ISO/IEC SC25/WG3 Liaison Report

- Customer Premises Cabling –

October 2023

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ISO/IEC SC25/WG3 Meeting
Berlin: 9th – 12th October 2023
- Customer Premises Cabling -
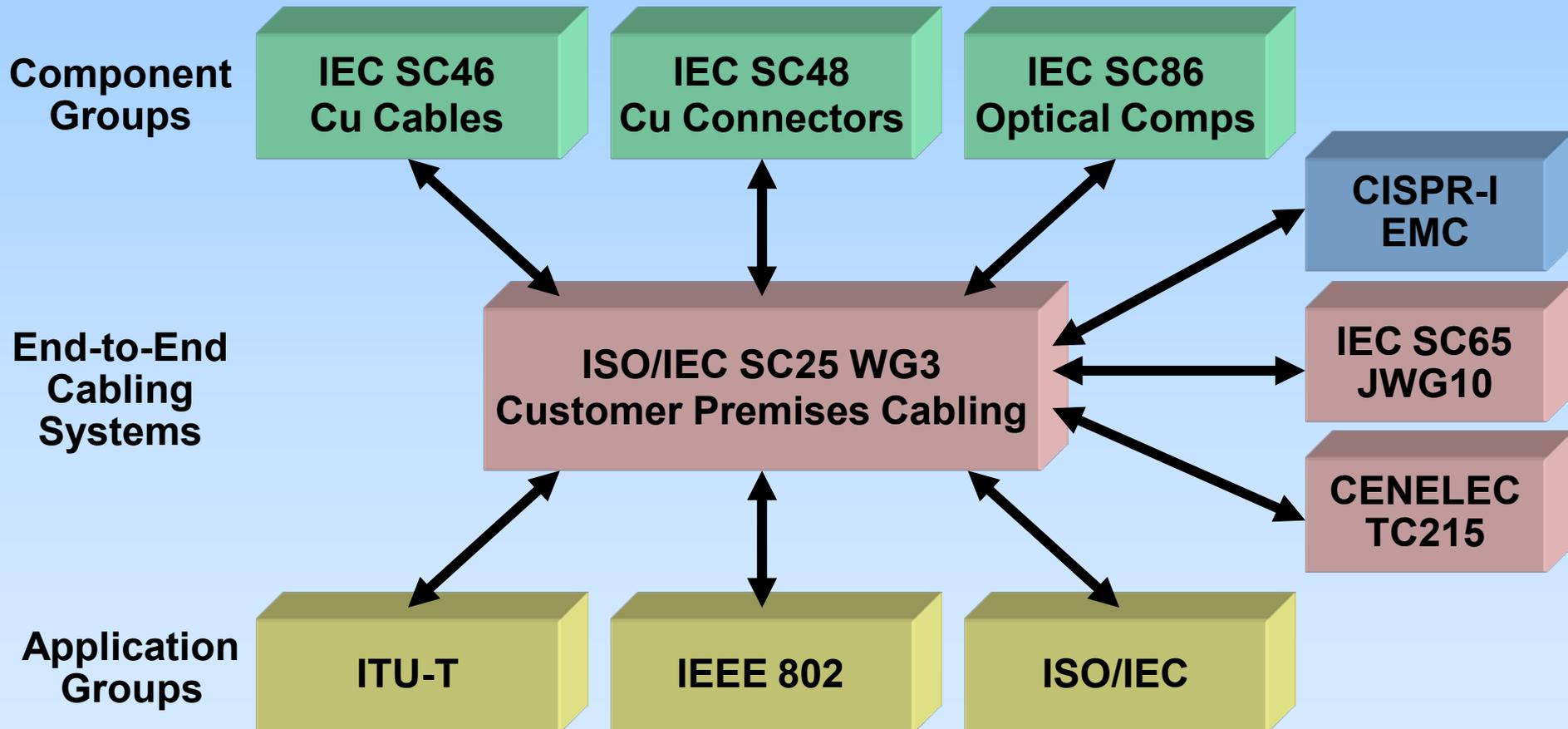
Key Items:

1. Generic single-pair cabling is being developed, with three new classes of cabling in amendments to the 11801-1 and 11801-6 standards. The -1 moves back to the CD stage and the -6 to a 7th CD.

2. Two levels of current carry capacity of SPE classes are now in the draft for 11801-1, but these must be separated by Keyed connectors which are yet to be developed.

3. A Technical report 11801- 9911 to provide guidance on 0.75A legacy classes cable sharing with single pair cabling moves to a CD.

4. A Multidrop TR is project has been halted.

5. The Physical Network Security 24383 draft gives requirements for multiple levels of security moves to a 9th CD

6. CD's of both the Planning and installation standard 14762-2 and Remote powering technical specification 29125 are being updated to included considerations of single pair cabling and 2A remote powering, including cable heating considerations.

7. Cabling Sustainability 14763-5 will progress with to a 4th CD before the next meeting, pending an interim ad-hoc to develop content related to energy efficiency.

8. An NP on training and certification of installation engineers was discussed, and will be reviewed at interim ad-hocs

9. The CDV of 14763-3 optical fiber testing document will circulate an FDIS

10. TR11801-9903 Models will be updated to include common and mixed mode parameters with another WD

11. A project has been initiated to provide guidance regarding SNR modeling

12. A corrigenda to correct a formula in ISO/IEC TR 11801-9909 has been approved

13. A project make a revision of 11801-9909, to further extend the reach of 25Gb cabling is being discussed

14. A project to update the Grounding and bonding standard ISO 30129 moves to a CDV.

43 Participants

12 Nations & IEEE 802.3 Delegation

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

IEC SC65 JWG10

CENELEC TC215

Application Groups

- ITU-T
- IEEE 802
- ISO/IEC

3

Meetings of SC25 WG3

- 9th – 12th October 2023, Berlin
    - Attended by delegation from IEEE 802.3

Publications

IEC has not published any SC25 WG3 documents since their last meeting.

Generic Cabling for Single-pair Applications

- Amendments to generic cabling standards were reviewed:
  - ISO/IEC 11801-1 General
  - ISO/IEC 11801-6 Distributed building services

- 3 classes of single-pair cabling are being developed.
  - T1-A, 20 MHz, 1000m (Generic cabling including support of 802.3cg)
    - Split into 1000m, 400m, 250m & 100m Sub classes
  - T1-B 600MHz 100m (Generic cabling including support of other IEEE SPE)
  - T1-C Additionally 1250MHz, 100m to present additional generic opportunities

- **The CDV of ISO/IEC 11801-1 Amd1, that was circulated from the last meeting, that clarified all SPE classes should be 2A, did not pass.**
  - 6 countries voted No (13 Yes), based on insistence on two classes of SPE cabling, for both 2A and 0.75.
  - A new consensus was reached to allow two classes but requiring the use of keyed connectors to prevent intermating.
  - This will require SC48B (and the industry) to develop such connectors, and liaisons were sent to initiate this process.
  - The revised document will circulate as CD, to allow time for connector standardization development.

- **A 7th CD of ISO/IEC 11801-6 Amd1 (Distributed Building Systems) will be circulated and is only waiting resolution of the topics in ISO/IEC 11801-1 Amd 1.**

Technical Report on Cable Sharing TR 11801-9911

- **SC25 WG3 reviewed comments to this technical report to which applies to the 0.75A cabling covered by the existing 4P classes covered by 11801-1:2017, and providers guidance regarding methods of segregation of 2A and 0.75A systems**

- **All comments were resolved, and the document progresses to a 1st CD**
- **Some comments may be needed to cover the latest changes in ISO/IEC 11801-1 Amd 1 relating to keyed connectors.**
  - **Participation of the IEEE 802.3 delegation will be welcomed in these ad-hocs.**

Single pair integration into ISO 14763-2 and TS 29125

- **Work continues to address the changes that will be needed for single pair cabling within the planning and installation standard ISO 14763-2 and the remote powering technical specification TS29125.**

- **This will include:-**
  - **Consideration of cable heating in bundles for 2A powering**
    - **There will be significant length derating as result considering thermal rise**
    - **2A may also greatly reduce the number of cable is in a bundle.**
  - **Changes to the RP levels of powering class to reflect single pair currents**

- **Comments were resolved to both documents, and both will be circulated as CD.**

Multidrop Cabling

- **SC25WG3 has halted work on a technical report into the use of multidrop cabling.**
  - **Intended to cover 802.3cg and 802.3da.**

- **The project did not have a volunteer for a project leader, and concerns were raised regarding the use of multidrop within a generic structured cabling system.**

- **Work may be restarted if significant demand is established for work within SC25 WG3.**

ISO/IEC 24383 Physical Network Security

- **Comments were resolved on the ISO/IEC 24383 for physical network security including guidelines for customer premises in these areas:**
  - **Security planning**
  - **Security systems**
  - **Intelligent building systems**
  - **Administration systems**
- **The draft specifies requirements for 4 levels of security:**
  - **Open (to be based on 14763-2)**
  - **Restricted**
  - **Secure**
  - **Highly Secure**
- **A 9th CD for ISO/IEC 24383 will be distributed shortly.**

ISO/IEC 14763-5 Cabling Sustainability

- The standard for physical network sustainability requirements ISO/IEC 14763-5 work continues to develop guidelines for customer premises in these areas:
  - Eco-friendly cabling materials and cabling systems
  - Equipment and accessories that consider the environment
  - System resilience and lifecycles (installation and operation)
  - Skill sets, training and management of construction technicians
- All comments were resolved except one which proposes content related to energy efficiency. This comment will be handled at an interim ad-hoc.

- After the Ad-hoc the document will progress to a 4th CD.

- An NP was discussed proposing a training and certification scheme for cabling installers.
  - This will be debated at interim ad-hocs.

ISO/IEC 14763-3 Testing of optical fibre cabling

- A new edition of the fibre optic testing document is being prepared.
- This is intended to clarify and simplify the guidance provided by the prevision edition from the perspective of the installer, and to address consistent guidance with other IEC testing documents.
- The new edition is also evaluating the need reference connectors and other additions.
- The document has reached FDIS stage.

Modelling technical reports

- **The project for ISO/IEC TR11801-9903 Modelling is moving forward with another working draft to add mixed mode and common mode parameters to for the 16 port model of a 4-pair system.**

- **SC25 WG3 is moving forward with a project to provide guidance on Salz SNR modeling, to help development of cabling to support existing and future applications.**
  - **This will be included either as an Annex to TR11801-9903 or as a separate document.**

- **A corrigendum is being preformed to correct an equation in the ISO/IEC TR 11801-9909 on extended reach 25Gb cabling**

- **Work on a revision to ISO/IEC TR 11801-9909 has been initiated provide models of 25Gb cabling at further reaches than provided in the first edition.**

Other items

- **Application Specific single pair cabling Technical report 11801-9906, which may include support of 802.3dg, is updating a WD.**

- **A project continues to update the Grounding and bonding standard ISO 30129 and a CDVwill be circulated**

Upcoming Meetings

- **March 18-22 2024, Virtual**
- **September 23- 26 2024, Japan**
- **March 3-7 2025, Virtual**
- **October 13-16 2025, TBD**

Document Access for 802.3

The main documents will be placed on a password protected area of 802.3 website

- **Other documents available on request from your liaison officer.**

https://www.ieee802.org/3/private/liaison_docs/ISO_IEC_SC25/

Questions?

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