

ISO/IEC SC25/WG3 Liaison Report

- Customer Premises Cabling –

March 2022

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ISO/IEC SC25/WG3 Meeting

Virtual: 28th February to 4th March 2022

- Customer Premises Cabling -

Key Items:

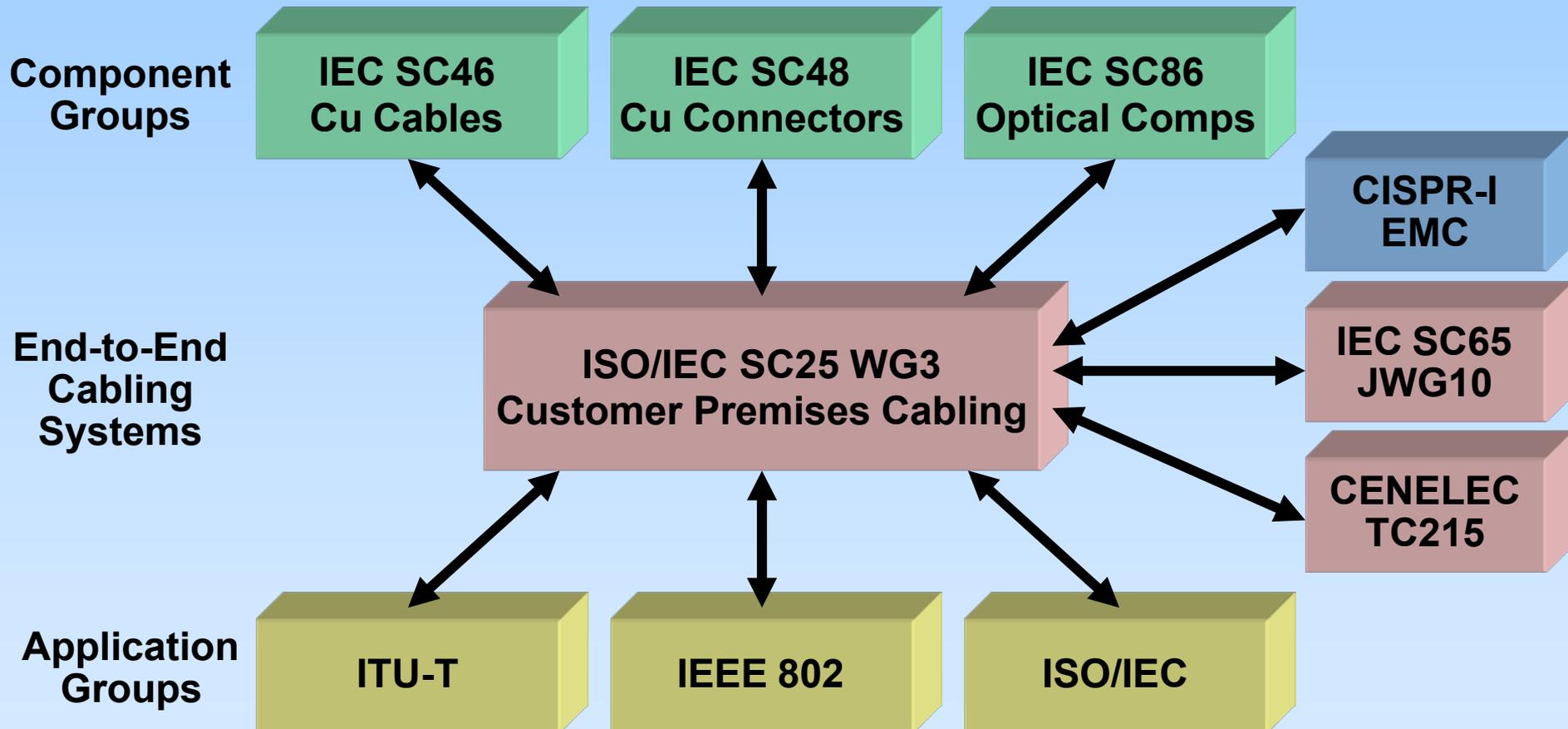
1. Generic single-pair cabling is being developed, with three new classes of cabling in amendments to the 11801-1 and 11801-6 standards.
2. A Technical report is being prepared to provide guidance on cable sharing with single pair cabling
3. Multidrop TR being reaches the working draft stage, and may not be suitable for Type B 11801-6 applications.
4. The Physical Network Security 24383 draft gives requirements for multiple levels of security moves to a 6th CD
5. The Planning and installation standard 14762-2 and Remote powering technical specification 29125 will be updated to included considerations of single pair cabling and 2A remote powering, including cable heating considerations.
6. Cabling Sustainability 14763-5 will progress with to a 1st CD before the next meeting.
7. The 4th CD of 14763-3 optical fiber testing document is being prepared
8. TR11801-9903 Models will be updated to include common and mixed mode parameters with another WD
9. A project to update the Grounding and bonding standard ISO 30129 moves to a 1st WD.



67 Participants

18 Nations

Process Model



Meetings of SC25 WG3

- **February 28 – March 5 2022, Virtual**

Liaisons

A Liaison reply was proposed to the IEEE Liaison letter 3N1316 (providing feedback on the 5th CD of 11801-1), however this was deferred to the following meeting, to allow discussions to be completed.

Publications

IEC has not published 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 and 400m 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 project for a TR providing additional guidance for cable sharing reviewed comments and will circulate a 2nd Work Draft**
- **The 5th CD of ISO/IEC 11801-6 Amd1 (Distributed Building Systems) will be distributed shortly.**

11801-1 Amd 1. Generic Single Pair Cabling

- The project for ISO/IEC 11801-1 Amd1 considered formal comments from National committees and the feedback provided by 802.3 in 3N1316.
 - Significant clarifications and changes were made to the cable sharing sections, including moving the “engineered solution” for mixed-application cable sharing into an informative annex.
 - The transmission performances of the new classes were not adjusted, but an annex will be added to explain how length scaling of the performance provided by these classes will support applications such as 100BASE-T1, and 1000BASE-T1 Types A and B.
 - Annex G, for remote powering guidance will be updated in accommodation of the feedback from 802.3.
 - Feedback to remove the 0.75A allowance for channels made from a mix of single pair and multipair cabling did not reach consensus, with the discussion being significant support for a generic single pair cabling class that does not exceed the performance of generic 4P classes, or similar.
 - The meeting ran out of time to complete these discussions and work will continue to develop consensus between the scheduled meetings.
 - Informal collaboration between experts before the September meeting is expected and has been encouraged by SC25 WG3.

Multidrop Cabling

- **SC25WG3 is preparing a working draft for a technical report into the use of multidrop cabling.**
 - **Intended to cover 802.3cg and 802.3da.**
- **The report is intended to cover:-**
 - **Multidrop cabling components.**
 - **Implementation guidance.**
 - **Testing considerations.**
 - **The work has highlight areas that suggest this is not suitable for Type B cabling as referenced by the 11801-6 project.**
- **Work will continue with circulating of an updated working draft.**

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 6th CD for ISO/IEC 24383 will be distributed shortly.**

Single pair integration into ISO 14763-2 and TS 29125

- **Preliminary work has been conducted 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
 - Early work suggests significant length derating when 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
- **Working drafts will be prepared for both documents.**

ISO/IEC 14763-5 Cabling Sustainability

- The NWIP for a standard for physical network *sustainability* requirements was approved as ISO/IEC 14763-5 and work continues to 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
- The document progresses to 1st CD.

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 previous 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.**
- **A 4th CD will be circulated in time for comment resolution at the September 2022 meeting**

Other items

- A project continues to update the Grounding and bonding standard ISO 30129 and a 1st WD will be circulated
- Application Specific single pair cabling Technical report 11801-9906, is collecting a live list for a potential new revision.
- Single pair Cable Sharing technical report 11801-9911
 - The document providing further guidance on cable sharing with multipair channels will move to a 2nd working draft.
- Review of optical fibre trends and their impact on WG 3
 - Considering items that may need to be added to SC25 WG3 standards or technical reports, including FTTR fibre to the room.
 - Work will continue at next meeting.
- 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.

Upcoming Meetings

- **September 26-29 2022, Reutlingen, Germany**
- **February 26 – March 4 2023, Location TBD**
- **Either week of 9th or 16th October 2023, Location 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/](https://www.ieee802.org/3/private/liaison_docs/ISO_IEC_SC25/)

The ISO/IEC SC25 WG3 documents provided to IEEE 802.3 are for the purposes of promoting awareness and coordination of the work of SC25 WG3 and avoiding overlaps and gaps in standardization.

The documents are covered by the circulation and distribution restrictions according to the ISO/IEC Category C Liaison relationship with 802.3. SC25 WG3 would like to encourage input from the IEEE to help make our standards better and welcomes feedback through the liaison channels.

If you have any questions about the documents provided, any other SC25 WG3 documents, or the terms under which they are provided please feel free to contact your liaison officer (james.withey.ieee@gmail.com).

Questions?

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