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

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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:
  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

• 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
• 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

• **TR-42.1 (Premises Infrastructure):**
  – New project: ANSI/TIA-4966-A, Telecommunications Infrastructure Standard for Educational Facilities” circulating for industry ballot
TIA TR-42 Activities

• TR-42.1 (Premises Infrastructure), cont.:
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
  – Joint TR-42.1/TR-42.7 Task Group formed to study building automation and multidrop single twisted-pair implementations
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
  - 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

• 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

- **TR-42.11 (Optical Fiber Systems):**
  - 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

• TR-42.12 (Optical Fibers and Cables):
  – ANSI/TIA-455-82-B, “FOTP-82 Fluid Penetration Test for Fluid-Blocked Fiber Optic Cable” published
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
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
TIA TR-42 Activities

• TR-42.12 (Optical Fibers and Cables), cont.:
  – 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

- TR-42.12 (Optical Fibers and Cables), cont.:  
  - New project: ANSI/TIA-455-175-B, “FOTP-175 Chromatic Dispersion (adoption of IEC 60793-1-42)” circulating for industry ballot  
TIA TR-42 Activities

• TR-42.12 (Optical Fibers and Cables), cont.:
TIA TR-42 Activities

• TR-42.12 (Optical Fibers and Cables), cont.:
  – 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 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

TR-42 Plenary Meetings
June 8 - 12, 2020
Virtual GoToWebinar
www.tiaonline.org
Thank you

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