ISO/IEC SC25/WG3 Meeting
Ixtapa, Mexico: 10-14 January 2005
- Structured Cabling Systems -

report for IEEE 802.3 by Alan Flatman

Highlights

- NWIP for 10GBASE-T cabling approved
  - 20 nations vote for, 2 nations vote against
  - more detailed report prepared for 802.3an
- cabling EM performance analysis updated
- industrial cabling CD expected in Apr 05
- cable thermal issues being investigated
- liaisons to 802.3 - 3N738, 3N739B, 3N740

46 Participants 19 Nations
ISO/IEC TR-24750
Installed Class E/F to Support 10GBASE-T

- Technical Reports created as *industry guides*
- TR will define channel only, not components
- TR will contain alien xtalk mitigation methods
- TR also planned to contain AXT test methods
- channel AFEXT characterisation still required
- plan to agree initial working draft by end April
- it is hoped to approve ISO/IEC TR by Feb 2006
- currently compatible with TIA/EIA TSB-155
ISO/IEC 11801 Edition 2.1
New Class E & Class F Cabling

• 11801 Ed 2.1 will define channel + components
• better than existing Class E + Class F cabling
• expected to require totally new component set
• intent to meet AXT requirements “by design”
• channel AFEXT characterisation still required
• plan to agree initial working draft by end April
• technically different to TIA “Cat 6 Augmented”
Electromagnetic Performance of Balanced Cabling

- generic specification for all cable constructions
  - need to define cabling for industrial applications
  - need to manage alien crosstalk for 10GBASE-T
- EMC analysis updated for 10M/100M/1G/10GBE
  - emission/immunity performance for cabling system only
  - Cat 6 UTP compliant with Class A RF emission (4dB margin)
  - Cat 6 UTP compliant with 3V/m radiated immunity
  - Cat 6 UTP compliant with 1V conducted immunity
  - Cat 6 FTP compliant with Class A RF emission (25dB margin)
  - Cat 6 FTP compliant with 10V/m radiated immunity
  - Cat 6 FTP compliant with 10V conducted immunity
  - latest version of analysis made available to 802.3an

3N740 posted in 802.3an Jan 2005 public area
ISO/IEC 24702
Industrial Premises Cabling

- LC duplex connector adopted as a single choice for all fibre types
  - MMF, SMF and POF
- MICE tables are now technically complete
- 24702 CD is expected to be issued April 05
- sets earliest date of approval as mid 2006
Cable Temperature Issues

- Ad hoc group formed to investigate thermal issues
  - In response to IEEE 802.3an request for assistance
- SC25 WG3 briefed on POE-plus CFI & SG activities
- ISO/IEC 11801 already supports 10 watts per pair
  - Effect of temperature already studied in detail
  - Detailed analysis forwarded to POE-plus SG
- Higher power delivery requires further investigation
  - Depends on cable construction, installation conditions, ambient temperature and heat transfer conditions
  - Please provide intended current, voltage, power ASAP

3N738 liaison posted in 802.3 public area
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