

# 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:  
Jun 8 - 12, 2020 via GoToWebinar**
- **Review TR-42 subcommittee activities**
  - 7 subcommittees met
- **Update on project development**
-  **This symbol highlights key points of interest**

# TIA TR-42 Liaison Letter to IEEE 802.3

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- **No new incoming liaison letters from TR-42**
- **Response needed to TIA liaison sent on January 31, 2020**
  - **TIA TR-42 requests assistance resolving the complexity between device components and cabling system components with respect to high performance EMC compatibility**
  - **The IEEE 802.3da Task Force may be able to assist**

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

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- **10BASE-T1L, 10BASE-T1S, 100BASE-T1, and 1000BASE-T1 PHYs do not have a designated common mode voltage range, which increases the burden on cabling components and field installation practices to support elevated electromagnetic noise levels of industrial applications**
- **The IEEE 802.3 Working Group is requested to specify isolation classes and corresponding working common mode voltages for affected applications**


# TIA TR-42 Activities

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- **TR-42.1 (Premises Infrastructure):**
  - **TSB-162-B, “Telecommunications Cabling Guidelines for Wireless Access Points” approved for publication**
  - **New project: ANSI/TIA-758-C, “Customer-Owned Outside Plant Telecommunications Infrastructure Standard” circulating for industry ballot**
  - **New project: ANSI/TIA-4966-A, Telecommunications Infrastructure Standard for Educational Facilities” circulating for industry ballot**


# TIA TR-42 Activities

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- **TR-42.1 (Premises Infrastructure), cont.:**
  -  – **New project: ANSI/TIA-568.0-E-1 (previously ANSI/TIA-568.0-D-2), “Generic Telecommunications Cabling for Customer Premises, Addendum 1: Single Balanced Twisted-pair Use Cases and Topology” circulating for committee ballot**
  - **New project: ANSI/TIA-862-C, “Structured Cabling Infrastructure Standard for Intelligent Building Systems” circulating for committee ballot**

# TIA TR-42 Activities



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- **TR-42.1 (Premises Infrastructure), cont.:**
  - **New project: ANSI/TIA-942-B-1, “Telecommunications Infrastructure Standard for Data Centers, Addendum 1: Edge Data Centers” under development**
  -  – **Joint TR-42.1/TR-42.7 Task Group formed to study building automation and multidrop single twisted-pair implementations**



# TIA TR-42 Activities

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- **TR-42.5 (Terms and Symbols):**
  -  – Definitions, acronyms, units of measure, and symbols maintained in a working document
- **TR-42.7 (Copper Cabling):**
  - New project: ANSI/TIA-568.2-D-2, “Balanced Twisted-Pair Telecommunications Cabling and Components Standard, Addendum 2: Power Delivery Over Balanced Twisted-Pair Cabling” circulating for default ballot
  -  – New project: ANSI/TIA-568.5, “Single Twisted-Pair Cabling and Components Standard” circulating for industry ballot

# TIA TR-42 Activities

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



- **New project: ANSI/TIA-5071, “Requirements for Field Test Instruments and Measurements for Balanced Single Twisted-Pair Cabling” circulating for committee ballot**





- **New project: ANSI/TIA-568.6, “Single-Pair Multidrop Cabling and Components Standards” under development**
- **Task Group studying category 8 short channel alien crosstalk has completed their work and will go dormant pending additional contributions**

# 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” circulating for committee ballot**
-  – **New project: ANSI/TIA-568.7, “Balanced Single Twisted-Pair Communications Cabling and Components Standard for Industrial Premises” under development**

# TIA TR-42 Activities

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- **TR-42.11 (Optical Fiber Systems):**
  - **TSB-5069 , “Optical Fiber Channel Polarity - Duplex - Single Row Fiber - Double Row Fiber Polarity” published**
  -  – **New project: ANSI/TIA-568.3-E, “Optical Fiber Cabling Components Standard” circulating for committee ballot**
  - **New project: TIA-526-14-D, “Optical Power Loss Measurement of Installed Multimode Fiber Cable Plant” circulating for committee ballot**

# TIA TR-42 Activities

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- **TR-42.12 (Optical Fibers and Cables):**
  - **ANSI/TIA-492AAAF, “Sectional Specification for Category A1 Graded-Index Multimode Optical Fibers (adoption of IEC 60793-2-10)” published**
  - **ANSI/TIA-492CAAC, “Sectional Specification for Class B Single-mode Optical Fibers (adoption of IEC 60793-50)” published**
  - **ANSI/TIA-455-82-B, “FOTP-82 Fluid Penetration Test for Fluid-Blocked Fiber Optic Cable” published**

# TIA TR-42 Activities

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- **TR-42.12 (Optical Fibers and Cables), cont.:**
  - **ANSI/TIA-455-191-C, “FOTP-191 Optical Fibres - Part 1-45: Measurement Methods and Test Procedures - Mode Field Diameter (adoption of IEC 60793-1-45)” published**
  - **ANSI/TIA-455-244-A, “FOTP-244-A Methods for Measuring the Change in Transmittance of Optical Fibers in Expressed Buffer Tubes When Subjected to Temperature Cycling” approved for publication**

# TIA TR-42 Activities

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- **TR-42.12 (Optical Fibers and Cables), cont.:**
  - **New project: ANSI/TIA-455-3-C, “FOTP-3 Procedure to Measure Temperature Cycling Effects on Optical Fiber Units, Optical Cable, and Other Passive Fiber Components” circulating for industry ballot**
  - **New project: ANSI/TIA-455-62-B, “FOTP-62 Macrobending Loss (adoption of IEC 60793-1-47)” circulating for industry ballot**
  - **New project: ANSI/TIA-455-67-A, “FOTP-67 Dry Heat (adoption of IEC 60793-1-51)” circulating for industry ballot**

# TIA TR-42 Activities

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- **TR-42.12 (Optical Fibers and Cables), cont.:**
  - **New project: ANSI/TIA-455-74-A, “FOTP-74 Water Immersion (adoption of IEC 60793-1-53)” circulating for industry ballot**
  - **New project: ANSI/TIA-455-78-C, “FOTP-78 Attenuation (adoption of IEC 60793-1-40)” circulating for industry ballot**
  - **New project: ANSI/TIA-455-80-D, “FOTP-80 Cut-off Wavelength (adoption of IEC 60793-1-44)” circulating for industry ballot**



# TIA TR-42 Activities

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- **TR-42.12 (Optical Fibers and Cables), cont.:**
  - **New project: ANSI/TIA-455-160-A, “FOTP-160 Damp Heat (Steady State) (adoption of IEC 60793-1-50)” circulating for industry ballot**
  - **New project: ANSI/TIA-455-175-B, “FOTP-175 Chromatic Dispersion (adoption of IEC 60793-1-42)” circulating for industry ballot**
  - **New project: ANSI/TIA-455-176-A, “FOTP-176 Fibre Geometry (adoption of IEC 60793-1-20)” circulating for industry ballot**

# TIA TR-42 Activities

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- **TR-42.12 (Optical Fibers and Cables), cont.:**
  - **New project: ANSI/TIA-455-177-B, “FOTP-177 Numerical Aperture (adoption of IEC 60793-1-43)” circulating for industry ballot**
  - **New project: ANSI/TIA-455-178-C, “FOTP-178 Coating Strippability (adoption of IEC 60793-1-32)” circulating for industry ballot**

# TIA TR-42 Activities

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- **TR-42.12 (Optical Fibers and Cables), cont.:**
  - **New project: TIA-4920000-C, “Generic Specification for Optical Fibers (adoption of IEC 60793-2)” under development**
  - **New project: ANSI/TIA-598-E, “Optical Fiber Color Coding” under development**
  - **New project: ANSI/TIA-455-111-B, “FOTP-111 Fiber Curl (adoption of IEC 60793-1-34)” under development**
  - **New project: ANSI/TIA-455-122-C, “FOTP-122 Polarization Mode Dispersion (adoption of IEC 60793-1-48)” under development**

# TIA TR-42 Activities

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- **TR-42.13 (Passive Optical Devices and Metrology)**
  - **New project: ANSI/TIA-604-19, “FOCIS 19-Fiber Optic Connector Intermateability Standard, Type CS Connector” circulating for industry ballot**
  - **New project: ANSI/TIA-604-10-C, “FOCIS 10-Fiber Optic Connector Intermateability Standard, Type LC Connector” circulating for committee ballot**

# Upcoming TIA Meetings

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## **TR-42 Plenary Meetings**

**June 8 - 12, 2020**

**Virtual GoToWebinar**

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

**Thank you**

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