

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

Future Meetings

Industrial Cabling	25-27 Apr 2005	Ottawa
ISO/IEC SC25 WG3	26-29 Sep 2005	Edinburgh
ISO/IEC SC25 Plenary	30 Sep 2005	Edinburgh
ISO/IEC SC25 WG3	06-10 Feb 2006	Kitzbuhel