

# IEEE 802.3 Ethernet Working Group TIA TR-42 Liaison to IEEE 802.3

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Rosemont, IL  
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# Introduction to TIA

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- **Telecommunications Industry Association**
- **[www.tiaonline.org](http://www.tiaonline.org)**
- **TR-42: Defines mechanical and transmission requirements for copper twisted-pair, optical fiber, and coaxial cabling and components**
- **Chris DiMinico is outgoing liaison from IEEE 802.3 to TIA TR-42**

# Agenda and TIA Meeting Overview

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- **Most recent TR-42 Plenary week:  
Jan 29 - Feb 2, 2018 in Orlando, FL**
- **Review TR-42 subcommittee activities**
  - 8 subcommittees met
- **Update on project development**
-  **This symbol highlights key points of interest**

# TR-42 Leadership

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- **New TR-42 committee leadership elected in January**
- **Greg Sandels, Chair of TR-42 can be reached at: [gsandels@ofsoptics.com](mailto:gsandels@ofsoptics.com)**
- **Henry Franc, Vice Chair of TR-42 can be reached at: [Henry.Franc@belden.com](mailto:Henry.Franc@belden.com)**
- **Courtesy copy Marta Soncodi at: [MSoncodi@tiaonline.org](mailto:MSoncodi@tiaonline.org)**

# TIA TR-42 Liaison Letter to IEEE 802.3

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- **TIA TR-42 responds to three incoming letters received from IEEE 802.3**
  - **TIA is focused on developing single pair cabling requirements - compatibility with four pair cabling will be addressed separately from the main body of the document**
  - **A 1,000 m link segment has been incorporated into the ANSI/TIA-568.5 draft**
  - **1.36 A (instead of 1.0 A) will be used for the minimum current per conductor for single balanced pair cables and connectors**

# TIA TR-42 Liaison Letter to IEEE 802.3, cont.

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- **TIA TR-42 responds to three incoming letters received from IEEE 802.3**
  - **There is general agreement that guidelines related to bundling of single balanced pair cables (for support of PoDL) need to be developed**
  - **A task group have been established to develop installation practices for the purpose of improving the efficiency of PoE installations**
  - **Update on single balanced pair connector selection process – proposals for 5 connectors forwarded**

# TIA TR-42 Activities



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- **TR-42.1 (Premises Infrastructure):**
  - **Note new Subcommittee name**
  - **ANSI/TIA-568.1-D-1, “Updated References, Accommodation of New Media Types” approved for publication**
  - **New project: ANSI/TIA-570-D, “Residential Telecommunications Standard” circulating for default ballot**
  - **New project: ANSI/TIA-758-C, “Customer-Owned Outside Plant Telecommunications Infrastructure Standard” under development**

# TIA TR-42 Activities

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- **TR-42.1 (Premises Infrastructure), cont.:**

-  – **New project: ANSI/TIA-568.0-D-2, “Generic Telecommunications Cabling for Customer Premises, Addendum 2: Single Balanced Twisted-pair Use Cases and Topology” under development**
-  – **New project: ANSI/TIA-862-B-2, “Structured Cabling Infrastructure Standard for Intelligent Building Systems, Addendum 2: Single Balanced Twisted-pair Use Cases and Topology” under development**



# TIA TR-42 Activities



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- **TR-42.3 (Pathways, Spaces, and Grounding):**
  - **Errata: Revision to figure 20 in ANSI/TIA-606-C, “Telecommunications Grounding (Earthing) and Bonding for Customer Premises” approved for publication**
  -  – **New project: ANSI/TIA-569-D-2, “Guidelines for Supporting Remote Powering” circulating for industry ballot**
- **TR-42.5 (Terms and Symbols):**
  - **Definitions, acronyms, units of measure, and symbols maintained in a working document**

# TIA TR-42 Activities

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- **TR-42.7 (Copper Cabling):**

-  – **New project: ANSI/TIA-568.2-D, “Balanced Twisted-Pair Telecommunications Cabling and Components Standard” circulating for default ballot**
-  – **New project: TSB-184-A-1, “Guidelines for Supporting Power Delivery Over Balanced Twisted-Pair Cabling: Addendum 1, Guidance to Support 28 AWG Cords” circulating for committee ballot**

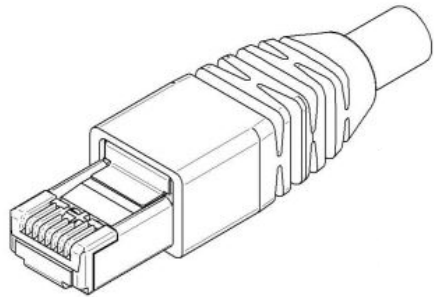
# TIA TR-42 Activities

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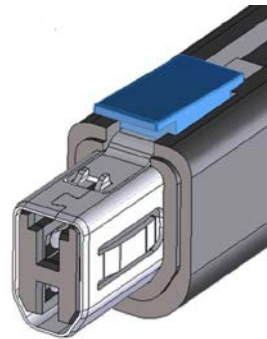
- **TR-42.7 (Copper Cabling), cont.:**
  -  – **New project: ANSI/TIA-PN-568.5, “Single Twisted-pair Cabling and Components Standard” under development**
  -  – **5 single balanced pair connector proposals were reviewed:**
    - **Surtec Industries Inc.**
    - **Phoenix Contact**
    - **Reichle & De-Massari AG**
    - **The Siemon Company**
    - **CommScope**

# TIA TR-42 Activities

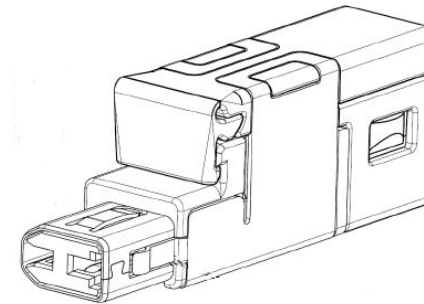
- **TR-42.7 (Copper Cabling), cont.:**



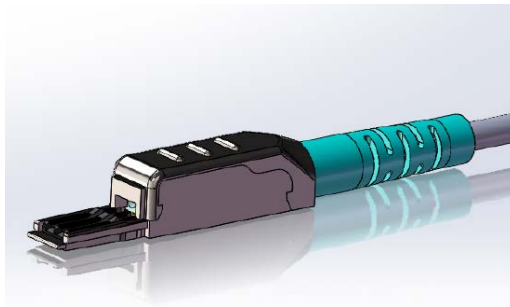
Surtec



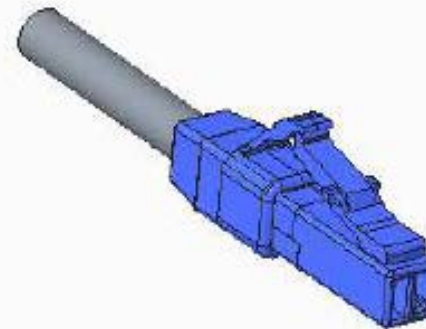
Phoenix Contact



Reichle & De-Massari



Siemon

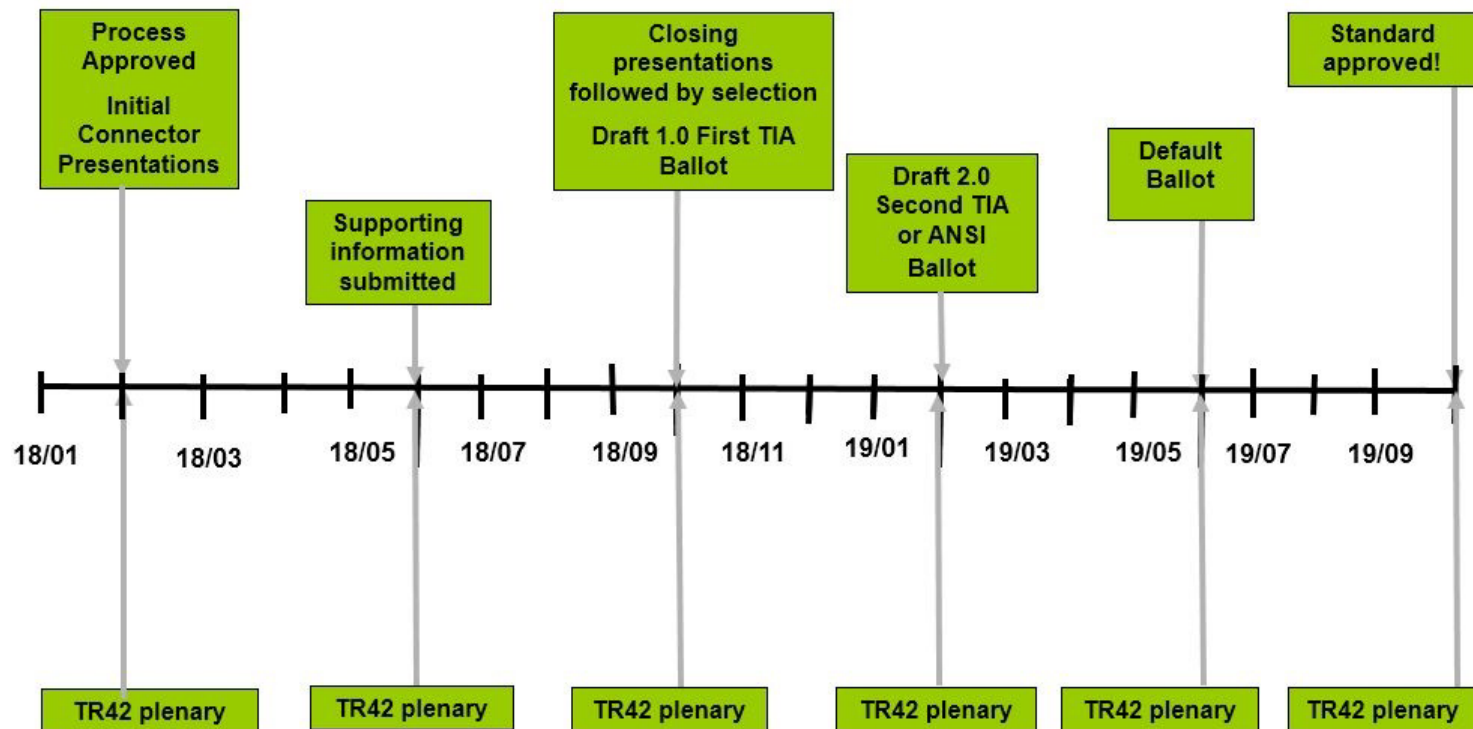


CommScope

# TIA TR-42 Activities




- **TR-42.7 (Copper Cabling), cont.:**

- 👉 – **Approved single balanced pair connector selection and specification timeline**





# TIA TR-42 Activities

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- **TR-42.7 (Copper Cabling), cont.:**
  -  – **Task Group formed to study category 8 short channel alien crosstalk**
  -  – **Task Group formed to examine and gain insight on the electrical performance levels of all categories of cabling above 60°C/140°F**
  -  – **Task Group formed to develop installation guidelines for cords in vertical cable managers for possible inclusion in TSB-184-A-1**



# TIA TR-42 Activities

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- **TR-42.9 (Industrial Infrastructure):**
  -  – **New project: ANSI/TIA-1005-A-2, “1G Industrial Cabling for Four Pair (100 meters) (1000BASE-T) for E2 and E3 Environments” circulating for industry ballot**
  -  – **New project: ANSI/TIA-1005-A-3, “1G Industrial Cabling for One Pair Type B (40 meters) (1000BASE-T1) for E2 and E3 Environments” circulating for committee ballot**

# TIA TR-42 Activities


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- **TR-42.9 (Industrial Infrastructure), cont.:**
  -  – **New project: ANSI/TIA-PN-1005-A-4, “Telecommunications Infrastructure Standard for Industrial Premises, Addendum 4: Single Balanced Twisted-pair Use Cases and Topology for Industrial Premises” under development**
- **TR-42.11 (Optical Fiber Systems):**
  -  – **New project: ANSI/TIA-568.3-D-1, “Optical Fiber Cabling Component Standard - Addendum 1, General Updates” circulating for industry ballot**



# TIA TR-42 Activities

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- **TR-42.12 (Optical Fibers and Cables):**
  - **ANSI/TIA-598-D-2, “Jacket Color for Wideband Laser-Optimized 50/125  $\mu\text{m}$  Multimode Fiber Cables (OM5)” approved for publication**
  - **New project: ANSI/TIA-455-95-A, “FOTP-95 Absolute Optical Power Test for Optical Fibers and Cables” circulating for industry ballot**
  - **New project: ANSI/TIA-598-D-1, “Optical Fiber Color Coding in Cable, Addendum for Additional Colors” circulating for industry ballot**
  -  – **Task Force formed to develop technical information on MMF for the purpose of supporting WDM applications**

# TIA TR-42 Activities

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- **TR-42.13 (Passive Optical Devices and Metrology)**
  - **New project: ANSI/TIA-455-171-B, "FOTP-171 IEC 61300-3-4 Attenuation by Substitution Measurement for Short Length Multimode Graded Index and Single-Mode Optical Fiber Cable Assemblies" circulating for committee ballot**
  - **New project: TIA-604-18-A, "FOCIS-18 Fiber Optic Intermateability Standard Type 1x16 and 2x16 Multifiber Push-on/ Multifiber Termination Push-on" circulating for industry ballot**

# TIA TR-42 Activities

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- **TR-42.13 (Passive Optical Devices and Metrology), cont.**
  - **New project: ANSI/TIA-604-5-F, "FOCIS 5 - Fiber Optic Connector Intermateability Standard, Type MPO (Multi-fiber Push On)" circulating for industry ballot**

# Upcoming TIA Meetings

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## **TR-42 Plenary Meetings**

**June 11 - 15, 2018**

**Pittsburgh, PA**

**[www.tiaonline.org](http://www.tiaonline.org)**

# Thank you

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