

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


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Introduction to TIA

- **Telecommunications Industry Association**
- **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

- **Most recent TR-42 Plenary week:
June 13 - 17, 2016 in Tigard, OR**
- **Review TR-42 subcommittee activities**
 - 11 subcommittees met
- **Update on project development**
-  **This symbol highlights key points of interest**

5 TIA TR-42 Liaison Letters to IEEE 802.3

- 1-2. Drafts 6.1b and 7.1 of TSB-184-A “Guidelines for Supporting Power Delivery Over Balanced Twisted-Pair Cabling” shared and available in the private area**
- 3-4. Drafts 1.0 and 1.1 of TSB-5021 “Guidelines for the Assessment and Mitigation of Installed Cabling to Support 2.5GBASE-T and 5GBASE-T” shared and available in the private area**


5 TIA TR-42 Liaison Letters to IEEE 802.3

5. **TIA TR-42.13 will initiate a project to amend TIA-604-18 (FOCIS 18), Fiber Optic Connector Intermateability Standard – Type MPO-16**
 - **An APC end-face geometry variant will be added**
 - **This will allow for MPO-16 connectors, adapters, and device receptacles to achieve 45 dB return loss**
 - **Note: TIA 604-5 (FOCIS 5), Fiber Optic Connector Intermateability Standard – Type MPO, will not need to be amended, as it already includes APC geometry for 8-fiber and 12-fiber based MPO's**

TIA TR-42 Activities

- **TR-42.1 (Commercial Building Cabling):**
 - **ANSI/TIA-5018 “Structured Cabling Infrastructure Standard to support Distributed Antenna Systems” published**
 - **New project: ANSI/TIA-1179-A “Healthcare Facility Telecommunications Infrastructure Standard” circulating for industry ballot**
 - **New project: ANSI/TIA-942-B “Telecommunications Infrastructure Standard for Data Centers” circulating for committee ballot**

TIA TR-42 Activities



- **TR-42.3 (Pathways and Spaces):**
 - **New project: ANSI/TIA-569-D-1 “Revised Temperate and Humidity requirements for Telecommunications Spaces” circulating for industry ballot**
 -  – **New project: ANSI/TIA-569-D-2 “Guidelines for Supporting Remote Powering” circulating for committee ballot**

TIA TR-42 Activities


- **TR-42.5 (Terms and Symbols):**
 - Definitions, acronyms, units of measure, and symbols maintained in a working document
 - New project: ANSI/TIA-440-C, “Fiber Optic Terminology” circulating for industry ballot
- **TR-42.6 (Infrastructure Administration):**
 - New project: ANSI/TIA-606-C, “Administration Standard for Telecommunications Infrastructure” circulating for committee ballot

TIA TR-42 Activities

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


-  – **ANSI/TIA-568-C.2-1, “Specifications for 100Ω Category 8 Cabling” published**
- **New project: ANSI/TIA-1183-1, “Test Fixtures for Balunless Measurements of Balanced Components and Systems to 2 GHz” published**
-  – **New project: TSB-184-A, “Guidelines for Supporting Power Delivery Over Balanced Twisted-Pair Cabling” circulating for committee ballot (drafts 6.1b and 7.1 available in the IEEE P802.3bt private area)**

TIA TR-42 Activities

- **TR-42.7 (Copper Cabling), cont.:**
 - **New project: ANSI/TIA-1152-A, “Requirements for Field Test Instruments” circulating for industry ballot**
 - **New project: ANSI/TIA-1183-A, “Measurement Methods and Test Fixtures for Balunless Measurements of Balanced Components and Systems” circulating for industry ballot**
 -  – **New project: ANSI/TIA-568.2-D, “Balanced Twisted-Pair Telecommunications Cabling and Components Standard” under development**



TIA TR-42 Activities

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

-  – **New project: TSB-5021, “Guidelines for the use of Installed Cabling to Support 2.5GBASE-T and 5GBASE-T” circulating for committee ballot (drafts 1.0 and 1.1 available in the IEEE P802.3bz private area)**
- **New project: ANSI/TIA-568.4-D, “Broadband Coaxial Cabling and Components Standard” opened (development to begin after ANSI/TIA-568-C.2-1 is approved for publication)**

TIA TR-42 Activities

- **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” under development**
-  – **New project: ANSI/TIA-1005-A-3, “1G Industrial Cabling for One Pair Type B (40 meters) (1000BASE-T1) for E2 and E3 Environments” under development**

TIA TR-42 Activities

- **TR-42.10 (Sustainable Information Communications Technology)**
 - **New project: TSB-5046, “Standard Process for Sustainable Information Communications Technology Manufacturers” circulating for committee ballot**
- **TR-42.11 (Optical Fiber Systems):**
 - **New project: TSB-5040: “Understanding Duplex and Single Row Fiber Polarity” under development**

TIA TR-42 Activities

- **TR-42.11 (Optical Fiber Systems), cont.:**

-  – **New project: ANSI/TIA-568.3-D: "Optical Fiber Cabling and Components Standard" circulating for default ballot**
 - **Allows other than 12-fiber row widths in array system connectivity**
 - **Adds specification for wideband multimode fiber**
 - **OM1, OM2, and OS1 are no longer recognized**
 - **OM3 and OM4 maximum attenuation at 850 nm lowered to 3.0 dB/km**
 - **Return loss of single-mode connections and splices raised from 26 dB to 35 dB**


TIA TR-42 Activities

- **TR-42.12 (Optical Fibers and Cables):**



- **TIA-492AAAE, “Detail Specification for 50- μ m Core Diameter/125- μ m Cladding Diameter Class 1a Graded-Index Multimode Optical Fibers with Laser-Optimized Bandwidth Characteristics Specified for Wavelength Division Multiplexing” published**
- **New project: ANSI/TIA-598-D-1, “Optical Fiber Color Coding in Cable, Addendum for Additional Colors” circulating for industry ballot**
- **10+ documents circulating for reaffirmation or committee ballot**

TIA TR-42 Activities

- **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 industry ballot**
 -  – **New project: TIA-604-18-A, "FOCIS-18 Fiber Optic Intermateability Standard Type 1x16 and 2x16 Multifiber Push-on/ Multifiber Termination Push-on" under development**

TIA TR-42 Activities

- **TR-42.16 (Grounding and Bonding):**
 - **Errata sheet for ANSI/TIA-607-A approved for publication**
 - **New project: ANSI/TIA-607-C-1, "Bonding in Multi-tenant Buildings" circulating for committee ballot**

Upcoming TIA Meetings

TR-42 Plenary Meetings

October 3 - 7, 2016

Philadelphia, PA

www.tiaonline.org

Thank you

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