

ISO/IEC SC25/WG3 Liaison Report - Customer Premises Cabling –

November 2018

James Withey

Liaison Officer, IEEE 802.3 - ISO/IEC SC25 WG3

james.withey.ieee@gmail.com

ISO/IEC SC25/WG3 Meeting

Falls Church, USA: 24-27 Sep 2018

- Customer Premises Cabling -

Key Items:

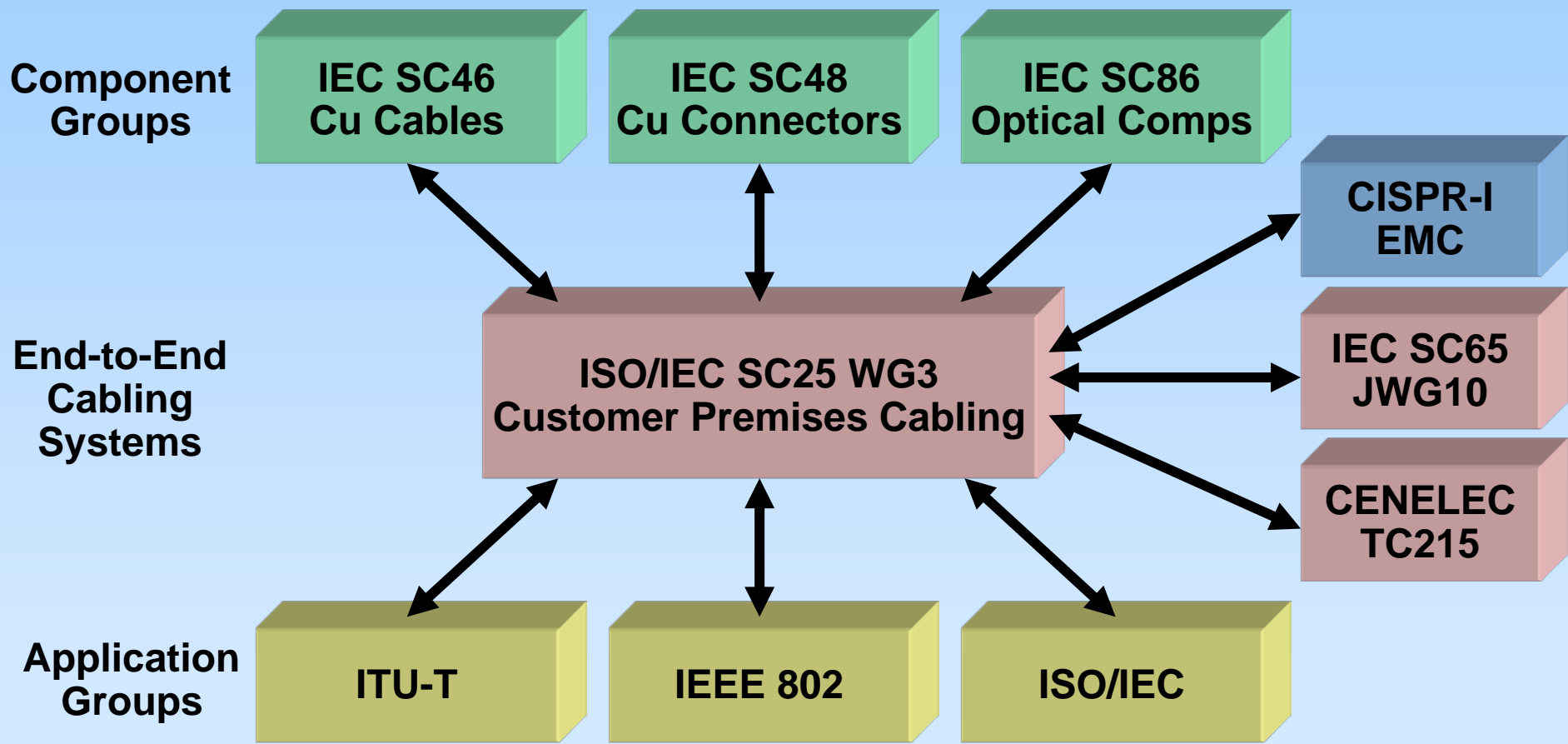
1. ISO/IEC 11801 Ed.3 Corrigenda have been published (in April 2018)
2. ISO/IEC TR 11801-9906 Application specific 1-pair Cabling
3. Generic cabling to support 1-pair applications will develop 3 new classes of single pair cabling
4. Single-pair connectors/selection process has been completed
5. ISO/IEC 29125 amendment; Adding cable heating for 1-pair cabling is being developed and 28awg cords
6. ISO/IEC 14763-2 Ed.2 Planning/Installation; Adding remote powering moves to a DIS
7. ISO/IEC 18598 AIM is being extended for PoE considerations
8. ISO/IEC TR 11801-9908 High Speed Apps for MMF
9. Physical Network Security
10. Technical Report for cabling to support 25Gb/s over 30m
11. Direct attach and MPLT cabling technical reports



54 Participants

16 Nations

Process Model



ISO/IEC 11801-X Corrigenda

- **Corrigenda to all parts of ISO/IEC 11801-x have been published.**
- **These changes are required for correct interpretation of 11801.**
- **The possibility of producing consolidated versions is being investigated.**

ISO/IEC TR 11801-9906: Application specific Single-pair Cabling

- **Technical report to define single-pair cabling to 600MHz to support:**
 - 802.3bp (1000BASE-T1)
 - 802.3bw (100BASE-T1)
 - 802.3cg (10BASE-T1)
- **Comments received and handled on a second working draft.**
- **WD3 to be prepared & circulated**

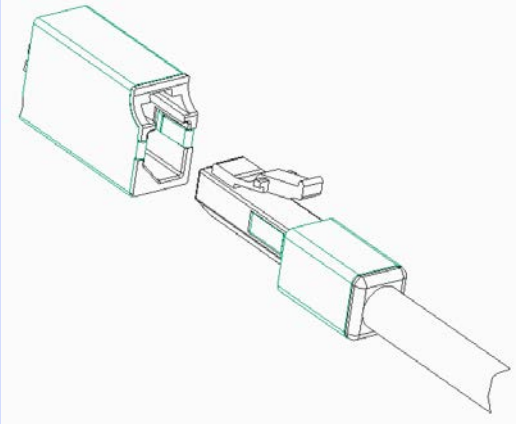
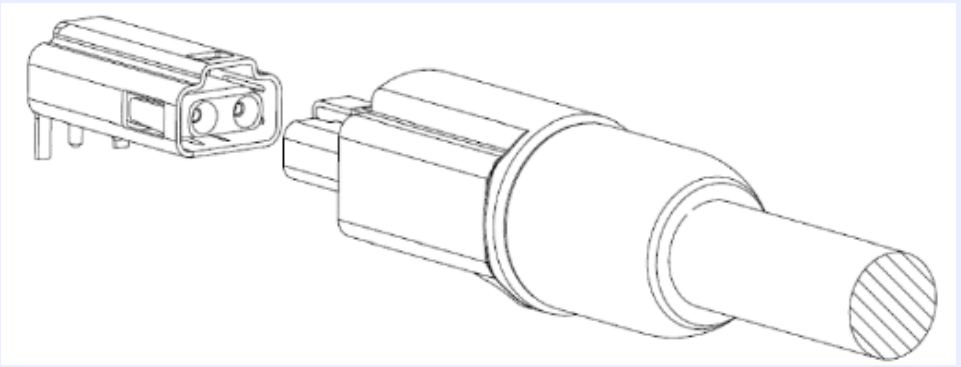
Generic Cabling to Support Single-pair Applications

- **Working drafts of Generic cabling to support single pair applications were reviewed for :**
 - ISO/IEC 11801- General
 - ISO/IEC 11801-3 Industrial
 - ISO/IEC 11801-6 Distributed building services
- **These will be circulated as new working drafts for the next meeting and in some cases interim teleconferences**
- **3 New classes of single pair are being developed.**
 - 20 MHz, 1000m (in support of 802.3cg)
 - 600MHz 100m (in support of 802.3bp/bw)
 - Additionally (TBD)MHz, 100m to present additional opportunities

Single Pair Connector Selection for SC25WG3

- **ISO/IEC SC25 WG3 produced a questionnaire for the national committees to select Connecting hardware for single pair cabling to be used by SC25 WG3.**
- **The questionnaire was divided into two selections:-**
 - **$M_1I_1C_1E_1$ (Normal office environments).**
 - **$M_2I_2C_2E_2/M_3I_3C_3E_3$ (Industrial environments).**
- **The results of the questionnaire were circulated 27/07/2018 as**
- **JTC 1/SC 25/2819/RQ.**

Single Pair Selection for SC25WG3

Environment	Standard	
$M_1I_1C_1E_1$	IEC 63171-1 (CD) Copper LC style connector for use with 1-pair balanced twisted pair cabling	 <p>The diagram shows an LC connector assembly. On the left is a rectangular plastic housing with a latch. On the right is a metal LC connector with a single pair of wires inserted into its ports. The wires are twisted and extend from the connector.</p>
$M_2I_2C_2E_2$ $M_3I_3C_3E_3$	IEC 61076-3-125 (CD) 2-way, shielded and unshielded, free and fixed connectors for data transmission up to 600MHz with current carrying capacity Standard:	 <p>The diagram shows a 2-way connector assembly. On the left is a rectangular plastic housing with two circular ports. On the right is a cylindrical metal connector with a threaded end and a central pin. The connector is shown inserted into the housing.</p>

ISO/IEC 29125: Remote Powering

- **Ed.2 was published as a TS in March 2017**
- **Am.1 is now being developed and will expand the scope to include 1 pair cabling of 1-pair cabling and 28awg cords**
- **Thermal evaluation of single-pair cables & cable bundles is now underway, and has confirmed that the existing models used by ISO/IEC are suitable for single pair cabling**
- **Work will continue in teleconferences, and a first draft of the amendment is expected for the next meeting.**

ISO/IEC 14763-2 Planning/Installation & ISO/IEC 18598 AIM

- **The ISO/IEC 14763-2 Ed.2 Planning and Installation standard moves to a DIS, and will mandate cabling that supports PoE in new buildings and refurbishments.**
- **Comments were reviewed to a working draft of the ISO/IEC 18958 AIM standard which is being amended to include bundle, resistance, and other considerations relevant to POE. A second working draft is expected for the next meeting.**

ISO/IEC TR 11801-9908: High-speed MMF Applications

- **Comments were resolved to a the first working draft of this technical report which will provide guidance for MMF cabling to support a wide range of applications from 10G to 400G, as well as migration/upgrade considerations.**
- **Supported channel lengths are listed for OM3, OM4 and OM5 fibre types**
- **The next working draft will be circulated for the next meeting.**

ISO/IEC TR 11801-9909: 25 Gbit/s balanced cabling extended reach over greater than 30 m.

- **This technical report explores the ability of cabling systems to support at least 25Gbit/s applications of at reaches over 30m.**
- **Focussing on a reach of 50m**
- **Evaluation of potential use cases is still on going.**
- **Comments were resolved to a working draft and an updated working draft is expected for the next meeting**

NWIP Physical Network Security

- **Work continues with development of a standard for develop physical network security requirements and guidelines for customer premises including:**
 - **Security planning**
 - **Security systems**
 - **Intelligent building systems**
 - **Administration systems**
- **Work was conducted to review the equivalent TIA document (TIA 5017) and a first working draft is expect for the next meeting.**

Cabling Topologies

- **A technical report, ISO/IEC TR 11801-9907 is being developed to provide guidance for the use of Direct Attach cabling**
 - **Cable assemblies with free connectors at each end, and with no intermediate connecting hardware, that connect two pieces of equipment.**
- **Work has begun on a technical report for MPTL (Modular plug terminated links)**
 - **A type of ISO/IEC link terminated with a modular plug on one end**

Liaison Letter

- A liaison letter 25/2843 was sent to announce that SC25 WG3 has selected a liaison officer from SC25WG3 to IEEE 802.3

Dear Mr Law,

further to the retirement of Alan Flatman, ISO/IEC JTC 1/SC 25 at its September 2018 meeting approved the following:

Resolution SC 25: 29/27

SC 25 appoints Mr James Withey as its liaison to IEEE 802.3.

Questions?

James Withey
Liaison Officer, IEEE 802.3 - ISO/IEC
SC25 WG3
james.withey.ieee@gmail.com