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

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Teleconference Update
March 16, 2020
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 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
TIA TR-42 Activities

• **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
TIA TR-42 Activities

• TR-42.1 (Premises Infrastructure), cont.:
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”
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):
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):
  • 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: 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-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
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: 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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