): 01/16/2014 - 01/16/2014

Location: Virtual (conference call, web conference, etc.)

Approved: 04/11/2014

TITLE: TR 34 Meeting Report

DATE: January 16, 2014

SOURCE: Hughes Network Systems, Inc.

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RECOMMENDATION: Review and Approve

**TR 34 Working Group
SATELLITE EQUIPMENT & SYSTEMS
MEETING REPORT
January 16, 2014**

1. Call to Order and Introduction

The Standards Committee, Satellite Equipment & Systems, TR 34, met on Thursday, January 16, 2014 at TIA's headquarters, 1320 North Courthouse Road, Arlington, Virginia and via teleconference. The Chair welcomed the participants and called the meeting to order at approximately 10:05 AM Eastern.

GoToMeeting Dial-In & Screen Share

<https://www1.gotomeeting.com/join/510324656>

Dial +1 (213) 493-0606

Access Code: 510-324-656

Audio PIN: Shown after joining the meeting

Meeting ID: 510-324-656

The meeting ID for signing in was announced at the meeting.

This meeting was conducted in accordance with the TIA Legal Guide and TIA Engineering Manual.

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TIA's patent policy can be found in the TIA Engineering Manual (5th edition). Participants in the work of the TIA Formulating Group are urged to review this policy. Participants are encouraged to notify TIA of any patents of which they are aware that are related to the practice of a TIA publication early on in the development of the TIA document to reduce the possibility for delays in the development process and increase the likelihood that the draft TIA publication will be approved for publication. Patent searches are not required to comply with the TIA IPR policy. Moreover, the Engineering Manual describes the need for members' disclosure of patents that are essential to practice TIA publications and for members to provide an indication of their willingness to license any known patents.

2. Attendance Registration

The meeting was attended by the following (all by teleconference):

| Company | Name & Mailing Address | Phone #, Fax #, Email |
|------------------------|---|---|
| Hughes Network Systems | Noerpel, Tony 11717 Exploration Lane Germantown, MD 20876 | P: 301-601-7449 F: 301-428-5682 E: anthony.noerpel@hughes.com |
| TIA | Jeff Hannah 1310 N. Courthouse Rd. Suite 200 Arlington, Virginia, | O: 703.907.7582 M: 301.502.9141 E: jhannah@tiaonline.org |
| AASKI Technology, Inc. | Hand, Jim | O: (732) 578-1250 x209 C: (908) 745-9748 F: (732) 578-1251 E: jhand@aaski.com |
| iDirect | Erup, Lars | E: lerup@idirect.net |

Quorum was achieved.

Apologies received from

| Company | Name & Mailing Address | Phone #, Fax #, Email |
|------------------------|------------------------|---|
| AASKI Technology, Inc. | Bharat Parikh | O: (732) 578-1250 x202 C: (908) 309-6655 F: (732) 578-1251 E: bparikh@aaski.com |

3. Review and Approval of the Agenda

The proposed agenda, contribution 01.14.01, was approved.

4. Introduction and Numbering of Contributions

Contributions and associated numbers received for this meeting were the following:

| Number | Title | Source | Notes/Disposition |
|----------|--|-----------------------|---------------------------------------|
| 01.14.01 | Meeting_Notice_Agenda | Tony Noerpel Chair | Approved |
| 01.14.02 | TR 34 meeting report | Tony Noerpel Chair | Review & approve by correspondence |
| 09.13.05 | TC SES WG MARESV Report Meeting #31, 25 June 2013 | Tony Noerpel | For information |
| 09.13.06 | SES MAR ESV DTR/SES- 00325, deliverable: Technical Report on antenna performance characterization for GSO mobile applications | Tony Noerpel | For information |
| 09.13.07 | SES MAR ESV DTR/SES- 00326, deliverable: Technical Report on antenna performance characterization for NGSO mobile applications | Tony Noerpel | For information |

| Number | Title | Source | Notes/Disposition |
|----------|---|--------------|-------------------|
| 09.13.08 | THALES_Comments_to_NWI_on_NCf_Antennas.ppt, 26th of June 2013 | Tony Noerpel | For information |

5. Review and Approval of Meeting Report

The meeting report from this meeting, contribution 01.14.02, shall be circulated and approved by email after the meeting.

6. Correspondence and Liaisons

Tony Noerpel (Chair) reported on ETSI activities. The ETSI SES met in France on December 17-19, 2013. The ETSI SES SCN working group's Study Task Force was approved for funding by EC to study integration of satellite communications with Global Navigation Satellite Systems. This might be something TIA is interested in tracking. Selection of experts will be on February 3, 2014 before the next SCN #8 meeting to be held in Toulouse, France.

- STF SA/ETSI/ENTR/496/2013-05 / "Interoperability and Integration of Global Navigation Satellite Systems (GNSS) with Telecommunications Systems for the provision of location-based services".
- DTR/SES-00363 / GNSS Logical Assistance Channel for Broadcast systems: Just created

A new initiative was begun to study integration of satellite systems with LTE networks. This new effort may receive some EC funding. It was first proposed by Tony Noerpel at the October SCN #7 meeting. It looks like Fraunhofer will take the lead on this activity.

There has been published research using the LTE waveform. See for example:

<http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6333083>

other Fraunhofer papers can be found here.

[http://publica.fraunhofer.de/starweb/servlet.starweb?path=list0.web&search=BARCD=\(HHI\)+AND+BDATE>2011](http://publica.fraunhofer.de/starweb/servlet.starweb?path=list0.web&search=BARCD=(HHI)+AND+BDATE>2011)

SCN # 9 is scheduled for 2-4th June 2014 in Helsinki/Finland.

The ETSI SES MARESV working group met on December 20-21, 2013 to make progress on two TRs regards relaxation of the off-axis emissions for aeronautical antennas. One applies to GEO satellites and the other to NGO satellites.

The next meetings of WG MARESV are proposed as follows:

- MARESV#34, is tentatively scheduled for March 2014 using either GoToMeeting or physical meeting. The Vice-Chairman is expected to confirm a date with the Working Group.
- MARESV#35, is tentatively scheduled for 5-6 June at Helsinki.

The ETSI SES SATELLITE EMERGENCY COMMUNICATIONS (SatEC) working group as initiated the following STF technical specifications which are funded by the EC.

- Multiple Alert Message Encapsulation over Satellite (MAMES) (see work item DTS/SES-00310)
- Multiple Alert Message Encapsulation over Satellite (MAMES) deployment guidelines (see work item DTR/SES-00342)
- Reference scenario for the deployment of emergency communications; Part 1: Earthquake (see work item DTS/SES-00341-1)
- Reference scenario for the deployment of emergency communications; Part 2: Mass casualty incident in public land transportation (see work item DTS/SES-00341-2)

Lars Erup (Vice Chair) reported on DVB, RCS and S2 activities. On January 15, the DVB technical module approved the draft of the DVB-S2 extensions. These include a more finely spaced set of MODCOD's, as well as extensions to very high (~ 20 dB) and very low (-10 dB) signal-to-noise ratios. This means that it is highly unlikely that any substantial changes will be introduced before publication.

There have also been some editorial changes to the DVB Carrier ID standard.

A new standard for DVB-S2 enhancements (green field technologies) is nearly finished and a forward looking activity which may lead to a DVB-S3 standard is also underway. The proposals for new modcods have been approved but more editorial work is required. The range of Eb/No has been increased both at the low end and high end with additional proposed modcods. The target for completion is the end of the year. In addition there are more radical proposals for additional modifications to the standard including OFDM, faster-than-Nyquist coding, and waveform features which might facilitate cancelation. This activity is on a slower track.

A new DVB-GSE (generic stream encapsulation) or DVB-GSE-lite has been approved which would be easier to implement. It is intended for both terrestrial and satellite applications.

Jeff Hannah reported on SGIP or smart grid meeting in Palm Springs. Not much satellite technology discussion.

7. Ballot Results

No Ballots.

8. Working Group Activities

JIPM Joint IP Modem (JIPM) Interoperability Standard project - temporarily suspended.

The rapporteur for the project is Bharat Parikh of AASKI Technology, bparikh@aaski.com, 732-578-1250 x202. Bharat sent his apologies.

9. New Business

Fred Kujawski made the request that we hold the meeting starting at 10 am instead of 9 am in the future so that others from GoGo could participate due to the difference time zone. This was agreed for all future meetings.

TIA action items for Lars Erup to continue to monitor DVB/ETSI activities associated with DVB-S2 and in particular the carrier ID standard and possibly introduce into TIA as a co-endorsement.

TIA action for Tony Noerpel to continue to monitor ETSI activities associated with GNSS, SatEC, MARESV, and LTE for the possibility of introducing into TIA as a co-endorsement.

10. Assignments from December, 2013 Meeting

- The Chair and Lars Erup to continue as liaison to DVB-S2. On-going
- The chair to continue as liaison to ETSI SES. On-going
- Bharat Parikh to continue as rapporteur for the new JIPM proposed standard and update the documents. On-going
- The Jeff Hannah to continue as liaison to SGIP2. On-going

11. Future Work and Assignments

- The Chair and Lars Erup to continue as liaison to DVB-S2.
- The chair to continue as liaison to ETSI SES.
- Bharat Parikh to continue as rapporteur for the new JIPM proposed standard and update the documents.
- The Jeff Hannah to continue as liaison to SGIP2.

12. Future Meetings

The Working Group agreed to meet on the third Thursday of June 19, 2013 with the option to meet earlier if there is progress in ETSI MARESV activities.

13. Adjournment

The meeting was adjourned at 11:00 a.m.

This meeting was conducted in accordance with the TIA Legal Guide and TIA Engineering Manual.