

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

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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:  
October 4-8, 2022 in St. Petersburg FLA and web**
- **Review TR-42 subcommittee activities**
  - 8 subcommittees met
- **Update on project development**
-  **This symbol highlights key points of interest**

# TIA TR-42 Activities

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- **TR-42.1 (Premises Infrastructure):**
  - **ANSI/TIA-568.1-E-1, “Generic Telecommunications Cabling for Customer Premises, Addendum 1: To add single-pair and WAP, first ballot to be circulated**
  - **ANSI/TIA-942-C, “Telecommunications Infrastructure Standard for Data Centers, Comments resolved and third ballot circulated**

# TIA TR-42 Activities

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- **TR-42.1 (Premises Infrastructure), cont.:**
  - **ANSI/TIA-570-E, revision of residential cabling standard, first ballot to be circulated**
  - **ANSI/TIA-758-C, “Customer-Owned Outside Plant Telecommunications Infrastructure Standard” circulated for industry ballot**
  - **ANSI/TIA-4966-1, addendum to the education standard to include single pair, first ballot to be circulated**

# TIA TR-42 Activities

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- **TR-42.1 (Premises Infrastructure), cont.:**
  - **ANSI/TIA-1179-B, “Healthcare Facility Telecommunications Infrastructure Standard”**  
**Comments resolved, to be circulated for re-ballot**
  - **New project: ANSI/TIA- 5017-A,**  
**“Telecommunications Physical Network Security Standard”** **Ballot to close October 31**

# TIA TR-42 Activities

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- **TR-42.3 (Pathways, Spaces, and Grounding):**
  - **ANSI/TIA-5048, AIM (Automated Infrastructure Management), re-affirmed, along with its addendum**
  - **Considering contributions on liquid immersion cooling**
- **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):**



- **ANSI/TIA-568.5-1, “Single Twisted-Pair Cabling and Components Standard Addendum 1, some corrections” Circulating for second industry ballot**
- **ANSI/TIA-1183-B, “Measurement Methods and Test Fixtures for Balunless Measurements of Balanced Components and Systems” Comments resolved, to be circulated for default ballot**



# TIA TR-42 Activities



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- **TR-42.7 (Copper Cabling), cont.:**
  - **New project: ANSI/TIA-568.6, “Single-Pair Multidrop Cabling and Components Standards” under development**
  - **New project: TSB-184-A-2, “Guidelines for Supporting Power Delivery over Balanced Single Twisted-Pair Cabling” Approved for circulation of second committee ballot**

# TIA TR-42 Activities

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- **TR-42.9 (Industrial Infrastructure):**

-  – **New project: ANSI/TIA-1005-B, “Telecommunications Infrastructure Standard for Industrial Premises” comments resolved, new ballot to be circulated**
-  – **New project: ANSI/TIA-568.7, “Balanced Single Twisted-Pair Communications Cabling and Components Standard for Industrial Premises” to be circulated for ballot**

# TIA TR-42 Activities

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- **TR-42.11 (Optical Fiber Systems):**
  - **ANSI/TIA-568.3-E Optical Fiber Cabling and Components. Document has been published.**
  - **ANSI/TIA-526-14-D, Adoption with modification of IEC 61280-4-1:2021 Installed cabling plant - Multimode attenuation measurement. Default ballot passed with one editorial comment. Document is approved for publication.**
  - **Discussions surrounding Tier 1 (OLTS) vs Tier 2 (OTDR) testing requirements in TIA, and the discrepancies to IEC and ISO/IEC. A task force was created to further study the topic.**

# TIA TR-42 Activities

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- **TR-42.11 (Optical Fiber Systems), cont.:**
  - **ANSI/TIA-568.3-E Addendum. On-going discussions on incorporating the polarity symbols from TSB-5069.**

# TIA TR-42 Activities

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- **TR-42.12 (Optical Fibers and Cables):**
  - **ANSI/TIA-492 series restructuring project**
    - **ANSI/TIA-4920000-C, Adoption with modification of IEC 60793-2 Ed9. Document was approved for committee ballot.**
    - **ANSI/TIA-492AAAF-1, Adoption with modification of IEC 60793-2-10 Ed7.1. New project was approved to adopt with modification of the consolidated version of IEC 60793-2-10 published in January 2022.**

# TIA TR-42 Activities

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- **TR-42.12 (Optical Fibers and Cables), cont.:**
  - **ANSI/TIA-455-111 (FOTP-111), adoption of IEC 60793-1-34 Measurement methods – Fibre curl. Ballot passed and approved for publication.**
  - **Revision of ANSI/TIA-598-D-2014 Optical Fiber Color Coding**
    - **Ink draw down procedure proposal was presented. The taskforce group will meet prior to the next TIA meeting to review the procedures in detail and revise if needed. The agreed procedure will be used for the next phase of the Munsell/CIELAB round robin study.**

# TIA TR-42 Activities

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- **TR-42.13 (Passive Optical Devices and Metrology)**
  - **IEC adoption projects continue to progress.**
    - **ANSI/TIA-621.1, adoption of IEC 61755-1:2022 General and guidance. Approved for committee ballot.**
    - **ANSI/TIA-622.1, adoption of IEC 61755-2-1:2022 Non-angled physically contacting fibres. Approved for committee ballot.**
    - **ANSI/TIA-622.2, adoption of IEC 61755-2-2:2022 Angled physically contacting fibres. Approved for committee ballot.**
    - **ANSI/TIA-622.4, adoption of IEC 61755-2-4:2015 Non-angled physically contacting fibres, reference connection. Ballot passed, will be published in early 2023.**
    - **ANSI/TIA-622.5, adoption of IEC 61755-2-5:2015 Angled physically contacting fibres, reference connection. Ballot passed, will be published in early 2023.**

# TIA TR-42 Activities

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- **TR-42.13 (Passive Optical Devices and Metrology), cont.**
  - **There was a new FOCIS document proposal on Alignment Independent Multifiber (AIM) connector. This AIM connector is compatible with both SAC (SN) and MDC connector and requires either SAC or MDC connector for breakout patching. Due to the SAC and MDC connectors are still under development in IEC SC86B, TR42.13 decided not to pursuit this FOCIS standardization until the SAC/MDC are more stable.**



# TIA TR-42 Activities

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- **TR-42.13 (Passive Optical Devices and Metrology), cont.**
  - **There is a call for interest for new activities. A few proposals were discussed during the meeting: connector cleaning recommendations for top of the cell tower installations; standards surrounding visual inspection; invited speakers from COBO to share their development; joint effort between Ethernet Alliance and TIA for interoperability testing; multicore fiber connector standardization (on-going work in ITU-T). Multiple committee members plan to bring in contribution at the next meeting.**

# TIA TR-42 Activities

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- **TR-42.13 (Passive Optical Devices and Metrology), cont.**
  - **New project: TIA-622-2, “Fibre Optic Connector Optical Interfaces – Part 2 2: Optical Interface Standard Single Mode Angled Physically Contacting Fibres” (adoption of IEC 61755-2-2) to be circulated for ballot**

# Upcoming TIA Meetings

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## **TR-42 Plenary Meetings**

**January 31 – February 4, 2023**

**To be hybrid Face-to-face and virtual**

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

# Thank you

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