


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

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The Siemon Company
Teleconference Update
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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:
Jan 27 - 31, 2020 in New Orleans, LA**
- **Review TR-42 subcommittee activities**
 - 8 subcommittees met
- **Update on project development**
-  **This symbol highlights key points of interest**

TIA TR-42 Liaison Letter to IEEE 802.3



- **TIA TR-42 requests assistance resolving the complexity between device components and cabling system components with respect to high performance EMC compatibility**
- **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**

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

- **The IEEE 802.3 Working Group is requested to specify isolation classes and corresponding working common mode voltages for affected applications**
- **The IEEE 802.3cr Task Force may be able to assist**

TIA TR-42 Activities

- **TR-42.1 (Premises Infrastructure):**



-  – **ANSI/TIA-568.0-E, “Generic Telecommunications Cabling for Customer Premises” approved for publication**
-  – **ANSI/TIA-568.1-E, “Commercial Building Telecommunications Infrastructure Standard” approved for publication**
- **New project: ANSI/TIA-758-C, “Customer-Owned Outside Plant Telecommunications Infrastructure Standard” circulating for industry ballot**

TIA TR-42 Activities


- **TR-42.1 (Premises Infrastructure), cont.:**
 - **New project: ANSI/TIA-4966-A, Telecommunications Infrastructure Standard for Educational Facilities” circulating for industry ballot**
 - **New project: TSB-162-A, “Telecommunications Cabling Guidelines for Wireless Access Points” circulating for committee ballot**
 - **New project: ANSI/TIA-942-B-1, “Telecommunications Infrastructure Standard for Data Centers, Addendum 1: Edge Data Centers” under development**

TIA TR-42 Activities

- **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” under development**
-  – **New project: ANSI/TIA-862-C, “Structured Cabling Infrastructure Standard for Intelligent Building Systems” under development**

TIA TR-42 Activities


- **TR-42.1 (Premises Infrastructure), cont.:**
 -  – **Joint TR-42.1/TR-42.7 Task Group formed to study building automation and multidrop single twisted-pair implementations**
- **TR-42.3 (Pathways, Spaces, and Grounding):**
 - **Developing PAR to update ANSI/TIA-606-C, “Administration Standard for Telecommunications Infrastructure”**
 - **Developing PAR to update ANSI/TIA-5048, “Automated Infrastructure Management (AIM) Systems – Requirements, Data Exchange and Applications”**

TIA TR-42 Activities

- **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 industry ballot**
-  – **New project: ANSI/TIA-568.5, “Single Twisted-Pair Cabling and Components Standard” circulating for committee ballot**

TIA TR-42 Activities

- **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**
-  – **Developing PAR to create ANSI/TIA-568.6, “Single-Pair Multidrop Cabling and Components Standards” (TBD) under development**
-  – **Task Group studying category 8 short channel alien crosstalk**

TIA TR-42 Activities

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




- **New project: ANSI/TIA-1005-B, “Telecommunications Infrastructure Standard for Industrial Premises” under development**

- **The content of proposed ANSI/TIA-1005-A-2, “Telecommunications Infrastructure Standard for Industrial Premises, Addendum 2: 1G Industrial Cabling for Four Pair (100 meters) (1000BASE-T) for E2 and E3 Environments” will be incorporated into this revision of ANSI/TIA-1005**

TIA TR-42 Activities

- **TR-42.9 (Industrial Infrastructure), cont.:**
 -  – **New project: ANSI/TIA-XXXX, “Balanced Single Twisted-Pair Communications Cabling and Components Standard for Industrial Premises” under development**

TIA TR-42 Activities

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

TIA TR-42 Activities

- **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)” approved for publication**
 - **ANSI/TIA-492CAAC, “Sectional Specification for Class B Single-mode Optical Fibers (adoption of IEC 60793-50)” approved for publication**
 - **ANSI/TIA-455-82-B, “FOTP-82 Fluid Penetration Test for Fluid-Blocked Fiber Optic Cable” approved for publication**

TIA TR-42 Activities

- **TR-42.12 (Optical Fibers and Cables), cont.:**
 - **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**
 - **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)” approved for publication**

TIA TR-42 Activities

- **TR-42.12 (Optical Fibers and Cables), cont.:**
 - **New project: ANSI/TIA-455-3-B, “FOTP-3-C Procedure to Measure Temperature Cycling Effects on Optical Fiber Units, Optical Cable, and Other Passive Fiber Components” circulating for committee ballot**
 - **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**

TIA TR-42 Activities

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

Upcoming TIA Meetings

TR-42 Plenary Meetings

June 8 - 12, 2020

Denver, CO

www.tiaonline.org

Thank you

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