ISO/IEC SC25/WG3 Meeting

Ixtapa, Mexico: 25 Feb - 01 Mar 2013
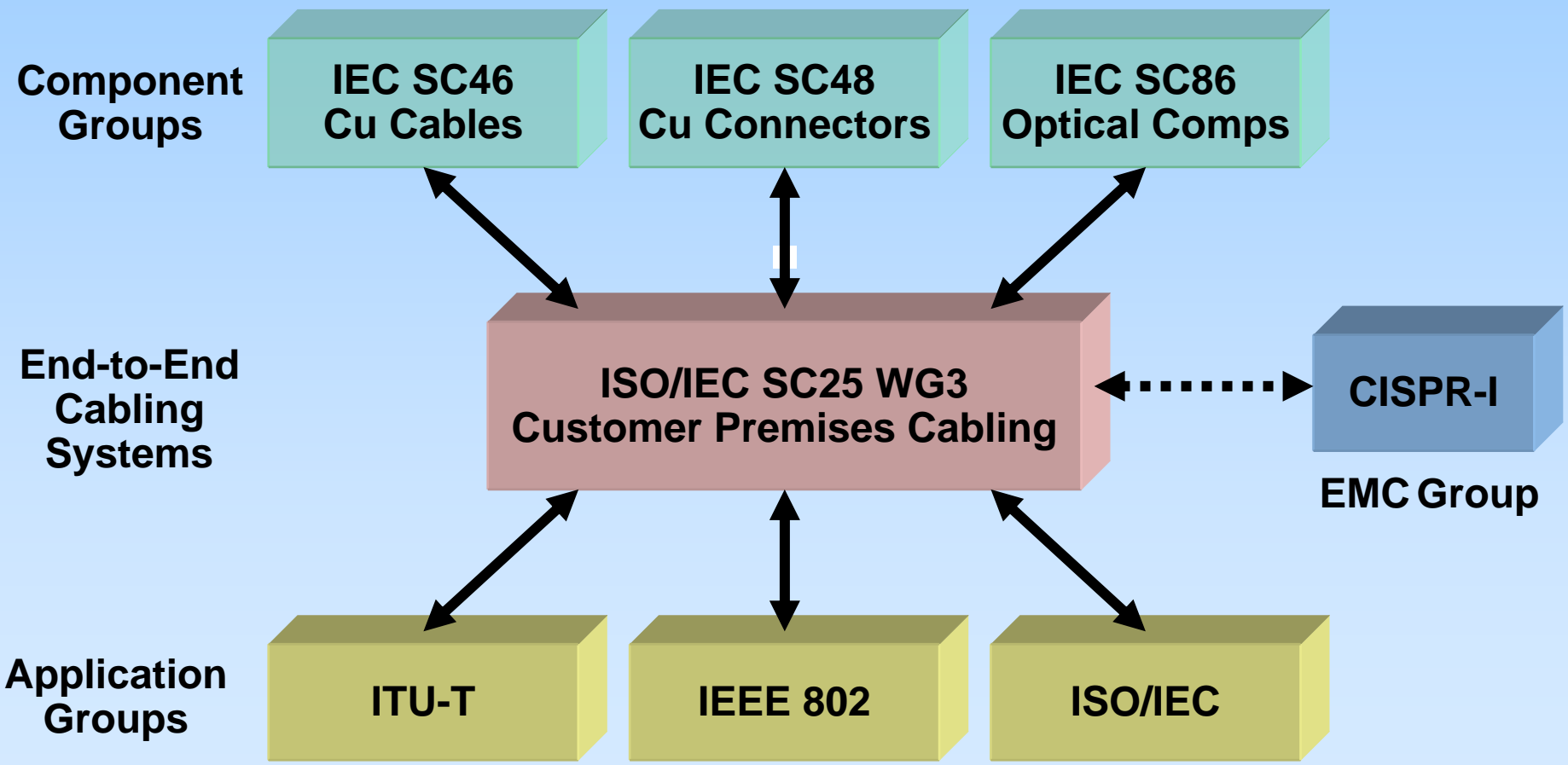
- Customer Premises Cabling -

Highlights:

1. ISO/IEC 11801-99-1 40GBASE-T Cabling progresses
2. naming agreed for new Categories and Classes
3. new cabling topology under study for data centres
4. liaison forwarded to IEEE 802.3 on items 1-3 above
5. ISO/IEC cabling standards distilled into single family
6. ISO/IEC 14763-3 Ed.2 OF Testing to 2nd CD or DIS
7. ISO/IEC 14763-2 being extended with cabling AIM
8. ISO/IEC standard being developed for AIM systems
9. ISO/IEC 30129 Bonding Networks in development

54 Participants   18 Nations

AIM = Automated Infrastructure Management

Process Model

Component Groups

IEC SC46
Cu Cables

IEC SC48
Cu Connectors

IEC SC86
Optical Comps

End-to-End Cabling Systems

ISO/IEC SC25 WG3
Customer Premises Cabling

CISPR-I

EMC Group

Application Groups

ITU-T

IEEE 802

ISO/IEC

ISO/IEC 11801-99-1 40GBASE-T Cabling

➢ **ISO/IEC TR 11801-99-1 PDTR had substantial support**

    ➢ **17 nations voted in favour**

    ➢ **8 nations voted against**

➢ **480 comments from national experts and IEEE 802.3**

    ➢ **comments were mostly technical**

➢ **all comments resolved at meeting, resolutions to be implemented in a new draft**

➢ **likely that 2nd PDTR will be circulated for national review & vote, based on level of technical change**

PDTR = Proposed Draft Technical Report

ISO/IEC 11801-99-1 Deliverables

Performance Requirements for 30m, 2-connector Channel

Legacy Cat 6_A Components to 500 MHz	Legacy Cat 7_A Components to 1000 MHz
	Legacy Cat 7_A Components to 1,600 MHz*
Enhanced Cat 6_A Components to 1,600 MHz*	Enhanced Cat 7_A Components to 1,600 MHz*

Tutorial on Channel Capacity, Assumptions, other PHY- related

* **Upper Frequency of 2 GHz For Further Study**

Naming of New Categories & Classes

> **Class I channels to be specified by a Reference Implementation using Category 8.1 components**

> **(Category 8.1 components backwards-compatible and interoperable with components up to Category 6_A)**

> **Class II channels to be specified by a Reference Implementation using Category 8.2 components**

> **(Category 8.2 components backwards-compatible and interoperable with all other components)**

New Cabling Architectures

- ➢ **cords are specified as part of generic structured cabling for patching and attachment to active equipment**

- ➢ **when cords used as "direct connects", they are expected to provide generic performance in accordance with the channel Class defined by their Category, but:**

- ➢ **the use of cords as "direct connects" is *not compliant* with existing structural requirements for generic cabling**

- ➢ **hence shorter channels with reduced connectivity <u>cannot</u> be introduced to the existing Category/Class regime**

- ➢ **additional requirements will need to be formulated**

- ➢ **to be considered as part of ISO/IEC 11801 Edition 3**
    - ➢ **may use a unique part of re-structured standard**

Liaison with IEEE 802.3

- ➢ **liaison from San Antonio mtg considered in Ixtapa**
- ➢ **excellent progress reported on ISO/IEC 11801-99-1**
- ➢ **concur that 30m reach objective for 40GBASE-T is highly appropriate for data centre End-of-Row links**
- ➢ **SC25 WG3 addressing support new data centre architectures & use of cords for Top-of-Rack links in future cabling design, planning/installation stds**
- ➢ **25m and 50m links in 11801-99-1 replaced with 30m**
- ➢ **need for high transmission performance but low cable bulk and high connector density fully noted**
- ➢ **request made for tutorial on 11801-99-1 in May 2013**

ISO/IEC 14763-3
Testing of Optical Fibre Cabling

- ➢ **2nd Edition CD received substantial support**
  - ➢ **229 comments, majority of which were technical**
- ➢ **majority of comments resolved at meeting, resolutions to be implemented in new draft**
- ➢ **next draft will be circulated as 2nd CD or DIS**
- ➢ **all aspects of measurement uncertainty are immature at this stage - it is hoped to resolve them at a late stage**
  - ➢ **awaiting additional input from IEC SC86**

Re-structuring of ISO/IEC Cabling Design Standards

➢ **ISO/IEC cabling standards have been 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 3rd Edition**

ISO/IEC 11801 Edition 3

> **NWIP to be circulated for ISO/IEC 11801 3rd Edition**
>
> > **ISO/IEC 11801-99-1 Class I & Class II channels in scope**

> **list of proposed changes being compiled for Ed.3:**
>
> 1. introduce new cabling architectures for data centre
> 2. introduce new Categories & Classes
> 3. introduce matrix model to relate components, links, channels
> 4. preclude Copper Coated Aluminium (CCA) cables
> 5. introduce MICE requirements
> 6. introduce Healthcare cabling

Future Meetings

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**	**Japan**
ISO/IEC SC25 WG3	**14 - 17 Sep 2014**	**Venue TBD**
ISO/IEC SC25	**18 Sep 2014**	**Venue TBD**