

# ISO/IEC SC25/WG3 Meeting

Madrid: 27 Feb - 01 Mar 2012

- Customer Premises Cabling -

## Highlights:

- 1. ISO/IEC 14763-2 Planning/Installation published
- 2. ISO/IEC 14763-3 OF Testing Ed.2 CD April 2012
- 3. ISO/IEC cabling standards being re-structured
- 4. ISO/IEC 11801 Ed.3 to commence in Sep 2012
- 5. Modelling Group defining 50m of Cat 6<sub>A</sub> + 7<sub>A</sub>
- 6. NWIP for 40GBASE-T cabling guidance
- 7. NWIP for automated infrastructure management
- 8. NWIP for twinax cable assemblies (40G/100G)
- 9. Tutorial received on Optical PCBs, Connectors



55 Participants

18 Nations

# ISO/IEC 14763-2

## Cabling Planning & Installation

- **consolidation of worldwide industry best practices:**
  - IEC & ISO/IEC
  - CENELEC
  - TIA
  - BICSI
- **to complement ISO/IEC cabling design standards**
- **expected to become the definitive industry *handbook***
- **could be referenced in many tenders and contracts**

## Re-structuring of ISO/IEC Cabling Design Standards

- **ISO/IEC cabling standards being re-structured into single family:**
  - **ISO/IEC 11801-1 General Requirements (structure, dimensioning, channel)**
  - **ISO/IEC 11801-2 Commercial Office Environment (unique aspects)**
  - **ISO/IEC 11801-3 Industrial Environment (unique aspects)**
  - **ISO/IEC 11801-4 Residential Environment (unique aspects)**
  - **ISO/IEC 11801-5 Data Centre (unique aspects)**
  - **ISO/IEC 11801-6 *for future use***
- **parts 1, 2, 3 and 4 to go to 2-month national review in March**
- **part 5 to follow once Am.1 has been approved (expected soon)**

## Copper Channel Modelling

- **JMTG comprises SC25 WG3, IEC SC46C & SC48B experts**
- **IEC TR 61156-1-3 length dependency models for cable NEXT & FEXT being extended to include IL, RL, connectors**
- **new channel models for 50m, 2 connectors and 2m cords**
- **existing Cat 6<sub>A</sub>/7<sub>A</sub> component specs extrapolated to 2GHz**
- **results from 4 different mathematical models correlate well**
- **experimental measurements from independent test labs 3P, Delta for same channel configurations also correlate well**

## 40GBASE-T Cabling Guidance

- **NWIP for ISO/IEC TR 11801-99-X closes on 13 March**
- **project team formed at previous meeting & 3 telecons held with assistance from IEEE 802.3 PHY designers**
- **sufficient input from IEEE 802.3 experts at this stage**
- **some excellent contributions received at this meeting:**
  - **Input received from Belgium, Germany, USA**
  - **Status report from TIA Next Gen Cabling Group**
  - **Project plan & deliverables agreed & ready to go**

## 40GBASE-T Cabling TR Deliverables

1. Max reach to support 40G for a 2-connector channel comprising Cat 6<sub>A</sub>, Cat 7 & Cat 7<sub>A</sub> components to existing upper frequencies.
2. As for 1) but with components demonstrating additional capability.
3. As for 1) or 2) but with extended upper frequencies.
4. Characterisation of a 50m channel with 2 connectors based on uprated Cat 6<sub>A</sub> components with an upper frequency of at least 1.6GHz (possibly extended to a maximum of 2GHz TBD).
5. Characterisation of a 50m channel with 2 connectors based on uprated Cat 7<sub>A</sub> components with an upper frequency of at least 1.6GHz (possibly extended to a maximum of 2GHz TBD).
6. Tutorials on expected channel capacity & other expected PHY-related aspects for all above.

## Twinax Cable Assemblies

- **NWIP for ISO/IEC TR 11801-99-X closes on 13 March**
- **to specify channels/test methods & component stds**
- **agreed to target 40GBASE-CR4 & 100GBASE-CR10 but will also take account of 100GBASE-CR4**
- **liaison to IEC SC46C to request component specs**
  - **SC46C NWIP already approved for twinax cables**
- **liaison to IEC SC46C to request component specs**
  - **IEC 61076-3-113 (CX4) connector project *abandoned***

# Optical Printed Circuit Board Technology

- **excellent OPCB tutorial from David Selviah of UCL**
- **3-yr elec/optical interconnect project funded by UK @ £1.6m/\$2.4m with 8 commercials + 3 academics**
- **10G demonstrator based on multimode techniques**
  - **singlemode interconnects considered to be too costly**
- **standardisation is well underway in IEC TC86 JWG9**
- **66-slide OPCB presentation available on request**



## Future Meetings

|                         |                             |                  |
|-------------------------|-----------------------------|------------------|
| <b>ISO/IEC SC25 WG3</b> | <b>10 - 13 Sep 2012</b>     | <b>Geneva</b>    |
| <b>ISO/IEC SC25</b>     | <b>14 Sep 2012</b>          | <b>Geneva</b>    |
| <b>ISO/IEC SC25 WG3</b> | <b>25 Feb – 01 Mar 2013</b> | <b>Venue TBD</b> |