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

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November, 2018
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:
  Oct 1 – Oct 5, 2018 in Mesa, AZ

• 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

• Preview: TIA TR-42 will respond to a request from IEEE 802.3 to provide guidance on MDI connector standardization
  - TIA TR42 concluded the single pair connector selection process and identified interfaces as follows:
    1. IEC 63171-1 CD for M₁₁₁C₁E₁ environments (e.g. commercial enterprise buildings)
    2. IEC 61076-3-125 CDV for M₂₁₂C₂E₂/M₃₁₃C₃E₃ and other non M₁₁₁C₁E₁ environments (e.g. industrial)
TIA suggests that IEEE 802.3 consider these two standardized connectors as MDI interface connectors.

This will improve the market adoption and growth of single pair cabling by having standardized connectors for cabling and equipment interfaces.
TIA TR-42 Activities

• TR-42.1 (Premises Infrastructure):
  – New project: ANSI/TIA-568.1-E, “Commercial Building Telecommunications Infrastructure Standard” circulating for industry ballot
TIA TR-42 Activities

• TR-42.1 (Premises Infrastructure), cont.:
TIA TR-42 Activities

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

• **TR-42.3 (Pathways, Spaces, and Grounding):**
  - New project: ANSI/TIA-569-E, “Commercial Building Standard for Telecommunications Pathways and Spaces” circulating for industry ballot
TIA TR-42 Activities

• TR-42.3 (Pathways, Spaces, and Grounding), cont.:
  – New project: ANSI/TIA-607-D, Generic Telecommunications Bonding and Grounding (Earthing) for Customer Premises circulating for industry ballot

• TR-42.5 (Terms and Symbols):
  – Definitions, acronyms, units of measure, and symbols maintained in a working document
TIA TR-42 Activities

• **TR-42.7 (Copper Cabling):**
  - New project: ANSI/TIA-568.2-D-1, “Balun Specifications for Testing Category 8 Cabling and Components” circulating for industry ballot
TIA TR-42 Activities

• TR-42.7 (Copper Cabling), cont.:
  - Task Group studying category 8 short channel alien crosstalk
  - Task Group examining and gaining insight on the electrical performance levels of all categories of cabling above 60°C/140°F
  - Task Group developing cord installation guidelines for proposed ANSI/TIA-568.2-D-2
  - Task Group investigating component specifications for field terminated plugs
TIA TR-42 Activities

• TR-42.9 (Industrial Infrastructure):
  – New project: 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” circulating for industry ballot
TIA TR-42 Activities

• TR-42.9 (Industrial Infrastructure), cont.:
  – New project: ANSI/TIA-1005-A-3, “Telecommunications Infrastructure Standard for Industrial Premises, Addendum 3: 1G Industrial Cabling for One Pair Type B (40 meters) (1000BASE-T1) for E2 and E3 Environments” circulating for committee ballot
TIA TR-42 Activities

- TR-42.11 (Optical Fiber Systems):
  - ANSI/TIA-568.3-D-1, “Optical Fiber Cabling Component Standard - Addendum 1, General Updates” approved for publication
TIA TR-42 Activities

• TR-42.12 (Optical Fibers and Cables):
  – New project: ANSI/TIA-455-95-A, “FOTP-95 Absolute Optical Power Test for Optical Fibers and Cables” circulating for industry ballot
  – New project: ANSI/TIA-455-82-C, “FOTP-82 Fluid Penetration Test for Fluid-Blocked Fiber Optic Cable” under development
  – New project: 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” under development
TIA TR-42 Activities

• TR-42.12 (Optical Fibers and Cables), cont.:
  – New project: TIA-4920000-C, adopt IEC 60793-2, "Generic Specification for Optical Fibers” under development
TIA TR-42 Activities

• TR-42.12 (Optical Fibers and Cables), cont.:
  – New project: ANSI/TIA-598-E, “Optical Fiber Color Coding” PAR initiated
  – “VCSEL Weighting Functions” Task Group will reassess and change, as necessary, the TIA-specified VCSEL DMD weighting functions throughout the wavelength range of interest
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-01 Connector" under development
TIA TR-42 Activities

- TR-42.13 (Passive Optical Devices and Metrology)
  - 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" approved for publication
  - New project: ANSI/TIA-604-5-F, "FOCIS 5 - Fiber Optic Connector Intermateability Standard, Type MPO (Multi-fiber Push On)" approved for publication
Upcoming TIA Meetings

TR-42 Plenary Meetings
January 29 – February 1, 2019
Orlando, FL

www.tiaonline.org
Thank you

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