

ISO/IEC SC25/WG3 Meeting

Germany: 19-22 Sep 2016

- Customer Premises Cabling -

Key Items:

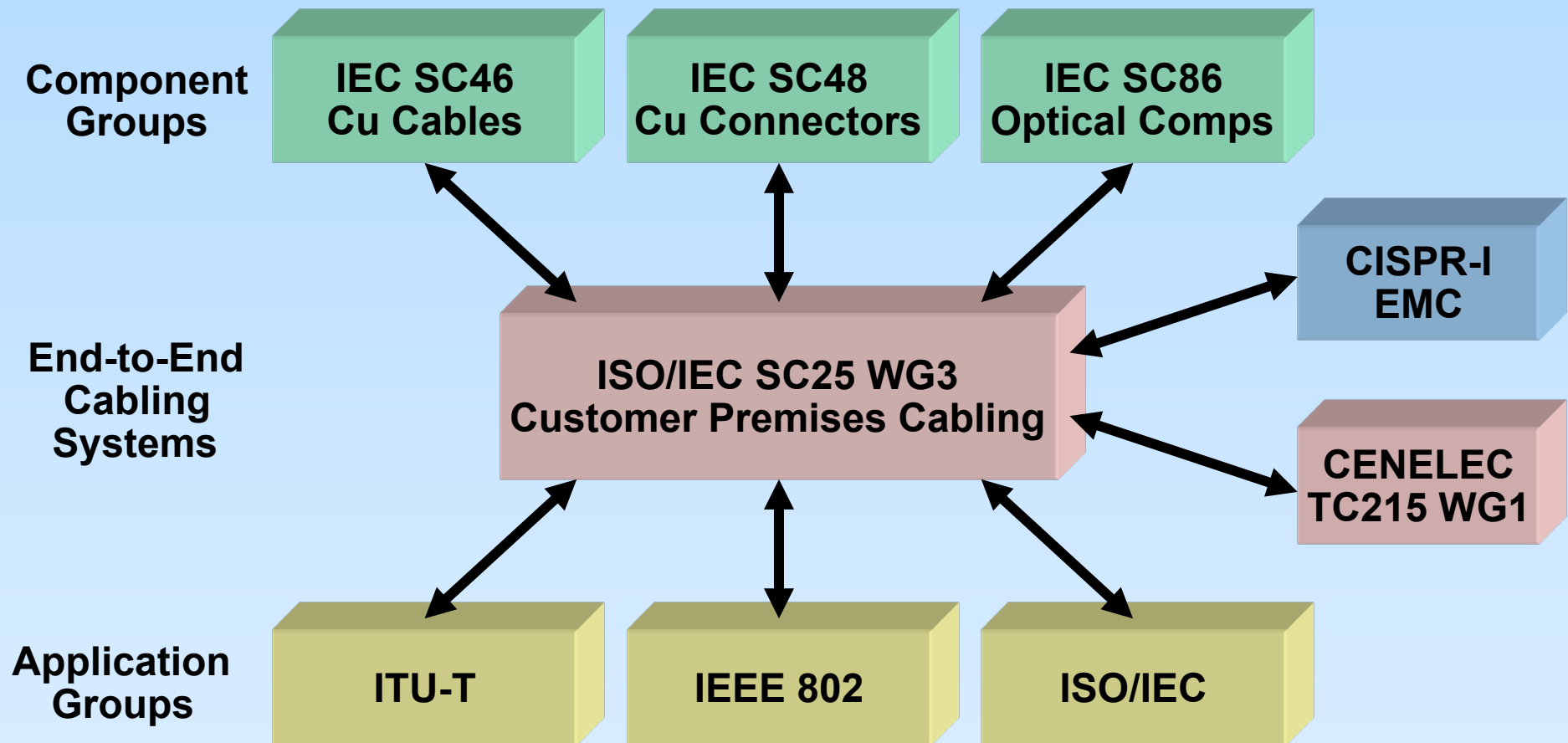
1. ISO/IEC 11801 Ed.3 **major revision** – DIS review closed 05 Oct & will be addressed at Jan meeting (contains Class I/II cabling to support 802.3bq)
2. ISO/IEC 11801-9904 Installed Cabling to Support 802.3bz elevated to DTR
3. ISO/IEC 11801-9905 Installed Cabling to Support 802.3bq 25GBASE-T PDTR prepared
4. ISO/IEC 29125 to support 802.3bt elevated to DTS
5. support of single-pair applications + definition of single-pair cabling projects initiated



46 Participants

17 Nations

Process Model



ISO/IEC TR 11801-9904: Guidelines for Installed Cabling to Support 2.5GBASE-T & 5GBASE-T

- **TR provides guidelines for use of installed cabling to support 802.3bz 2.5GBASE-T and 5GBASE-T**
- **ALSNR is used instead of AXT as this takes account of noise sources and coupling between cabling channels**
- **defines use cases and guidance on existing cabling**
 - **certification, measurement + mitigation procedures**
- **Class E_A or better recommended for new installations**
- **ISO/IEC 11801-9902 PDTR received substantial support**
 - **16 nations voted to approve**
 - **4 nations voted disapprove (BE, SP, UK, US)**
- **57 comments received from national review**
 - **30 technical + 27 editorial**
- **all comments resolved at meeting, a DTR being prepared**

ISO/IEC TR 11801-9904: ALSNR Risk Matrix for Installed Cabling

Installed Class D Cabling	Victim cable length			
	Data rate	1 – 20m	20 – 75m	75 – 100m
Bundled distance up to 20m	2.5G	low	low	low
	5.0G	low	low	low
Bundled distance 20m-75m	2.5G	N/A	low	medium
	5.0G	N/A	medium	high
Bundled distance 75m-100m	2.5G	N/A	N/A	medium
	5.0G	N/A	N/A	high

Note: Risk of bundled cable configurations not supporting $ALSNR_{min}$ at least 28dB

ISO/IEC TR 11801-9904: ALSNR Risk Matrix for Installed Cabling

Installed Class E Cabling	Victim cable length			
	Data rate	1 – 20m	20 – 75m	75 – 100m
Bundled distance up to 20m	2.5G	low	low	low
	5.0G	low	low	low
Bundled distance 20m-75m	2.5G	N/A	low	low
	5.0G	N/A	low	medium
Bundled distance 75m-100m	2.5G	N/A	N/A	medium
	5.0G	N/A	N/A	high

Note: Risk of bundled cable configurations not supporting $ALSNR_{min}$ at least 28dB

ISO/IEC TR 11801-9904: ALSNR Risk Matrix for Installed Cabling

Installed Class E _A Cabling	Victim cable length			
	Data rate	1 – 20m	20 – 75m	75 – 100m
Bundled distance up to 20m	2.5G	none	none	none
	5.0G	none	none	none
Bundled distance 20m-75m	2.5G	N/A	none	none
	5.0G	N/A	none	none
Bundled distance 75m-100m	2.5G	N/A	N/A	none
	5.0G	N/A	N/A	none

Note: Risk of bundled cable configurations not supporting ALSNR_{min} at least 28dB

ISO/IEC 11801-9905: Guidelines for Installed Cabling to Support 25GBASE-T

- **TR to provide guidelines for use of installed cabling to support 802.3bq 25GBASE-T**
- **30m channel comprising Cat 7_A components supported**
- **12m (TBC) channel comprising Cat 6_A/Cat 7 components**
- **defines use cases and guidance on existing cabling**
 - **certification, measurement + mitigation procedures**
- **Class I/II or better recommended for new installations**
- **83 comments received from expert review**
 - **61 technical + 22 editorial**
- **all comments resolved at meeting & PDTR being prepared**

ISO/IEC TR 11801-9905: Risk Matrix for Installed Cabling

	1 – 10m	10 – 20m	20 – 30m
Channel with Cat 7 _A Components	low	low	low
Channel with Cat 7 Components	medium	high	high
Channel with Cat 6 _A Components	medium	high	high

Note: Risk of non-compliance with ISO/IEC 11801-9905 channel performance requirements

ISO/IEC 29125: Cable Heating

- **ISO/IEC TR 29125 being extended to support higher currents for IEEE 802.3bt 4-pair PoE:**
 1. temp rises for Cat 5 to Cat 7_A solid conductor cables plus 0.4mm stranded cords
 2. bundle sizes up to 100 cables
 3. up to 600mA per conductor
 4. range of installation environments
- **ISO/IEC 29125 Ed.2 PDTR received substantial support**
 - 17 nations voted to approve
 - 4 nations voted disapprove (DE, FR, SP, US)
- **69 comments received from national review**
 - 40 technical + 29 editorial
- **all comments resolved at meeting, DTS being prepared**

Cabling to Support 1-pair Applications

- **NWIP to define a single-pair channel to 600MHz to support IEEE 802.3bp 40m Type B link segment**
 - **TR to be developed**
- **proposal from Ireland prepares for the adoption of 1 pair technologies in buildings for applications, including:**
 - **building controls**
 - **access control**
 - **audio-visual**
 - **security**
 - **Internet of Things**
- **informative Annex proposed to provide guidelines for the support of 1-pair cabling in existing and new installations compliant with ISO/IEC 11801-6**
 - **amendment to ISO/IEC 11801-6 to be developed**

Future Meetings

ISO/IEC SC25 WG3	16-20 Jan 2017	Singapore
ISO/IEC SC25 WG3	11-14 Sep 2017	Belgium
ISO/IEC SC25	15 Sep 2017	Belgium