Revised Project Start for QSFP56

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Project supporters

- Jeff Maki: Juniper
- Vera Koleva: II-VI
- Tom Palkert: Samtec
- Piers Dawe, Nvidia

- Editor: Tom Palkert: Samtec

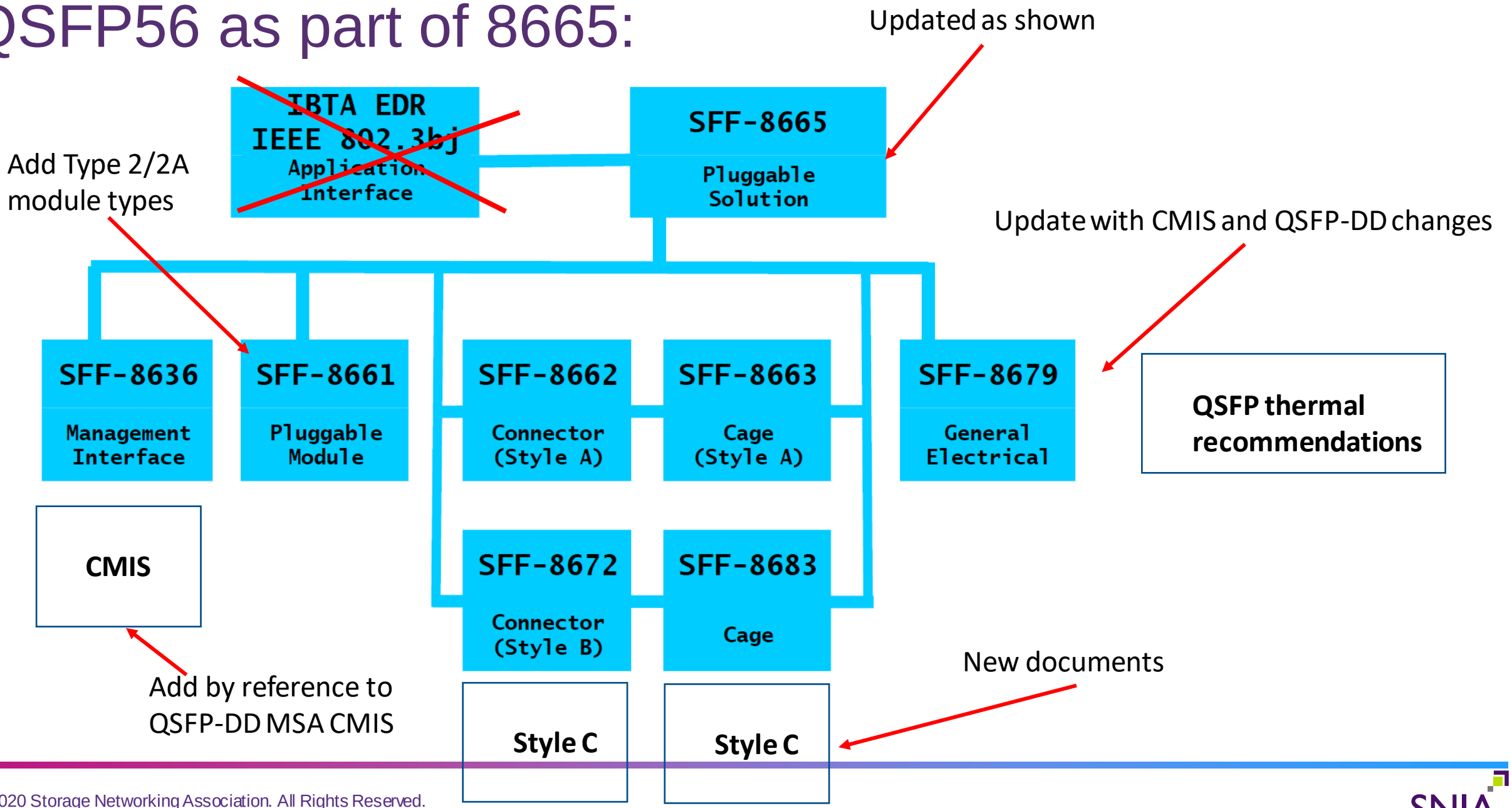
Why a new project proposal?

- The first project proposal assumed a stand alone QSFP56 document with references to other SFF specs as appropriate
- After months of work the transceiver group agreed that a modification of the existing QSFP+ documents would be a better approach.

Project overview

- Incorporate appropriate updates from QSFP-DD specification into appropriate QSFP+/28 documents and create new documents as needed
  - Update SFF-8665 and REF-TA-1011 to add references to new documents
  - Update SFF-8679 to support CMIS (Common Management Interface Specification) as an alternative to SFF-8636 and incorporate appropriate changes from QSFP-DD
  - Add style c Cabled cage and connector option as additional specifications
  - Update SFF-8661 to add type 2/2A module types for high power modules
  - Maintain compatibility with existing QSFP+ and QSFP28
    - No changes to QSFP28 for all connector, cage, Type 1 module mechanicals and drawings

QSFP56 as part of 8665:



Details:

- SFF-8679 Updates from QSFP-DD
  - Improved Thermals
    - Surface roughness, flatness specs for high power modules
    - Increased maximum power and maximum supply current
  - Updated power supply decoupling, ramp, noise sections
  - Add CS and SN connectors
  - Updates for PAM4 with equalization and for compatibility with CMIS
  - Improve timing for low speed signals and management interface
  - Improve timing for e.g. Rx squelch deassert time with PAM4 and equalization
  - New functional description for LPMode
  - Add optional I2C Fast Mode+
- SFF-8661 updates to add Type 2 and Type 2A module form factors
  - Type 2 module is longer, Type 2A is longer with external heatsink
- SFF-8665 updates per page 4 of this presentation
- REF-TA-1011 updates based on SFF-8665 changes
- New project to define cabled cage and connector
  - Could result in 2 SFF documents

Anticipated timeline (for all documents)

- Initial draft: May 2021
- 1st Review: June 2021
- Final spec: Sept 2021

QSFP56 Thermals (future project)

- Create an ‘Informative’ Thermal recommendations document
  - Allows Thermals to be separated from speed.
  - Thermals would show data for ‘short’ module, Type 2 and Type 2A module types

