

Approved by General Counsel

TR-42.7 Meeting Report

Date(s): 06/13/2017 - 06/14/2017

Location: Quebec, Canada

Approved: 08/03/2017

TR-42.7 Minutes

Organization: ANSI Accredited Engineering Committee TIA TR-42.7
Telecommunications Copper Cabling Systems

Date: June 13-14, 2017

Time: Tuesday, 8:00am – 6:00pm (June 13th)
Wednesday, 8:00am – 11:45 am (June 14th)

MEETING LOCATION**Four Points by Sheraton Quebec**

7900 Rue du Marigot
Quebec City, Quebec, Canada G1G 6T8
418-627-8008
<http://www.fourpointsquebec.com>

Chair: Wayne Larsen – CommScope (972) 792-3149
Vice-Chair: Sterling Vaden – Surtec Industries – 828-712-3482

IMPORTANT NOTICE OF PARTICIPATION

Participation in, or attendance at, any activity of a TIA Formulating Group or any sub element thereof, constitutes acceptance of and agreement to be bound by all provisions of the current TIA Procedures for American National Standards (PANS) and the TIA Engineering Committee Operating Procedures (ECOP), including but not limited to all competition and antitrust laws. Participation in, or attendance at, any activity of a TIA Formulating Group or any sub element thereof, also constitutes acceptance of and agreement to permission that all communications and statements, oral or written, or other information disclosed or presented, and any translation or derivative thereof, may without compensation, and to the extent such participant or attendee may legally and freely grant such copyright rights, be distributed, published, and posted on TIA's web site, in whole or in part, on a non-exclusive basis by TIA or TIA's licensees or assignees, or as TIA directs. Exceptions to the foregoing may be granted or permitted in writing to the Chair of the Formulating Group by the head of the TIA Standards Department on a case-by-case basis.

1 ADMINISTRATIVE**1.1 Call to order**

The chair called the meeting to order at 8:00 am Tuesday. The chair noted the meeting days and times and the method of logging in attendance. The chair noted the important notice of participation for the group. The chair read through the quorum call of participating companies. 40 companies were eligible with 28 companies reported as attending. Quorum was established.

1.2 Attendance (call quorum, introductions, announce web registration code)

Attendee	Company / Representing	Attendee	Company / Representing
Jimenez, Andrew	C: Anixter	Dearing, Mark	C: Leviton
Beauregard, Francois	C: Belden	Poulsen, Jeff	C: Leviton Network Solutions
Siev, Virak	C: Belden	Diminico, Christopher	C: MC Communications
Tellas, Ron	C: Belden	Woodman, Brad	C: Molex Inc.
Vanderlaan, Paul	C: Berk-Tek, LLC	Rivers, Phillip	C: Molex Incorporated
Speer, Richard	C: CCG	Forbes, Diane	C: NIS
Dawson, Fred	C: Chemours	Lounsbury, Bob	C: ODVA
Zimmerman, George	C: CME Consulting, Inc.	Straka, Frank	C: Panduit
Hayes, Trent	C: CommScope Network Solutions	Borgman, Michael	C: Panduit

Shariff, Masood	C: CommScope Network Solutions	Judson, Ward	Pentair
Larsen, Wayne	C: CommScope Network Solutions	Rivernider, Jim	C: Quabbin
Cornelison, Ken	C: Hitachi	Huedepol, Konstantin	C: Softing
Hess, Dave	C: CORD DATA	Saunders, Mark	C: Softing
Alley, Chad	C: Corning	Born, Steve	C: Superior Essex
Withey, James	C: Fluke Networks	Vaden, Sterling	C: Surtec Industries
Kuniyoshi, Cristina	C: Furukawa Ind. S. A.	Ehredt, Allen	C: Telegartner
Fausz, David	C: General Cable	Ceella, Brian	C: The Siemon Company
Emplit, Ray	C: Harger, Inc.	Maguire, Val	C: The Siemon Company
Khan, Naved	C: Hubbell Premise Wiring	Tassone, Anthony	C: Underwriters Laboratories
Payerle, Dan	C: Ideal Industries	Gastle, Ed	C: Viavi Solutions
Stafford, Vicki	C: Intertek Testing Services	Dupuis, Marc	C: Web Industries
Aekins, Robert	C: Legrand		

1.3 Intellectual Property Rights Policy

The chair announced the intellectual rights policy and asked if there were any patent disclosures. There were none announced.

"TIA's Intellectual Property Rights Policy can be found in Statements of Policy (ANNEX C) and other clauses and annexes of this document. Participants in the work of the TIA Formulating Groups are urged to review the appropriate sections. Individual participants are encouraged to notify TIA of any patent(s) or published pending patent application(s) of which they are aware that may be essential to the practice of a proposed TIA Publication, including requirements introduced through normative references, early on in the development to reduce the possibility for delays in the development process and increase the likelihood that the proposed TIA Publication will become a Standard. However, a Patent Holder who has provided TIA with a TIA Patent Holder Statement with respect to the applicable proposed TIA Publication need not (but may elect to) identify its specific patent(s) or published pending patent application(s) that may be essential to the practice of the proposed TIA Publication in question. Patent searches are not required to comply with the TIA Intellectual Property Rights Policy."

1.4 Chair's Report

The chair noted that elections will be held in September and that Sterling Vaden will put his name forward in nomination for chair and Wayne Larsen will put his name forward in nomination for vice chair.

1.5 Agenda review and approval (TR-42.7-2017-06-036b)

The chair reviewed the agenda and action items. The 036b agenda includes the listing of documents to be considered during this meeting cycle.

Motion: James Withey moved and Fred Dawson seconded to approve the agenda. The agenda was approved by voice vote unanimously.

036b 02-28017 Agenda for meeting of June 13 - 14 Wayne Larsen

1.6 Meeting report review and approval (TR42.7-2017-06-037)

The chair reviewed the minutes from the last meeting of February 7-8, 2017.

Motion: Chris Diminico moved and Ray Emplit seconded to approve the minutes. The minutes were approved by voice vote unanimously.

037 02-22-17 Minutes from meeting of February 7 - 8 Wayne Larsen

1.7 Distribution of documents and contributions

(Contributions left in this place were available but not reviewed during this meeting.)

038	02-17-17	Proposal for generic single pair balanced cabling	Masood Shariff
039	02-17-17	Minutes from Single Pair TG meeting of Jan 5	Wayne Larsen
040	02-28-17	Highest level summary of IEEE 1-pr apps	Wayne Larsen

041	02-28-17	'Link segment' versus application parameters	Wayne Larsen
042	03-03-17	Reach versus bandwidth for different single pair cables	Sterling Vaden
043	03-12-17	SP-568.4-D (Coax Cabling) ballot comment form	Wayne Larsen
044	03-12-17	SP-568.4-D (Coax Cabling) draft 2.0	Wayne Larsen
045	03-12-17	PN-568.2-D (Copper Cabling) ballot comment form	Wayne Larsen
046	03-12-17	PN-568.2-D (Copper Cabling) draft 1.0	Wayne Larsen
047	04-07-17	802.3bp type A model for return loss and insertion loss	Wayne Larsen
048	04-10-17	IEEE 802.3 single pair specifications	Zimmerman/Vaden
049	04-10-17	Minutes from Single Pair TG meeting of Mar 31	Wayne Larsen
050	04-20-17	Patch cord versus overall channel performance	Phillip Rivers
051	04-28-17	Topology options for generic single pair balanced cabling	Masood Shariff
057	05-19-17	1-pair cabling roadmap proposal	Masood Shariff
058	05-19-17	Minutes from Single Pair TG meeting of May 12	Sterling Vaden
059	06-02-17	28 AWG temperature rise: bundles in air & conduit	Mike Borgman
060	06-02-17	28 AWG patch cord use cases	Frank Straka
061	06-02-17	Minutes from 28 AWG Patch Cord TG meeting of Mar 7	Frank Straka
062	06-02-17	Minutes from 28 AWG Patch Cord TG meeting of Apr 4	Frank Straka
063	06-02-17	Minutes from 28 AWG Patch Cord TG meeting of May 2	Frank Straka
064	06-02-17	Minutes from 28 AWG Patch Cord TG meeting of May 30	Frank Straka
065	06-02-17	Category 5e & 6 28 AWG temp rise comparison	Mike Borgman

1.8 Review of incoming liaison letters, reports, and requests

Chris Diminico reviewed the IEEE incoming liaison report, which was also presented during the TR-42 opening plenary. **TR42-2017-06-094b IEEE 802.3 Liaison Report.pdf.**

Dave Hess reviewed the ISO IEC liaison report which was also presented during the TR-42 opening plenary. **TR42-2017-06-095 ISO IEC JTC1 SC25 WG3 Liaison Report.pptx**

During the liaison report it was mentioned that an 11801.3 preliminary draft document describing single pair cabling is available for comment but has not been shared with the committee at this time due to copyright restrictions.

1.9 Updated action items listing

Item	Task group name or owner	Task group membership or task description	Completion Date
1	New Annex C TG	Wayne Larsen Chair, Antoine Pelletier, Brian Celella, Derrick Stikeleather, James Withey, Masood Shariff, Sterling Vaden, Theodore Brillhart, Jeff Poulsen, Mike Good, Rich Marowsky, Shadi Abughazaleh, Dan Payerle, Simon Harrison, Frank Straka, Dave Hess, Chris Diminico, Paul Vanderlaan, Naved Khan, Al Greiner, Dave Jeskey, Phil Rivers	Meeting to be held on pcord testing March 2 11 eastern Meetings were held on March 2, April 6, and April 20. Recommendation for patch cord testing was developed. TR42.7-2017-06-067
2	Dave	Provide draft of 60512-99-002 CD3 Next draft will be circulated as CDV and circulated to members of the 48B TAG.	Incomplete Revised to CD3. Dave Hess has provided a copy to Sterling and Wayne.

3	Wayne Larsen, Henry Frank, Bob Lounsbury	Single pair TG	<p>Several meetings were held. TG would benefit from further instructions from SCs.</p> <p>to motion in plenary to request a meeting during the next Plenary for 2 hours of this JTG.</p> <p>Research connectors.</p> <p>This JTG has had several meetings.</p> <p>This JTG has developed proposed draft PARs for consideration in 42.1, 42.9, and 42.7.</p> <p>Think this TG is finished, depending on views of 42.1 and 42.9.</p>
4	Ron (Masood to help)	Produce a press release and video to announce the publication of TSB-184-A	<p>Press release is done. Don't know if it was released by TIA. Video still to be done. Masood to follow up on the press release, and the video.</p>
5	High temp study TG	Paul leader, Dave Hess, Jeff, Roy, Bob, Mark, Randy, Ron, Trent, Brian C., Brad, Antoine	<p>Examine and gain insight on the electrical performance levels of all categories of cabling above 60 C</p> <p>Mtg Thursday 2/16 11-1 eastern</p> <p>TG has held two meetings.</p> <p>Meeting to be held 8/3 11 est 2 hours.</p>
6	28 AWG TG	Frank leader, Ron, Dave Hess, Antoine, Brian, Jim, Chris, Mike Borgman, Naved, Trent, Brian C., Dave J., Jim W., Rich, Jim R., Sterling	<p>Four teleconferences were held</p> <p>Draft annex has been produced for our consideration.</p> <p>This TG is finished.</p> <p>TR42.7-2017-06-066-28AWG_cord_cable_annex_rev2b</p>
7	George	Lead a task group to elevate TSB-184-A to a normative standard as an addendum to TIA 568.2-D	Telcon August 21st Monday 11:00-1:00 EDT
8	Ray	Publish .4-D	
9	Wayne, Sterling	Circulate industry ballot for .2-D	
10	1-pair TG '568.5	Sterling leader	Meetings to be held June 27 11-1 EST, July 18, 11-1 EST
11	TSB-184-A-1 TG 28 AWG guidelines for power	Ron Tellas, Frank Straka co-leaders	Meeting to be held July 25 11-1 EST

2 OLD BUSINESS

2.1 ANSI/TIA-568.4-D, revision of ANSI/TIA-568-C.4

The chair reviewed the ballot summary, document 53.

Ballot comments, document 54 were reviewed and resolved. There were no technical changes made as a result of comment resolution.

Motion: Masood Shariff moved and Ray Emplit seconded to publish the 568.4-D standard after implementation of comment resolution. The motion was approved by voice vote unanimously.

053	05-09-17	SP-568.4-D (Coax Cabling) ballot summary	Wayne Larsen
054	05-09-17	SP-568.4-D (Coax Cabling) ballot comments	Ray Emplit

2.2 Report from task group on high temperature cabling

There was no report from this task group.

2.3 Report from task group on 28 AWG cable for patch cords

Frank Straka reviewed the draft proposal for adding 28 AWG cord cable specifications to the TIA 568.2-D draft. The current 568.2-D draft does not include temperature rise information for DC powering for other cable types. Discussion focused on several issues, 28 AWG suitability for Cat6A, 1000mA support, maximum bundle sizes, installation in air vs fully loaded vertical cable managers vs conduit, NFPA considerations, installation as horizontal cabling in point to point use cases. A proposal was made to incorporate the performance information into 568.2-D and the DC powering information into an addendum to TSB-184-A.

066	06-02-17	Draft annex for 28 AWG patch cords	Frank Straka
-----	----------	------------------------------------	--------------

2.4 Report from task group on patch cord testing

Wayne Larsen reviewed the task group report for patch cord measurement limits task group. The outcome of the task group was to add a note to the draft at line 4127 regarding a patch cord test limit relaxation of 1.5 dB.

067	06-08-17	Minutes patch cord measurement TG meeting of Apr 21	Wayne Larsen
-----	----------	---	--------------

2.5 568.2-D revision of 568-C.2 to include new material in C.2-1 and C.2-2

Trent Hayes reviewed document 68 from Antoine Pelletier regarding a simplified Category 8 alien crosstalk measurement procedure. Wayne Larsen incorporated suggested changes to the proposed text for incorporation into the document.

Wayne Larsen reviewed the ballot summary and noted that Peter Fisher was not present to speak for AESA's no vote. Masood Shariff explained CommScope's no vote and James Withey explained Fluke's no vote. Ballot comment resolution was conducted on ballot comments with editor's recommendations, document 056 and recorded as document 056a. We agreed to split the draft 28 AWG annex into two parts with one part, the performance requirements added into the 568.2-D document and the thermal characteristics incorporated into an addendum to TIA TSB-184-A.

We agreed that after the publication of the addendum to TSB-184-A, we will consider a project to elevate TSB-184-A to a normative standard.

Motion: Ray Emplit moved and Dan Payerle seconded to submit an industry ballot for TIA 568.2-D after incorporation of ballot comment resolutions into the document with the editor given license to implement editorial changes as needed. The motion was approved by voice vote unanimously.

068	06-08-17	Simplified category 8 cable AXT comment with equation	Antoine Pelletier
055	05-18-17	PN-568.2-D (Copper Cabling) ballot summary	Wayne Larsen
056	05-18-17	PN-568.2-D (Copper Cabling) ballot comments	Sterling Vaden

2.6 Report from joint task group on 1-pair cabling

Masood Shariff presented document 073a from TR-42 plenary. **TR42-2017-06-073a 1-Pair cabling & components PAR TR-42.7.docx.** This presentation includes the PAR to create a new standard for a single pair balanced twisted pair cabling and components standard. Editorial changes were incorporated into the proposed par by the group. The document was saved as **TR42-2017-06-073b 1-Pair cabling & components PAR TR-42.7.docx.**

Motion: Chris Diminico moved and Ray Emplit seconded to approve the edited PAR for submission to TIA and start a new project for single-pair balanced cabling. The motion was approved by show of hands unanimously.

052	05-01-17	Minutes from Single Pair TG meeting of Apr 28	Wayne Larsen
051	04-28-17	Topology options for generic single pair balanced cabling	Masood Shariff
057	05-19-17	1-pair cabling roadmap proposal	Masood Shariff
058	05-19-17	Minutes from Single Pair TG meeting of May 12	Sterling Vaden

A task group was established to begin work on this project. Sterling Vaden volunteered to chair the task group. Due to the high level of interest in this project, the chair will send an email to the TR47 reflector requesting participants. A meeting was scheduled and documented in the action item list above.

3 NEW BUSINESS

3.1 Output documents and letters

3.1.1 Consider a liaison to IEEE on 1-pair cabling, containing both information and questions

During the meeting we wrote a simple liaison to IEEE to announce to them the start of the single-pair balanced cabling project.

Motion: Masood moved and Paul seconded to request that TR42 complete the above liaison by adding the projects from 42.1 and 42.9 to it and sending it to IEEE 802.3. This motion was approved by voice vote unanimously.

3.1.2 Consider liaison to NEC NFPA panel 16 concerning power distribution

None considered.

3.1.3 Consider any draft documents to liaise to any other SDOs

None recommended.

3.1.4 Consider any other output documents

3.2 Review of potential new work items

3.2.1 Consider a project to develop channel and component requirements for a 1-pair cabling system

This project was authorized under section 2.6 of the agenda.

3.2.2 Project to create an addendum to TSB-184-A to add support for 28 AWG cords.

Motion: Ray Emplit moved and James Withey seconded to start a new project to create an addendum to TSB-184-A to provide guidelines for the support of 28 AWG cords. The motion was approved by voice vote unanimously.

Ron Tellas and Frank Straka will lead a task group to create the addendum.

3.2.3 Project to elevate some of the content TSB-184-A to the level of a normative standard by converting it to an addendum of the TIA 568.2-D standard.

George Zimmerman volunteered to lead a task group to create a project proposal to elevate the content of TSB-184-A to normative status.

3.3 Review of action items

Action items were reviewed.

3.4 Determination of future meeting dates

Meeting dates and locations were confirmed as follows.

4 FUTURE MEETING DATES AND SCHEDULE

September 18-22, 2017: Las Vegas RIO All Suite Hotel and Casino
 Jan 29 – Feb 2, 2018, probably in Florida
 June 4-8, 2018, tentative
 October 1-5, 2018, tentative

5 ACKNOWLEDGEMENTS

None.

6 ADJOURNMENT

Motion: Fred Dawson moved Ray Emplit seconded to adjourn the meeting. The meeting was adjourned at 10:15 am June 14th.

This meeting was conducted in accordance with the TIA Legal Guides and the engineering procedures.

AVAILABILITY OF MEETING DOCUMENTS:

All meeting attendees are instructed to download contributions and other meeting documents from the TIA TR-42.7 FTP site (<http://ftp.tiaonline.org/TR-42.7/>) before the meeting. For information on how to access the FTP site, contact TIA (Stephanie Montgomery: smontgomery@tiaonline.org).

NEW CONTRIBUTIONS:

Contributions shall use the approved templates and specific wording provided by TIA. Contributions affecting a document are to include a TIA cover sheet, proposed text to be included in the document, and the rationale/substantiation for the contribution. File templates are available on the TR42 FTP site for download. All contributions shall be submitted to Valerie Maguire (the EDC) at valerie_maguire@siemon.com and copied to the chair and vice-chair. All electronic files shall be provided in either Adobe Acrobat (*.PDF); Microsoft Word (*.DOC); Microsoft PowerPoint (*.PPT); or in Microsoft Excel (*.XLS). Compressed files shall be accessible using PKUNZIP or WINZIP (*.ZIP).

All contributions shall be sent to the EDC for posting on appropriate location on the TIA FTP site no later than 12:00 am AOE on the Thursday preceding the week of the meeting in which the contribution is to be considered (example: if the meeting will be held on Thursday the 28th, the contributions shall be sent by midnight on Thursday the 21st).

LATE CONTRIBUTIONS:

Contributions not posted as described in the timing above shall be classified as "late contributions." They may be considered in the meeting to which they are addressed provided that an appropriate motion receives 50% or greater of a vote.

All late contributions shall be provided to the EDC and to the committee members on a memory stick or CD-ROM along with sufficient paper copies for those members without a PC.

All late contributions shall be posted to the TIA FTP site no later than one week following the meeting in which they are considered. Notification of the posting shall be made to the group's email reflector list by the EDC.

Questions and Comments concerning this agenda should be submitted to:

Chair: Wayne Larsen

Ph: (972)-792-3149 E: wlarsen@commscope.com

Vice-chair: Sterling Vaden

Ph: (828)-712-3482 E: sterlingv@charter.net

Table 1 TR-42.7 Program of work

Document	Title	Date of Revision	Current Status
ANSI/TIA-1183-A	Measurement methods and test fixtures for balun-less measurements of balanced 2 components and systems	2017	Complete, published
ANSI/TIA-568.4-D	Broadband Coaxial Cabling and Components Standard		Revision of '568-C.4. Being balloted.
TSB-184-A	Guidelines for Supporting Power Delivery Over Balanced Twisted-Pair Cabling	2017	Complete, published
ANSI/TIA-568.2-D	Balanced Twisted-Pair Telecommunications Cabling and Components Standard		Revision and incorporation of '568-C.2, '-C.2-1, and 'C-2.2. Being balloted.
TSB-5021	Guidelines for the Use of Installed Category 5e and Category 6 Cabling to Support 2.5GBASE-T and 5GBASE-T	2016	Complete, published
TSB-5019	High Performance Structured Cabling Use Cases for Data Centers and Other Premises	2015	Complete, published
TSB-155-A	Guidelines for the Assessment and Mitigation of Installed Category 6 Cabling to Support 10GBASE-T	2014 (Re-affirmed)	Complete, published
TSB-5008	Mechanically-Generated Cable Impulse Noise Detection and Characterization	2014	Complete, published
TSB-1197	Mode Conversion Parameters for Balanced Twisted Pair Cabling	2014	Complete, published