

# **ISO/IEC SC25/WG3 Liaison Report**

## **- Customer Premises Cabling –**

**September 2021**

**James Withey – WG3 Liaison Officer**

**[James.withey@flukenetworks.com](mailto:James.withey@flukenetworks.com)**

# **ISO/IEC SC25/WG3 Meeting**

## **Virtual: 20-24 September 2021**

### **- Customer Premises Cabling -**

## **Key Items:**

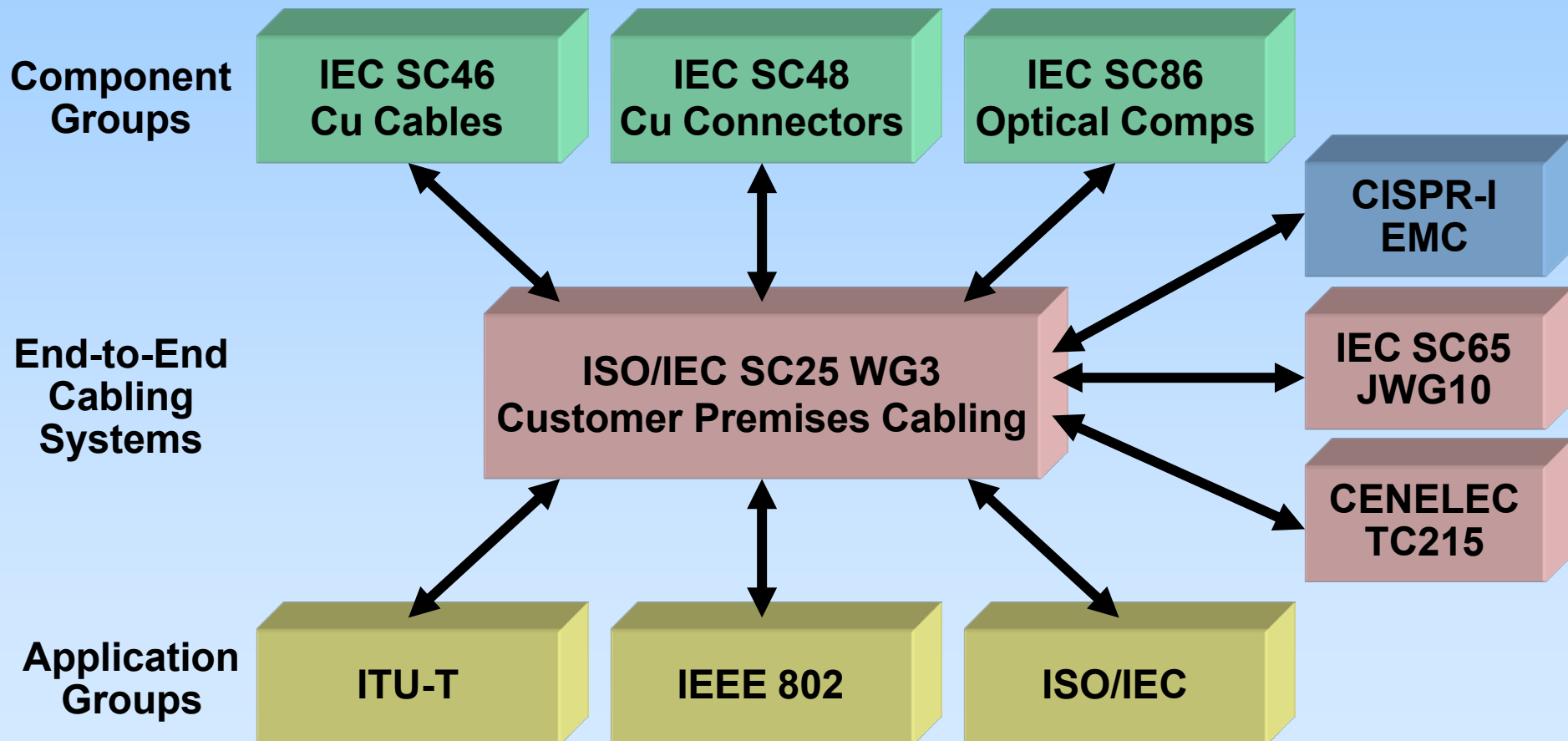
1. Generic single-pair cabling is being developed, with three new classes of cabling, in amendment to the 11801-1 and 11801-6 standards.
2. The Industrial cabling standard 11801-3 A1 has been published
3. Progress is made on a possible multidrop TR, including for Type B 11801-6 applications.
4. The Automated Infrastructure Management standard amendment to include PoE considerations has been published
5. The Physical Network Security 24383 draft gives requirements for multiple levels of security.
6. Cabling Sustainability 14763-5 will progress a CD before the next meeting.
7. A 3<sup>rd</sup> CD of 14763-3 optical fiber testing document is being prepared
8. The 14673-4 E2E/DAC/MPTL testing document has been published
9. TR11801-9903 Models will be updated to include common and mixed mode parameters.
10. A project was stated to update the Grounding and bonding standard ISO 30129



**61 Participants**

**16 Nations**

# Process Model



# Publications

IEC has published the following SC25 WG3 documents since their last meeting.

## ISO/IEC 11801-3:2017+AMD1:2021 CSV

- Industrial generic single pair cabling amendment

## ISO/IEC 14763-4:2021

- Testing of E2E, MPTL and DAC

## ISO/IEC 18598:2016+AMD1:2021 CSV

- Automated infrastructure management (updated for PoE including bundle size, resistance, and other considerations)

## ISO/IEC TS 11801-9903:2021

- Mathematical model of channels from componets

# Liaisons

- **Two liaisons agreed to be sent to IEEE from the September 2021 meeting**

**Subject: Liaison from ISO/IEC JTC 1/SC 25/WG 3 on 60512-99-003**

Dear David,

At our 20 to 23 September meeting, we reviewed the IEC SC48B work on a proposed new standard IEC 60512-99-003, specifying a test procedure for unmating under electrical load for SPE connectors to correctly qualify that single pair connectors are not damaged if they are unplugged while power is still applied.

IEEE 802.3 has previously supplied circuit diagrams for simulating unmating under load for 4-pair POE, and SC25 WG3 would like to request your guidance with associated circuit diagrams for single pair ethernet powering, or confirmation that the same circuit could be used.

**Subject: Liaison from ISO/IEC JTC 1/SC 25/WG 3 on Multidrop**

Dear Mr. Law,

We are writing first to inform you of active work in ISO/IEC JTC1/SC25/WG3 involving multidrop cabling systems. We have been studying this topic and have begun to draft content regarding cabling in support of IEEE multidrop applications. We have just entered the stage of developing content.

Secondly, in support of this work, we would like to establish a closer partnership in sharing content between our group and the 802.3 da project. We would like to request that any draft documents be shared once available and plan to respond in kind. We greatly appreciate any additional information that can be provided to keep our definitions fully aligned with your active work.

- **Liaison also in preparation to TC64 to follow up on IEEE recent letter regarding SPoE. \***

\* Letter may not yet be received

# 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
- A 5<sup>th</sup> CD for ISO/IEC 11801-1 Amd1 will be distributed shortly.
  - Confirmation of 2A current carrying capacity for SP classes
    - 1p-4p mixed channels may allow lower current
  - A project was approved for a cable sharing TR
- A 4<sup>rd</sup> CD of ISO/IEC 11801-6 Amd1 (Distributed Building Systems) will be distributed shortly.

# Multidrop Cabling

- **SC25WG3 is to considering a NWIP for a technical report into the use of multidrop cabling.**
  - **Intended to cover 802.3cg and 802.3da.**
- **Interim meetings were held to develop a working draft ready for the September meeting.**
- **The report is intended to cover:-**
  - **Multidrop cabling components.**
  - **Implementation guidance.**
  - **Their use, including, but not limited to, Type B cabling as referenced by the 11801-6 project.**
- **Work will continue in interim ad-hoc meetings**

# **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**
- **A 5<sup>th</sup> CD for ISO/IEC 24383 will be distributed shortly.**
- **The draft specifies requirements for 4 levels of security:**
  - **Open (to be based on 14763-2)**
  - **Restricted**
  - **Secure**
  - **Highly Secure**



# 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 a next working draft.

# **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 3<sup>rd</sup> CD will be circulated in time for comment resolution at the March 2023 meeting**

# ISO/IEC TR11801-9903 Modelling

- **SC25 WG3 is moving forward with a new edition of this modelling document which provides a full matrix S-parameter model of the differential mode of cabling channels and components.**
- **The new edition will add mixed mode and common mode parameters to complete the full 16 port model of a 4-pair system.**
- **The model allows simulation of channel performance based on component values and is being completed by a joint task group with SC25 WG3, SC46C (cables) and SC48B (Connectors)**

# Other items

- **A project was started to update the Grounding and bonding standard ISO 30129**

# Upcoming Meetings

- **February 28 – March 5 2022, Virtual**
- **September 26-29 2022, Reutlingen, Germany**
- **February 26 – March 4 2023, Location TBD**
- **Either week of 9<sup>th</sup> or 16<sup>th</sup> 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](mailto:james.withey.ieee@gmail.com)).

# Questions?

**James Withey**  
**Liaison Officer, IEEE 802.3 - ISO/IEC**  
**SC25 WG3**  
**[james.withey.ieee@gmail.com](mailto:james.withey.ieee@gmail.com)**