

ISO/IEC SC25/WG3 Meeting

Geneva: 10-13 Sep 2012

- Customer Premises Cabling -

Highlights:

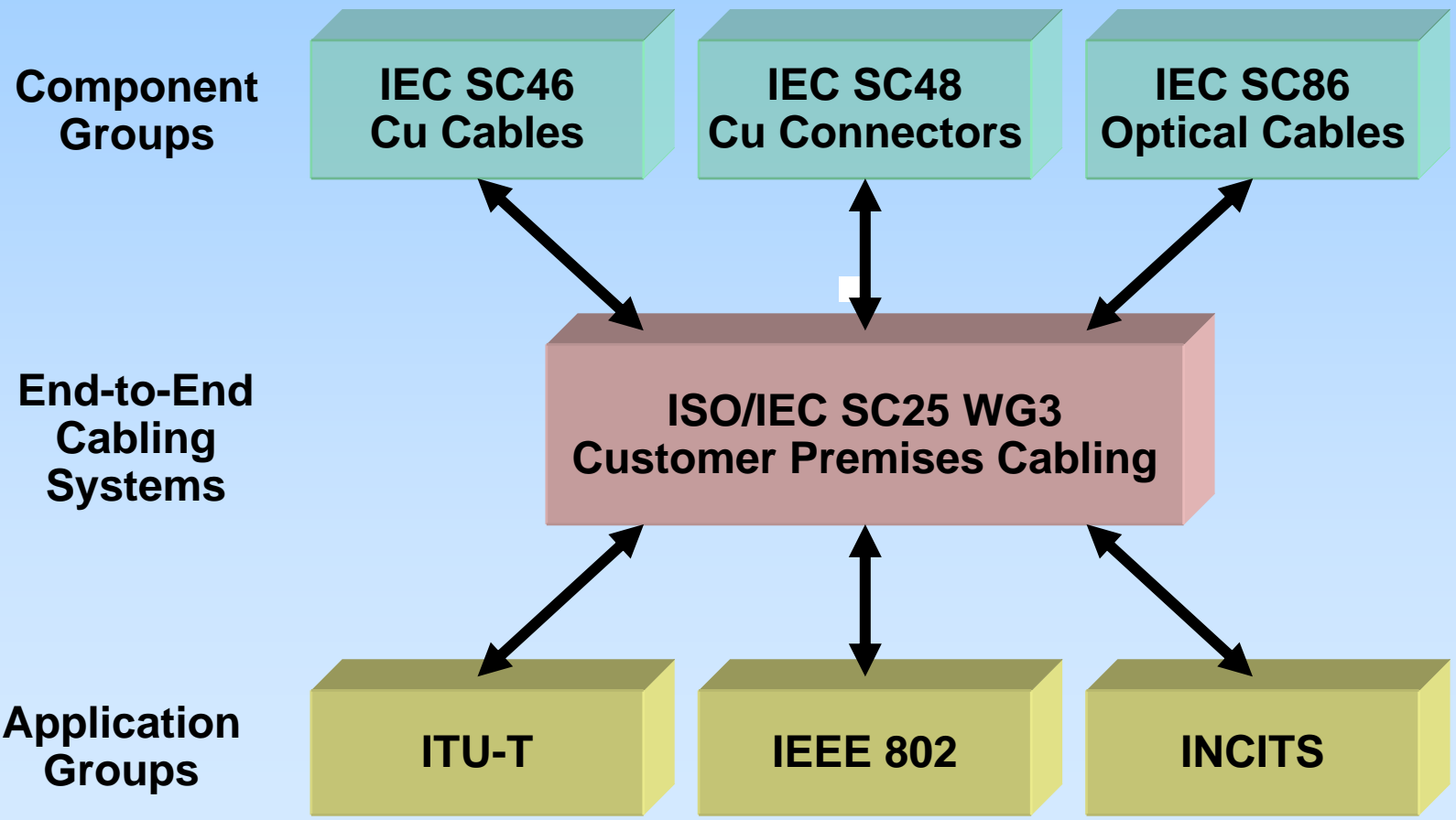
1. ISO/IEC 24764 Data Centre Cabling Am.1 approved
2. ISO/IEC 14763-3 OF Testing Ed.2 CD in preparation
3. ISO/IEC cabling standards re-structured for Ed.3
4. ISO/IEC 11801 Ed.3 to commence at next meeting
5. Modelling Group defining 50m Cat 6_A + 7_A to 2GHz
6. 40GBASE-T cabling guidance TR NWIP approved
7. Auto Infrastructure Management NWIP approved
8. 40/100G twinax cable assemblies NWIP approved
9. Grounding & Bonding standard NWIP approved



54 Participants

22 Nations

Process Model

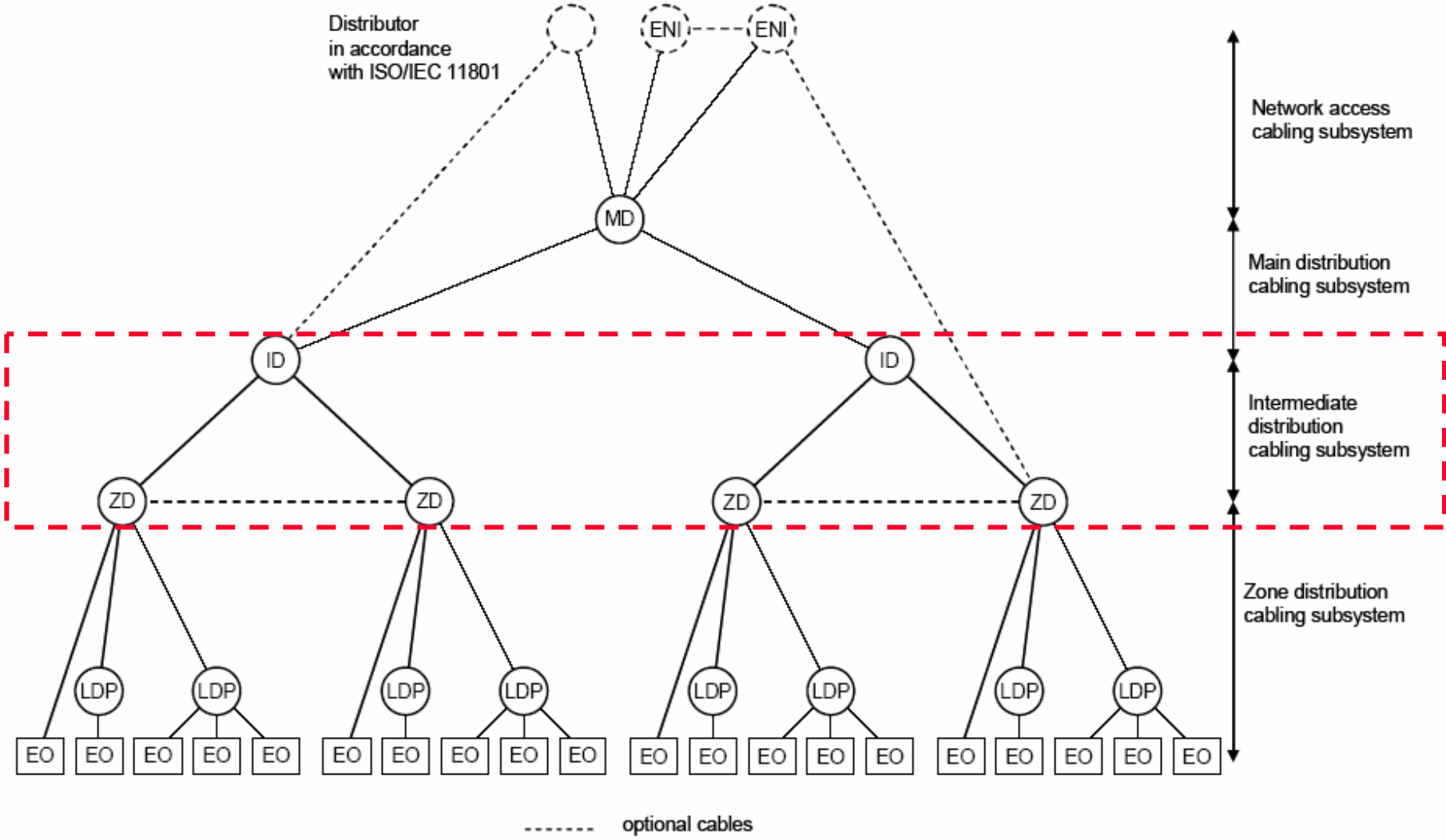


ISO/IEC 24764

Data Centre Cabling

- additional cabling tier has been introduced in Am.1
- *intermediate distribution cabling* to provide more flexibility in large +/- more distributed data centres
- changes harmonise with TIA-942-A and CENELEC
- ISO/IEC 24764 Am.1 now approved for publication

ISO/IEC 24764 3-tier Cabling Architecture



ISO/IEC 14763-3

Testing of Optical Fibre Cabling

- **2nd Edition WD reviewed by national members in 2011**
 - 156 comments of which 120 were technical
- **unresolved comments addressed in Geneva, majority relating to measurement uncertainty**
- **CD being prepared for circulation however all aspects of measurement uncertainty are immature at this stage**
 - hoped to stabilise topic after CD national review & vote

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***
- **re-structuring exercise now complete with no technical changes**
- **will be used as the basis to develop ISO/IEC 11801-1 3rd Edition**

ISO/IEC 11801 Edition 3

- **major revision of ISO/IEC 11801 Ed.2 is planned**
 - work scheduled to commence in Feb 2013

- **list of possible changes being compiled for Ed.3:**
 - delete OF classification scheme
 - withdraw OM1 fibre type
 - update POF fibre types (for home cabling)
 - introduce higher Class balanced channels
 - introduce new model to relate components, links, channels

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_A/7_A 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**
- **agreed to adopt the proposed matrix model for future use**
 - **expected to be introduced to ISO/IEC 11801-1 3rd Edition**

40GBASE-T Cabling Guidance

- **NWIP for TR on 40GBASE-T cabling guidance approved:**
 - 18 out of 18 P- members voted in favour
 - 8 P- members to participate in project
- **240 comments from review of 2nd WD, 190 technical**
- **more demanding requirements for Coupling Attenuation**
- **planned to prepare PDTR for circulation early Nov 2012**
- **liaison statement forwarded to IEEE 802.3 with status report & invitation to join PDTR review (NGBASE-T SG)**

ISO/IEC 11801-99-1 Deliverables

Technical Report being developed with following scope:

1. Characterisation of a 25m channel with 2 connectors based on *legacy* Cat 6_A components to their existing upper frequency.
2. Characterisation of a 25/50m channels with 2 connectors based on *legacy* Cat 7_A components to their existing upper frequency.
3. Characterisation of a 50m channel with 2 connectors based on *improved* Cat 6_A components with an upper frequency of at least 1.6GHz (possibly extended to a maximum of 2GHz TBD).
4. Characterisation of a 50m channel with 2 connectors based on *improved* Cat 7_A components with an upper frequency of at least 1.6GHz (possibly extended to a maximum of 2GHz TBD).
5. Tutorials on expected channel capacity & other expected PHY-related aspects for all above.

Twinax Cable Assemblies

- **NWIP to define twinax cable assemblies approved:**
 - 18 out of 18 P- members voted in favour
 - 9 P- members to participate in project
- **to specify channels/test methods & component stds**
- **plan to target 40GBASE-CR4 and 100GBASE-CR10**
- **liaison to IEC SC46C to request cable specs**
 - IEC SC46C NWIP already approved for twinax cables
- **liaison to IEC SC48B to request connector specs**
 - IEC 61076-3-113 (CX4) connector project *abandoned*
 - 2 of 3 relevant connectors already specified by EIA
 - SC48B unable to justify resources to produce IEC stds

Future Meetings

ISO/IEC SC25 WG3	25 Feb - 01 Mar 2013	Mexico
ISO/IEC SC25 WG3	30 Sep - 03 Oct 2013	Sweden
ISO/IEC SC25	04 Oct 2013	Sweden
ISO/IEC SC25 WG3	24 - 28 Feb 2014	Venue TBD
ISO/IEC SC25 WG3	14 - 17 Sep 2014	Belgium
ISO/IEC SC25	18 Sep 2014	Belgium