



Standards Report

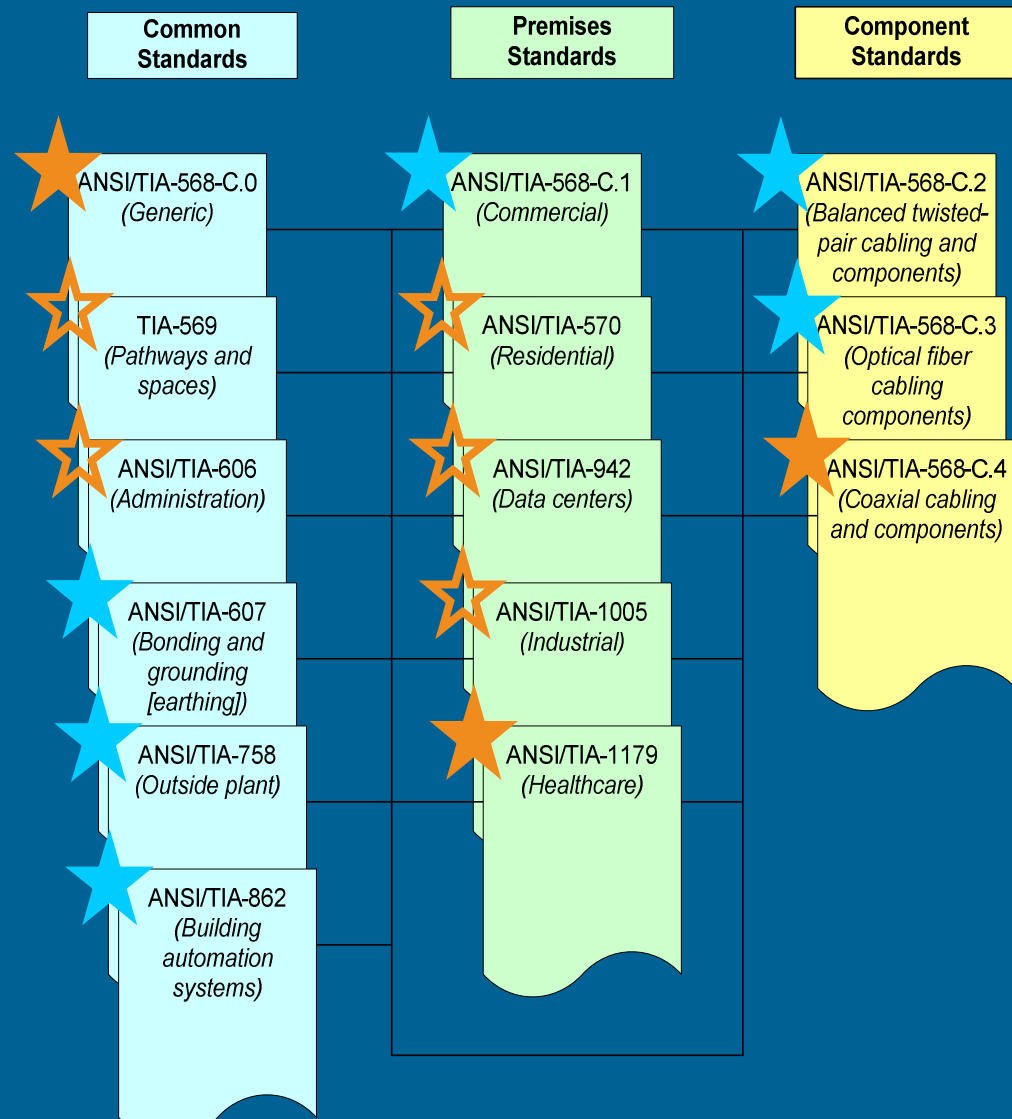
FOLS Meeting – June 2011

June 22, 2011



Revision Progress

- TR-42 Documents
 - Common Standards
 - Premises Standards
 - Component Standards
 - Related Standards
 - FOTPs
 - Fiber Specifications





TR-42.1

Subcommittee on Generic Cabling and Commercial Building Cabling

TR-42.1



Document Summary

- 568-C.0 – Generic Structured Cabling
 - Addendum 1 - Updated References for Balanced Twisted-Pair (PUBLISHED)
 - Addendum 2 – General Updates (going to default ballot)
 - Fiber polarity
 - Method C for parallel and 24-fiber
 - Debate on adding a Method D
 - Field-testing updates for new OFSTPs
 - Revisions to application tables
 - OM4 fiber and 10GBASE-ER
 - Revision to the MICE table

Document Summary

- 568-C.1 – Commercial Building Cabling
 - Addendum 1 – Pathways and Spaces (tabled)
 - Tabled until 569-C publishes
 - Addendum 2 – General Updates (approved for publication)
 - Entrance facility
 - Reference to 568-C.0 for centralized cabling
 - References to 568-C.2 for balanced twisted-pair components

Document Summary

- 942-A Data Centers (2nd Industry Ballot)
 - LC (duplex) and MPO (array) are recommended for new fiber installations
 - Comments to include building information modeling (BIM) not approved
 - Comments to recommend OM-4 fiber for all data centers approved
 - Not unanimously
 - Attempts to remove recommendation for Cat 6A in backbone not approved
 - Comments to recommend OM4 in the horizontal and backbone portions of the network approved
- 862-A Building Automation Systems Revision (PUBLISHED)
- 1179 Healthcare Facility Cabling (PUBLISHED)

- TIA 1183 (Balun-less Testing) ballot resolution was completed. There were comments to increase the frequency range from 1 GHz to 2 GHz but it was rejected. The consensus is to get the document completed to 1 GHz then increase it to 2 GHz at a future date as a revision to the document. A task group was set up to work on the 2GHz extension.
- TIA TSB 1197 Balance Task Group – Paul Kish gave a couple presentation on the balance task group and his suggestion is that if balance performance were increased to 40dB the modelling shows it then has limited impact on AXT performance. This was not a comment or actionable item, just an observation.
- C6A Patch Cord Testing – Sterling Vaden put forward a motion to liaise with ISO to come up with a common test head for patch cords. Currently to qualify to ISO you need an ISO test head and to TIA a TIA test head. His belief is that as the plug range is the same, the test head doesn't matter and that the cord performance is the same. Several items were pointed out that made this not the case (it is true if you modify the limit lines for the appropriate test head and patch cable). There was a task group set up to look into this in more detail (I am on that task group).
- Next Generation Cabling Task Group – Val gave a presentation on data centre link/channel lengths based on their company data and showed it was not the same as previous information on this subject previously presented in other groups by Alan Flatman. Their data showed longer lengths and she is arguing for a longer target length for the next generation cabling preferring 50-60m rather than 30-40m. Systimax pointed out that their data agrees more closely with Alan Flatman's data. This seems to be another unscreened versus screened argument as the screened system will allow additional channel length over unscreened systems. Also of note there is talk of changing channel topology to a 2 connector model as well as changes to patch cord insertion loss to potentially make it the same as horizontal cable. These two items have previously been brought up on the task group conference calls as well.

TR-42.7 Open Projects

- New Standard to be TIA-1183: Test Methods & Fixtures to 1000 MHz
 - Sent for 3rd industry ballot
 - Comments to increase the frequency range from 1 GHz to 2 GHz were rejected
 - A task group was set up to work on the 2GHz extension
 - Addition of an informative annex on test fixture de-embedding

TR-42.7 New Proposals

- Project approved to develop “next generation cabling for data transmission higher than 10GBps”
 - Not necessarily Category 7A
- Project to Add Category 7A Cabling to the 568-C.2 Standard
 - Recognized in ISO 11801 and IEEE 802.3an (10GBASE-T)
 - Proposed specifications to 1 GHz
 - Previous proposals “failed” in June and in February
 - One vote short of “greater than 2/3rd majority”

TR-42.11 Open Projects

- 568-C.3 - 1st Addendum
 - Why?
 - Add OM4 to tables
 - More on array connectors (40G and 100G support)
 - Status?
 - Released for publication
 - What you need to know:
 - OM4 already allowed, just not specifically called out
 - No new proposed color (aqua applies)
- Comments that would have resulted in the introduction of fiber "categories" were not approved

TR-42.11 Open Projects

- New TSB Project
 - Looking at loss budgets – design and connector loss limits
- Key Issue
 - Design to worst case model (0.75dB maximum connector loss per mated pair) – or -
 - Design to a more realistic, statistical model
 - How can statistical tools and connector loss performance be used to provide a more accurate expectation of link loss?
- Connection performance
 - Contributions focused on connector performance based on max, 97%ile and mean loss
 - Contributions proposed four connector grades (targeted max loss along with 97%ile upper limits and mean loss upper limits)

TR-42.12

- TIA-598
 - Routine revision to the fiber cable color code standard
 - Adding testing and OM4 issues
 - This document establishes aqua for the OM4 color (as well as OM3)
 - Issued for industry ballot



LAN Applications Update



IEEE 802.3 Calls for Interest

- Next Generation 100Gb/s Ethernet Interfaces for Optical Fiber
 - To explore the market need and solutions to reduce the cost, power and panel size of 100 Gb/s optical interfaces that can be implemented with the interfaces currently defined by IEEE Std 802.3ba-2010
- Extended EPON PMDs
 - To explore the market demand, available technologies and definition of optical interface parameters for higher power EPON PMDs, building on top of IEEE Std 802.3ah and IEEE Std 802.3av, to address demand for higher power budget classes to address requirements for longer reach and/or increased split ratio.

IEEE 802.3 Other Subjects

- Power Over Ethernet
 - There is a collective effort to pursue a “POE++” standard, but debates about the true demand need to be addressed

IEEE 802.3 Projects

- 802.3bg – 40GBASE-LR (serial 40G)
 - No disapprove votes on first ballot
 - Document will “fast-track” to publication
 - Lower cost option than current 40GBASE-LR4

Bend-insensitive Fibers

- Key Issue
 - How, exactly, is “bend-insensitive” defined?
- Related Issues
 - Compatibility between vendors
 - Compatibility with legacy (non-BI) fibers
 - How is testing conducted (what size mandrel)?
 - Different mode distributions have influence on bandwidth, connector loss and system performance
 - Reliability of BI fibers