

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

## **- Customer Premises Cabling –**

**November 2019**

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for  
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# ISO/IEC SC25/WG3 Meeting

Nagasaki, Japan: 23-26 September 2019

## - Customer Premises Cabling -

### Key Items:

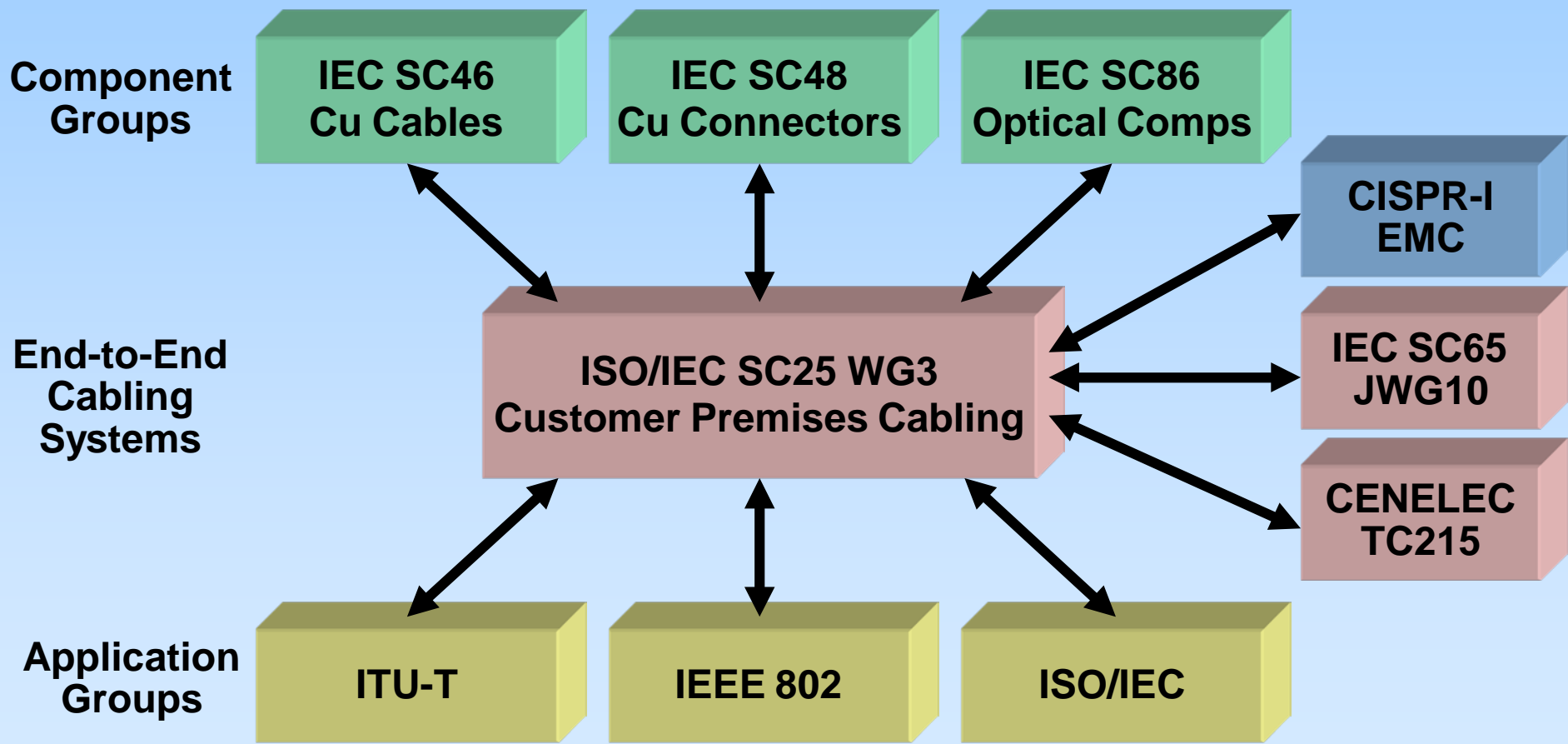
1. Application specific single-pair Cu cabling
2. Generic single-pair cabling with three new classes of cabling
3. Amendment to remote powering specification: calculates cable heating for single-pair cabling
4. Planning/Installation standard adds remote powering and moves to FDIS
5. Automated Infrastructure Management is being extended for PoE considerations
6. High speed cabling for MMF
7. Physical Network Security
8. Cabling Sustainability
9. Investigation of Cu cabling to support 25Gb/s longer-reach
10. Alternative cabling topologies



50 Participants

17 Nations

# Process Model



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

- **This is a Technical Report to define application specific single-pair cabling to 600MHz in support of:**
    - **802.3bp (1000BASE-T1)**
    - **802.3bw (100BASE-T1)**
    - **802.3cg (10BASE-T1)**
  - **A DTR was circulated and approved by all countries.**
  - **TR 11801-9906 is being prepared for publication.**
- **A liaison letter to .3 WG regarding this TR was approved (3Nag\_068)**

# Generic Cabling for Single-pair Applications

- **Amendments to generic cabling standards were reviewed:**
  - ISO/IEC 11801-1 General
  - ISO/IEC 11801-3 Industrial
  - ISO/IEC 11801-6 Distributed building services
- **3 classes of single-pair cabling are being developed.**
  - 20 MHz, 1000m (Generic cabling including support of 802.3cg)
  - 600MHz 100m (Generic cabling including support of 802.3bp/bw)
  - Additionally (ffs)MHz, 50m(ffs) to present additional generic opportunities
- **PDAM for ISO/IEC 11801-1 Amd1 will be distributed shortly.**
- **DAM for ISO/IEC 11801-3 Amd1 will be distributed shortly.**
- **1st Working Draft of ISO/IEC 11801-6 Amd1 is requested for circulation in December.**

# Remote Powering

- **ISO/IEC TS 29125 specification covers issues related to power delivery on customer premises cabling (SC25/WG3).**
- **Amd1 is being developed to expand the scope to include single-pair cabling and 28 AWG patch-cords.**
- **Constants have been developed to allow calculation of temperature rise of single-pair cabling due to remote powering.**
- **A revised draft for circulation DAMTS is being prepared and will be sent to IEEE 802.3 soon.**
- **A second amendment was authorized to consider inclusion of 2A capacity and 0,32 mm cordage.**

# Planning/Installation & Automated Infrastructure Management(AIM) systems

- The ISO/IEC 14763-2 Ed.2 Planning and Installation standard will mandate cabling that supports PoE in new buildings and refurbishments.
  - FDIS circulated in September (editorial comments only)
- Comments were resolved on the latest committee draft of the AIM standard ISO/IEC 18598 Amd1.
  - Includes bundle size, resistance, and other considerations relevant to PoE
  - Draft amendment approved for circulation as a DAM for national committee comment

# High-speed MMF Applications

- **Technical Report ISO/IEC TR 11801-9908: provides 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.**
- **Comments to the third working draft of this technical report were resolved. Including a resolution to expand the scope of the TR to *support SMF applications*.**
- **A PDTR will be circulated for the next meeting.**



# Balanced Cu cabling in support of up to 25Gb/s data rate

- Technical report ISO/IEC TR 11801-9909 provides an evaluation of the ability for standardised cabling systems to support at least 25Gbps use cases that reach over **50m**.
- The TR also offers an evaluation of improvements to cabling and components that would be required to further extend the reach.
- Comments were resolved on the 2<sup>nd</sup> working draft and the document was approved to progress to a DTR for national committee comment.

# Cabling Topologies

- **Technical Report, ISO/IEC TR 11801-9907 has been published - Specification for *Direct Attach cabling*:**
  - **Cable assemblies with free connectors at each end, and with no intermediate connecting hardware, that connect two pieces of equipment.**
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- **Comments have been resolved on a 2<sup>nd</sup> working draft of the technical report for MPTL (*modular plug terminated links*):**
  - **A type of ISO/IEC link terminated with a modular plug on one end**
- **MPTL TR will be promoted to the DTR voting stage with the designation ISO/IEC TR 11801-9910**

# NWIP Physical Network Security

- **New project has been approved for development of a standard for physical network security requirements including guidelines for customer premises in these areas:**
  - **Security planning**
  - **Security systems**
  - **Intelligent building systems**
  - **Administration systems**
- **Review of the equivalent TIA document (TIA 5017) and IEC data centre security standards has been completed.**
- **Comments to the working draft have been resolved and a committee draft (CD) will be prepared with the designation ISO/IEC 24383.**

# NWIP Cabling Sustainability

- **An updated project proposal for development of a standard for physical network *sustainability* requirements including 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 new project proposal will originate from the Japan delegation and be circulated as a letter ballot for all WG3 member countries.**

# Liaison Letters

- **SC25 WG3 *received* two liaison from IEEE 802.3 during, or prior to, their September meeting.**
  - Initial request for ISO/IEC DTS 29125 Amd. 1 (remote powering)
  - Response to letter 3N1224 re. ISO/IEC 11801-9906 draft (SPE)
- **SC25 WG3 *prepared* one liaison letter (as noted above) for the 802.3 November 2019 meeting.**
  - Response (3Nag\_068) to 802.3 letter re. ISO/IEC TR 11801-9906

# Publications

**IEC has recently published the following WG3 projects:**

- **ISO/IEC TR 11801-9907:** Information technology – Generic cabling for customer premises - Part 9907: Specifications for direct attach cabling
- **ISO/IEC TR 29105/Amd2:** Information technology — Generic cabling - Introduction to the MICE environmental classification

# Upcoming Meetings

- **February 24-28, 2020 – Sydney, Australia**
- **September 21-25, 2020 – Reutlingen, Germany**
- **February 22-26, 2021, location TBD**
- **September 20-24 2021, location TBD**

# Questions?

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