

# ***TIA TR-42 Liaison to IEEE 802.3***

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# ***Introduction to TIA***

- **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**

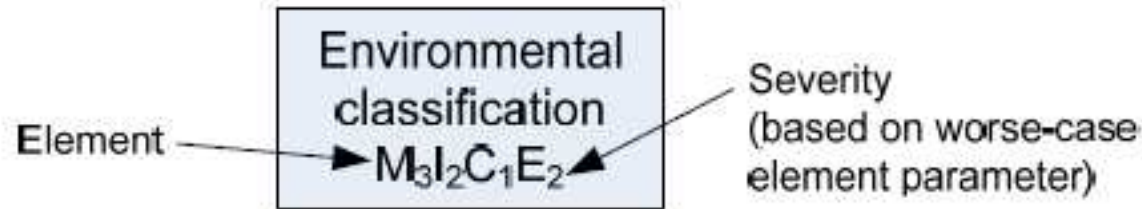
# *Agenda and Meeting Overview*

- **Most recent TR-42 Plenary meetings: October 7 - 11, 2013 in Philadelphia, PA**
- **Review TR-42 subcommittee activities**
  - **11 subcommittees met**
- **Update on project development**
-  **This symbol highlights key points of interest**

## ***TR-42 Liaison to IEEE 802.3***

- **TIA TR-42 supports the IEEE P802.3bp objective of 1 Gb/s operation in automotive and industrial environments (e.g. EMC, temperature)**
- **The TR-42.9 Industrial Cabling Subcommittee is developing industrial cabling specifications for support of applications up to 1 Gb/s in MICE2 and MICE3 environments**

# TR-42 Liaison to IEEE 802.3



		Elements			
		M	I	C	E
Parameters	Shock/bump	Particulate ingress	Ambient temperature	Electrostatic discharge	
	Vibration	Immersion	Humidity	Radiated RF	
	Crush		Liquid pollution	Conducted RF	
	Impact		Gaseous pollution	Magnetic field	

NOTE: The parameters listed here are not all inclusive of the MICE elements. See annex F of ANSI/TIA-568-C.0 for a complete listing of parameters.

## ***TR-42 Liaison to IEEE 802.3, cont.***

- **Two TIA Standards might be helpful in understanding these environments:**
  - **TIA TSB-185, “Environmental Classification (MICE) Tutorial”, which outlines the necessary parameters and three levels defining the MICE environments**
  - **ANSI/TIA-1005-A, “Telecommunications Infrastructure Standard for Industrial Premises”, which provides requirements for industrial cabling**

# ***IEEE 802.3 Liaisons Received***



- **Confirming TIA TR-42 receipt of two incoming IEEE 802.3 liaisons:**
  - **Liaison to TIA TR-42 regarding alignment between TIA TR-42.7 and ISO/IEC JTC 1/SC 25/WG 3**
  - **Liaison letter to TIA Subcommittee TR-42.11 regarding harmonization of single-mode connection Return Loss**
- **No formal responses prepared at this time**

# ***TR-42 Activities***

- **TR-42.1 (Commercial Building Cabling):**
  - **TSB-162-A, “Telecommunications Guidelines for Wireless Access Points” approved for publication**
  - **New project: ANSI/TIA-4966, “Telecommunications Infrastructure for Educational Buildings and Spaces” circulating for default ballot**



# *TR-42 Activities*

- **TR-42.1 (Commercial Building Cabling), cont:**
  -  – **New project: ANSI/TIA-568.0-D, “Generic Telecommunications Cabling for Customer Premises” circulating for committee ballot**
  -  – **New project: ANSI/TIA-568.1-D, “Commercial Building Telecommunications Cabling Standard” circulating for committee ballot**

# ***TR-42 Activities***

- **TR-42.1 (Commercial Building Cabling), cont.:**
  - **New project: ANSI/TIA-862-B, “Building Automation Systems Cabling Standard” circulating for committee ballot**
  - **New project: TSB-xxxx “Structured Cabling Infrastructure Standard to support Distributed Antenna Systems” under development**

# ***TR-42 Activities***

- **TR-42.1 (Commercial Building Cabling), cont.:**
  - **New project: ANSI/TIA-xxxx  
“Telecommunications Physical Network Security Standard” under development**
- **TR-42.2 (Residential Infrastructure):**
  - **No updates**


# ***TR-42 Activities***

- **TR-42.3 (Pathways and Spaces):**
  - **New project: ANSI/TIA-569-D “Commercial Building Standard for Telecommunications Pathways and Spaces” under development**


# ***TR-42 Activities***

- **TR-42.5 (Terms and Symbols):**
  - **Definitions, acronyms, units of measure, and symbols maintained in a working document**
  - **New project: ANSI/TIA-440-C, “Fiber Optic Terminology” circulating for industry ballot**
- **TR-42.6 (Infrastructure Administration):**
  - **No new project status updates**

# *TR-42 Activities*

- **TR-42.7 (Copper Cabling):**
  - **New project: TSB-1197, “Mode Conversion Parameters for Balanced Twisted-Pair Cabling” circulating for default ballot**
  -  – **New project: ANSI/TIA-568-C.2-1, “Balanced Twisted-Pair Telecommunications Cabling and Components Standard, Addendum 1: Specifications for 100Ω Category 8 Cabling” under development**

# *TR-42 Activities*


- **TR-42.7 (Copper Cabling), cont.:**
  - **2-connector, 30-meter channels are currently defined**
  - **Upper frequency bandwidth specification remaining at 2 GHz**
  -  – **Return loss requirements are under scrutiny**
  - **Task Group working to develop class II performance criteria/limits (channel only at this time)**

# ***TR-42 Activities***


- **TR-42.7 (Copper Cabling), cont.:**
  - **New project: ANSI/TIA-1152-A, “Requirements for Field Test Instruments” under development**
  - **New project: ANSI/TIA-1183-1, “Test Fixtures for Balunless Measurements of Balanced Components and Systems to 2 GHz” under development**




# *TR-42 Activities*

- **TR-42.7 (Copper Cabling), cont.:**
  -  – **New project: TSB-xxxx, “Internally-Generated Impulse Noise Characterization, Detection, and Mitigation” under development**
  - **New project: ANSI/TIA-568.4-D, “Broadband Coaxial Cabling and Components Standard” opened (development to begin after ANSI/TIA-568-C.2.1 publishes)**

# *TR-42 Activities*

- **TR-42.7 (Copper Cabling), cont.:**
  -  – **New project: ANSI/TIA-568.2-D, “Balanced Twisted-Pair Telecommunications Cabling and Components Standard” opened (development to begin after ANSI/TIA-568-C.2.1 publishes)**


# *TR-42 Activities*

- **TR-42.9 (Industrial Infrastructure):**
  - **New project: ANSI/TIA-1005-A, “Telecommunications Infrastructure Standard for Industrial Premises Addendum 1, M12-8 X-coding Connector for Industrial Premises” under development**
  -  – **Noise induced on cabling carrying 1000BASE-T in E2 and E3 environments under study**

# ***TR-42 Activities***

- **TR-42.10 (Sustainable Information Communications Technology)**
  - **New project: ANSI/TIA-4994, “Standard for Sustainable Information Communications Technology” circulating for industry ballot**
- **TR-42.11 (Optical Fiber Systems):**
  - **TSB-4979: "Practical Considerations for Implementation of Multimode Launch Conditions in the Field” approved for publication**

# *TR-42 Activities*

- **TR-42.11 (Optical Fiber Systems), cont.:**
  - **New project: ANSI/TIA-526-14-C: "Optical Power Loss Measurement of Installed Multimode Fiber Cable Plant" circulating for committee ballot**
  -  – **New project: ANSI/TIA-568.3-D: "Optical Fiber Cabling Components Standard " circulating for committee ballot**
  - **Task Group formed to consider PON splitter specifications**
  - **19 documents up for 5-year review**

# ***TR-42 Activities***

- **TR-42.12 (Optical Fibers and Cables):**
  - **New project: ANSI/TIA-598-D, “Cable Color Coding” circulating for default ballot**
  - **20+ documents circulating for reaffirmation or committee ballot**

# ***TR-42 Activities***

- **TR-42.13 (Passive Optical Devices and Metrology):**
  - **New project: TSB-4947: "Guidance for Adhesive Usage in Fiber Optic Components" circulating for committee ballot**
- **TR-42.16 (Grounding and Bonding):**
  - **ANSI/TIA-607-B-2, "Structural Metal" approved for publication**

# *Upcoming TIA Meetings*

**TR-42.7 Interim Meeting**

**December 10 - 11, 2013**

**Miami, FL**

**TR-42 Plenary Meetings**

**January 27 - 31, 2014**

**Ft. Myer's, FL**

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



***Thank you***

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