SFF TWG

2024 Review and 2025 Plans

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SFF TWG 2024 Accomplishments

- The SFF TWG develops technical specifications for:
  - Storage media
  - Networking
  - Pluggable solutions
- These specifications complement existing industry standards work and encompass:
  - Cables and connectors
  - Form factor sizes and housing dimensions
  - Management interfaces
  - Transceiver interfaces
  - Electrical interfaces
  - Related technologies
- These specifications enable technology vendors to produce compatible, multi-sourced products and solutions.

- SFF TWG Published or revised 10 specifications in 2024
  - Connectors For Pluggable Multi-Purpose Module (SFF-TA-1037)
  - Internal Unshielded High Speed Connector System (SFF-TA-1016)
  - Next Gen High Speed Cable Connector System (SFF-TA-1035)
  - Storage System High Speed Cable Interconnect (SFF-TA-1026)
  - SFF Module Management Reference Code Tables (SFF-8024)
  - Pluggable Multi-Purpose Module (SFF-TA-1034)
  - Tunable SFP+ Memory Map for ITU Frequencies (SFF-8690)
  - Multifunction 6X Unshielded Connector (SFF-8639)
  - Enterprise and Datacenter Standard Form Factor Pin and Signal Specification (EDSFF) (SFF-TA-1009)
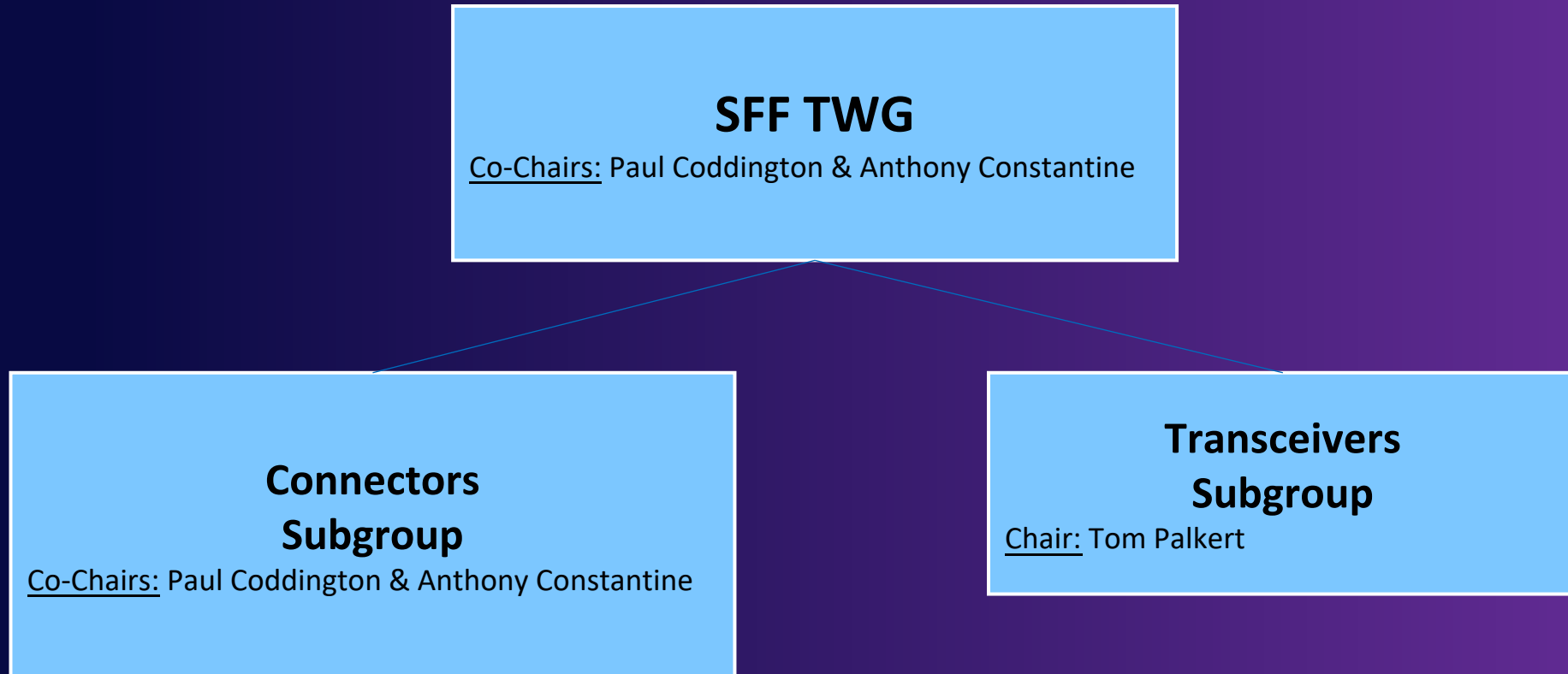 - Protocol Agnostic Multi-Lane High Speed Connector (SFF-TA-1002)

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SFF TWG Work Items: New Projects and Activities

- New Projects Proposed or in Development: 5 in development, 2 additional proposed.
  - PCIe FPP Hardware and Electrical Specification (SFF-TA-1039)
  - Low Profile High Density Flexible Cable Connector (SFF-TA-1038)
  - Cable Optimized Boot Peripheral Connector (SFF-TA-1036)
  - Multi-lane External High Speed Cable System (SFF-TA-1032)
  - Cabled QSFP Cage & Connector (SFF-TA-1029)
  - PCIe Optical Cabling Mechanicals Project
  - 200/400Gb Ethernet Transceivers Project

- Activities
  - 400G AI Workshop on January 27th sponsored by SFF in partnership with Ethernet Alliance (EA), Open Compute Project (OCP), and Optical Internetworking Forum (OIF)
  - 400G development work for AI applications with partner organizations.
  - Converting from a Technical Affiliate to the new SNIA TWG and Community model.

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SFF TWG Work Items: Project Revisions and Collaboration

- Existing project work in process: 12 projects
  - Internal High-Speed Cable / Modular Connector System (SFF-TA-1033)
  - QSFP2 Connector, Cage, & Module Specification (SFF-TA-1027)
  - Enterprise and Datacenter Standard Form Factor Pin and Signal Specification (EDSFF) (SFF-TA-1009)
  - Protocol Agnostic Multi-Lane High Speed Connector (SFF-TA-1002)
  - Cross Reference to Select SFF Connectors and Modules (REF-TA-1011)
  - Multi-Protocol Internal Cables for SAS and/or PCIe (SFF-9402)
  - QSFP+ 4X Hardware and Electrical Specification (SFF-8679)
  - QSFP+ 28 Gb/s 4X Pluggable Transceiver Solution (QSFP28) (SFF-8665)
  - Mini Multilane 4/8X Shielded Cage/Connector (HDsh) (SFF-8614)
  - Mini Multilane 4/8X Unshielded Connector (HDun) (SFF-8613)
  - Management Interface for SFP+ (SFF-8472)
  - SFP+ Power and Low Speed Interface (SFF-8419)

- Collaborations With External Organizations
  - PCI-SIG
  - OIF
  - Ethernet Alliance
  - JEDEC
  - OCP

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SFF TWG Structure and Chairs

SFF TWG

<u>Co-Chairs:</u> Paul Coddington & Anthony Constantine

**Connectors
Subgroup**

<u>Co-Chairs:</u> Paul Coddington & Anthony Constantine

**Transceivers
Subgroup**

<u>Chair:</u> Tom Palkert

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SFF TWG Membership as of 1/10/2025: 69 companies

SFF TWG Participation

- We are solving problems around higher speed Ethernet and PCIe interconnect to solve AI bottleneck problems while improving existing interconnects and form factors.
  - This includes future projects focused on 200/400 Gb/lane, PCIe 7.0, and Optical.

- Our members include participants involved in ASICs/CPUs, Data centers, interconnects, networking, research, server systems, storage devices, test equipment, and transceivers.
  - We develop specifications to support a broad range of usages.

- Benefits:
  - Participation into development of SFF specifications, information documents, and reference guides
  - Ability to open new projects
  - Access to all presentations, all drafts, prior publications, and supplemental material relevant to all SFF projects

- Resources:
  - Public Site: https://www.snia.org/sff
  - Specifications: https://www.snia.org/sff/specifications
  - Additional questions? Please send mail to sff_ta_twgchair@snia.org

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