

## Cabling Standards Update

### Telecommunications Industry Association (TIA):

During the week of October 6, 2003 the TIA TR-42 meeting took place at the gateway to the West, beautiful St-Louis, Missouri. At this meeting, the odd number sub-committee chairs and vice-chairs were up for election. Each of these mandates has a duration of two years. The even number sub-committee chairs and vice-chairs as well as the TR-42 chair and vice-chair will be up for election at the next meeting to be held in February 2004.

### **TR 42.1 Commercial Building Telecommunications Cabling**

Herb V. Congdon II from Tyco Electronics was elected chair and Julie Roy from NORDX/CDT was elected vice-chair.

In the works:

- Draft ANSI/TIA/EIA-568-B.1-5, *Additional Cabling Guidelines for Telecommunications Enclosures* was out for its first industry ballot. We resolved all technical comments and it was approved to go out for default ballot. This draft discusses the impact of the use of a telecommunications enclosure in the cabling infrastructure, and provides the appropriate structured cabling guidelines.
- Draft ANSI/TIA/EIA-568-B.1-6, *Additional Cabling Guidelines for DC Power* was out for its first industry ballot. We resolved all technical comments and it was approved to go out for a second industry ballot. One of the main changes is the scope of the document, it was approved to have a document that was more generic regarding power sources and not limit to the DTE power source only. The document still discusses cabling guidelines when DC power is inserted onto a structured cabling infrastructure to provide power to low voltage applications.
- The draft TSB on *Static Discharge Between LAN Cabling and Data Terminal Equipment* was out for industry ballot. Only editorial comments were received. The document will be editorially revised and be published as TSB-153. This TSB provides installation guidelines to mitigate Electro Static Discharge effects in balanced twisted pair cabling systems.
- *The Telecommunications Infrastructure Standard for Data Centers* draft document was out for its first industry ballot. We resolved all technical comments and it was approved to have draft 3.0 out for second industry ballot sometime in November.
- A call for interest on a Health Care standard was issued by TIA. A lot of interest was shown. TR 42.1 created a study group to propose a scope of work and to evaluate what would be required to satisfy this need.
- It is expected that the study group created at the June meeting to evaluate the need for a standard on cabling infrastructure to support wireless access points will propose a scope of work at the next meeting in February 2004.

## **TR 42.2 Residential Telecommunications Infrastructure**

The revision of ANSI/TIA/EIA-570-A to develop a B version was started a few months ago. It was approved to send the draft ANSI/TIA/EIA-570-B out for final default ballot. If no technical comments are received, it has been approved to have the document published. Some major changes: the introduction of Category 5e, Category 6 and optical fiber cabling systems, guidelines on cabling administration (with the exception of multi-dwelling units which are considered as commercial environments and should follow ANSI/TIA/EIA-606-A), and Coax testing.

## **TR 42.3 Commercial Building Telecommunications Pathways and Spaces**

Steve Huffaker from Bank One Corporation was elected chair and Glenn Sexton from Northwest Information Services was elected vice-chair.

The revision of ANSI/TIA/EIA-569-A to develop a B version was started a couple of years ago. It was approved to send the draft ANSI/TIA/EIA-569-B out for final default ballot. This means that this document is going into its final stage and we should expect publication approval at the February 2004 meeting. Currently, the main contentious points are related to telecommunications enclosures space requirements.

## **TR 42.4 Outside Plant Telecommunications Infrastructure**

The draft document ANSI/TIA/EIA-758-A was out for final default ballot. Only one technical comment was received and resolved at this meeting. It was approved to go out for publication. The document will be available via Global Engineering Document at [www.global.ihs.com](http://www.global.ihs.com).

## **TR 42.5 Telecommunications Infrastructure Terms and Symbols**

Peter Sharp from Giffels Associated limited was elected chair and Steve Huffaker from Bank One Corporation was elected vice-chair.

There is not need for an update of the activity of this sub-committee as the mandate of this group is to develop and maintain the master glossary of terms and symbols including acronyms, abbreviations and units of measurement for all standards developed in TR-42.

## **TR 42.6 Telecommunications Infrastructure Administration**

Since ANSI/TIA/EIA-606-A has been published, no new substantially interesting subjects have been presented. It was proposed and accepted that the sub-committee will go dormant at this time due to lack of further assignments. Until further notice, no future meetings have been planned.

## TR 42.7 Telecommunications Copper Cabling Systems

Paul Z. Vanderlaan from Belden Wire and Cable Company was elected chair and Valerie Rybinski from Hitachi Cable Manchester Inc. was elected vice-chair.

In the works:

- The draft ANSI/TIA/EIA-568-B.2-6, *Category 6 Related Component Test Procedures* was approved for publication. This draft contains refinements and enhancements to the measurement methods specified for Category 6 components in the TIA/EIA-568-B.2-1 standard.
- The draft ANSI/TIA/EIA-568-B.2-7, *Reliability Specification Requirements for Copper Connecting Hardware* was out for its first industry ballot. This draft will replace the requirements of ANSI/TIA/EIA-568-B.2, annex A and annex K.6.2.2, and modifies the requirements of ANSI/TIA/EIA-568-B.2 clause 5.3.5. It was approved to have the next draft out for ballot.
- The draft ANSI/TIA/EIA-568-B.2-8, *Additional Component Requirements for DTE Power* was terminated. The group feels that there is no need for a specific component addenda on the subject.
- A project was approved to create a new addendum 9 to ANSI/TIA/EIA-568-B.2 to specify additional Category 6 balance requirements and measurement procedures.
- A project was approved to create a new addendum 10 to ANSI/TIA/EIA-568-B.2 to specify requirements for an augmented category 6 cabling system (the word “augmented” was chosen to be consistent with IEEE nomenclature).
- A project was approved to create a new TSB on the investigation of balanced cabling performance up to 625 MHz for both TIA Category 6 and Category 5e cabling for IEEE 802.3 10GBASE-T applications. The goal of this project is to study the measurements of cabling performance and the effect of alien crosstalk up to 625 MHz.
- It was approved to send a liaison letter to IEEE to inform them of the creation of 2 new projects that will impact the development of 10 Gb/s over UTP:
  - 1) investigation of balance cabling performance up to 625 MHz for both TIA Category 6 and Category 5e cabling for 10GBASE-T applications (as a TSB),
  - 2) augmented category 6 cabling (as a new addenda to 568-B.2).
- Balanced task group: The balance task group continues to work on the development of balance measurement procedures and levels for cable and connecting hardware for commercial and industrial environments.
- Modelling task group: The modeling task group is developing a model to determine the balance requirements of a Category 6 channel and link from component measurements.

## TR 42.8 Telecommunications Optical Fiber Cabling Systems

In the works:

- The draft TSB-136, *Guidelines For Maintaining Optical Fiber Polarity With Systems Utilizing MPO Connectors*. Due to a contentious issue regarding the intellectual property regulation, this project was terminated.

- In replacement of the TSB-136 project that was terminated, a new project was approved to create an addendum 7 to ANSI/TIA/EIA-568-B.1 on array connector polarity, on the same subject that was terminated.
- The draft TSB 140, *Additional Guidelines for Field-testing of Length, Optical Loss and Polarity of Optical Fiber Cabling Systems*. All ballot comments were resolved. It was approved to have the document out for final default ballot. If no technical comments are received, it has been approved to have the document published.

## **TR 42.9 Industrial Telecommunications Infrastructure**

Shadi AbuGhazaleh from Hubbell Premise Wiring Company was elected chair and Bob Lounsbury from ODVA/Rockwell Automation was elected vice-chair.

TR-42.9 Industrial Telecommunications Infrastructure group is in the process of developing a standard for industrial facilities.

The members had the opportunity to visit an actual industrial site. They visited Anheuser Busch in St-Louis, Brewers of Budweiser, Busch and Michelob beer. It allowed to the members to see a real installation.

There is still work being done on the MICE table and requirements. MICE being requirements for mechanical, ingress, climatic and electromagnetic environment ratings.

Peter Sharp presented a contribution on micromode distribution. The logic behind micromode distribution can be compared to traditional zone cabling. It complies with the structured cabling philosophy and with the industrial island philosophy. It was well received by the members.

A plan has been elaborated for the completion of the first draft. They expect to compile text in the 45 days following this meeting. The editorial group will then have a further 45 days to revise and edit the document. The committee will then review the document in the 14 days prior to the February meeting. If everything goes as planned, the first draft should be approved to go out for committee ballot at the February meeting.

### **Next TIA meeting**

The next meeting will be held in San Diego, CA in February 2004.

### **Canadian Standards Association (CSA):**

Although there is no good news to report at this time, as CSA T-104 has not held a teleconference call since the last one on June 16, 2003, it is important to say that we are still in communication.

In August 2003, the BICSI Standard Committee forwarded a letter to CSA T-104. The BICSI Standard Committee is concerned that its several hundred professional members in Canada do not have up-to-date standard documents to use as

reference. They understand that T-104 committee acted appropriately to withdraw T528-93, due to its obsolescence, but they are very discouraged that there does not appear to be any activity towards replacing or updating this standard; whether by a new standard effort, or by modification and adoption of an existing standard.

Since the T530, *Building facilities, design guidelines for telecommunications* standard will be up for re-affirmation or re-publication soon and since this document is based on the ANSI/TIA/EIA-569-A, which is presently on its last phase of revision to become ANSI/TIA/EIA-569-B, it will be a good opportunity to start the work for re-publication and have an up-to-date document available in the near future.

The next conference call will be scheduled sometime before the end of 2003. To be continued...

### **International Organization for Standardization (ISO):**

SC25 WG3 meeting was on Sept 15-18 2003 in Zurich, Switzerland.

The wireless access point technical report document was out for ballot. All comments were resolved and the technical report will be published. This document is not a standard but a technical report, which means it is a non-mandatory guideline document.

Work is on going on the industrial standard. The complete draft is expected to come out of the May or June meeting in 2004. This group is trying to have a co-locating meeting with the TIA TR 42.9 sub-committee. The next meeting of the Industrial group is in December 2003.

Two new annexes of ISO/IEC 18010, *Pathways and Spaces*, are in development; a normative annex on multi-tenant requirements and an informative annex on multi-tenant specifications including the hard numbers: e.g. the type of plywood to use and its thickness. The new drafts were approved to go out for ballot.

The next SC25 WG3 meeting will be held the last week of February 2004.

### **IEEE**

The proposed 10 G BASE-T over UTP project will be presented at the IEEE plenary meeting in November, only then we will know which direction they will take. So far, the 10 G BASE-T study group is looking to preserve the 802.3 Ethernet Frame, min and max frame size, full duplex operation and the same requirements as much as possible. The study group accepted the following cabling proposals:

- support 100 m over Class F (Category 7)
  - support a minimum of 55 m over Class E (Category 6)
- The proposal for supporting 20 m over Class D (Category 5e) was rejected.

Finally, IEEE will work jointly with TIA in order to develop an augmented Category 6 cabling system, which should support 10 G BASE-T over a minimum of 100 m. All measurements should be performed up to 625 MHz and the cabling system should operate with less attenuation and a better immunity to alien crosstalk.

*I hope this update has shed some light on what has been happening recently with the standards. If you have questions, please do not hesitate to contact the NORDX/CDT IBDN Technical Support team at 1-800-858-7954.*

*For copies of the published standard documents, please obtain them via Global Engineering Documents at 1-800-874-7179 (US and Canada) or via the Net at [www.tiaonline.org](http://www.tiaonline.org).*

*Regards,*

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NORDX/CDT, Inc.*