

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

## **- Customer Premises Cabling –**

**March 2024**

**James Withey – WG3 Liaison Officer**

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

# ISO/IEC SC25/WG3 Meeting

## Virtual: 11<sup>th</sup> – 22<sup>th</sup> March 2024

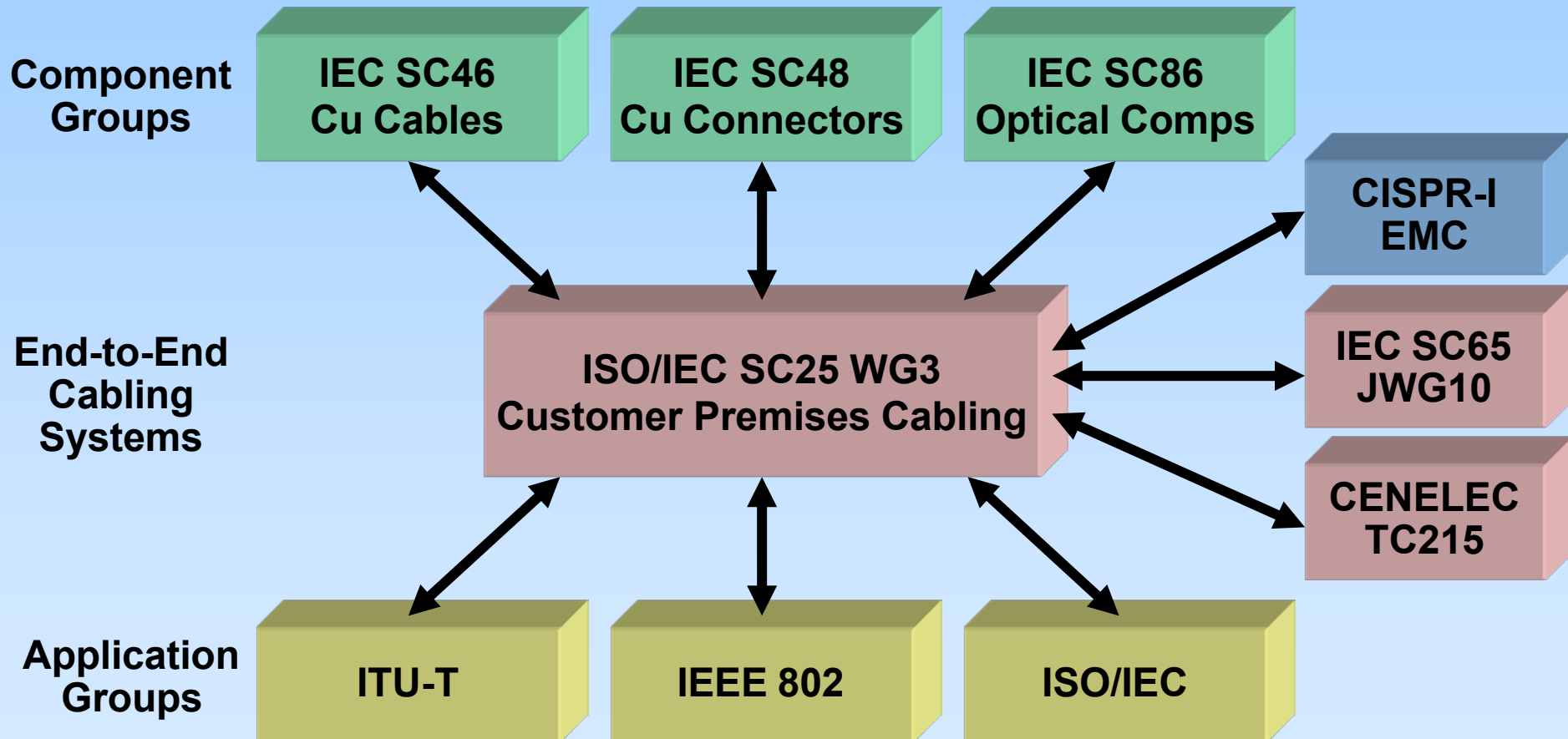
### - Customer Premises Cabling -

## 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 to the CDV stage .
2. It will be required that cabling with current carrying capacity below 2A is assessed, labelled and identified according to the administration requirements of 14763-2, and it has been clarified that SP cabling is intended to carry up to 2A.
3. A Technical report 11801- 9911 to provide guidance on 0.75A legacy classes cable sharing with single pair cabling moves to a DTR for voting
4. The Physical Network Security 24383 draft gives requirements for multiple levels of security beings work on 10<sup>th</sup> CD
5. 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, with the 29125 standards reaching the CD stage.
6. Cabling Sustainability 14763-5 will progress with to a CDV.
7. An NP on training and certification of installation engineers was discussed, and will be reviewed at interim ad-hocs
8. ISO/IEC 14763-3 optical fiber testing was approved for publication on 19<sup>th</sup> March 2024
9. TR11801-9903 Models will be updated to include common and mixed mode parameters has reached CD
10. A project has been initiated to provide guidance regarding SNR modeling
11. A corrigenda to correct a formula in ISO/IEC TR 11801-9909 has been competed
12. A project make a revision of 11801-9909, to further extend the reach of 25Gb cabling is being discussed
13. A project to update the Grounding and bonding standard ISO 30129 moves to a CDV.



# Process Model



# Meetings of SC25 WG3

- **11<sup>th</sup> – 22<sup>nd</sup> March 2024, Virtual**
  - **Attended by delegation from IEEE 802.3**

## Publications

**ISO/IEC 14763-3 for Testing of optical fibre cabling was been approved for publication on 19<sup>th</sup> March 2024.**

- This clarifies and simplifies the guidance provided by the previous edition from the perspective of the installer, and to addresses consistent guidance with other IEC testing documents.

**ISO/IEC TR11801-9909 Cor.1 25G Extended distance**

- The corrigendum was completed to correct an equation in the ISO/IEC TR 11801-9909 on extended reach 25Gb cabling

# 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 CD of ISO/IEC 11801-1 Amd1, faced concerns from SC48 regarding the practicality of small keyed connectors. As such new proposal was reached that focuses on the use of assessment of the cabling to establish current carrying capacity and clear identification of cabling rated below 2A.**
  - “ISO/IEC TS 29125 shall be used to assess the DC current carrying capacity. ISO/IEC 14763-2 shall be used to apply proper planning and installation. Each conductor of a single pair cabling channel is intended to support DC current carrying capacity of up to 2,0 A, dependant on installation conditions. Single pair channels shall be administrated and labelled according to ISO/IEC 14763-2. Multi-pair cabling using Category 5 through Category 8.2 cabling components support 0,75 A. When using these components within a single pair channel, the resulting channel is limited to 0,75 A, see ISO/IEC TR 11801-9911. “
  - The revised document will now circulate as a CDV.
- **A 7<sup>th</sup> 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 provides guidance regarding methods of segregation of 2A and 0.75A systems**
- **All comments were resolved, and the document progresses to a DTR (a voting stage)**

# 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**
  - **Identification and administration of cabling rated below 2A.**
- **ISO/IEC 29125 will now be circulated as a CDV.**

# ISO/IEC 24383 Physical Network Security

- **Comment resolution began on the 9<sup>th</sup> CDISO/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 10th CD for ISO/IEC 24383 will be following an interim series of meetings to complete comment resolution**



# 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 and the document will now progress to a CDV.**

# Modelling technical reports

- The project for ISO/IEC TR11801-9903 Modelling is moving forward as a CD 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 was completed 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 as a DTR.**
- **A project continues to update the Grounding and bonding standard ISO 30129 and a CDV will be circulated**
- **An NP was discussed proposing a training and certification scheme for cabling installers.**
  - **This will be debated at interim ad-hocs.**
- **SC25 WG3 agreed to put information regarding PON support into in AMD1 of 11801-1**

# Upcoming Meetings

- **September 23- 26 2024, Japan**
- **February 24 – March 7 2025, Virtual**
- **October 13-16 2025, TBD**
- **March 16 – 27 2026, Virtual**

# 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)**