Revised proposed responses for comments against P802.3cd Clause 138:

Comments 13, 14, 15 on the MDI for 50GBASE-SR, 100GBASE-SR2 and 200GBASE-SR4

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11th Jan 2017, Huntington Beach, CA

Comments 13, 14 and 15 against 138

- These comments describe the changes needed to define the MDIs for 50GBASE-SR, 100GBASE-SR2 and 200GBASE-SR4 .
- Presentation kolesar_3cd_01_0117 supporting the comments was reviewed and discussed in the Task Force on 11th Jan 2017.
- As a result of review the following revisions have been made to the proposed responses to reflect:
  - Use of two ***outer*** pairs for the 100GBASE-SR2 MDI;
  - Inclusion of references in Clause 1.3 to the relevant IEC documents
  - Correct a typo in the MPO interface type title for figure 138-6.
  - Editorial changes to 138.10.3, 138.10.3.1 and 138.10.3.2 and addition of a subclause 138.10.3.3 to make the document structure flow nicely:
    - 138.10.3 contains the generic MDI description
    - 138.10.3.1 contains lane assignments for 100GBASE-SR2 and 200GBASE-SR4;
    - 138.10.3.2 contains MDI requirements for 50GBASE-SR
    - 138.10.3.3 contains MDI requirements for 100GBASE-SR2 and 200GBASE-SR4

Comment 13, 138.10.3.1

- Comment
- Content is absent regarding optical lane assignments. There are two different array interfaces that require lane assignments: 100G-SR2 and 200G-SR4. This comment will address the first. A subsequent comment will address the second. Add the content proposed in the suggested remedy. Supporting information, including the proposed figure, can be found in contribution kolesar_3cd_01_0117.

Comment 13, 138.10.3.1

- Suggested remedy
- 138.10.3.1 Optical lane assignments for 100GBASE-SR2
- The two transmit and two receive optical lanes of 100GBASE-SR2 shall occupy the positions depicted in Figure 138-4 when looking into the MDI receptacle with the connector keyway feature on top. The interface contains four active lanes within 12 total positions. The four center positions and the outermost two lanes on the left and outermost two lanes on the right are unused. The transmit optical lanes occupy the remaining two position on the left. The receive optical lanes occupy the remaining two positions on the right.

Comment 13, 138.10.3.1

- Revised proposed response, following TF discussion: **ACCEPT IN PRINCIPLE**
- Change subclause 138.10.3.1 heading to "Optical lane assignments for 100GBASE-SR2 and 200GBASE-SR4".
- Replace the magenta text with: "The two transmit and two receive optical lanes of 100GBASE-SR2 shall occupy the positions depicted in Figure 138-4 when looking into the MDI receptacle with the connector keyway feature on top. The interface contains four active lanes within 12 total positions. The eight center positions are unused. The transmit optical lanes occupy the leftmost two positions. The receive optical lanes occupy the rightmost two positions."
- Add figure: 'Figure 138-4 -100GBASE-SR2 optical lane assignments' depicting the lane alignments as described above, following the style of Figure 121-9.
- Add: "The four transmit and four receive optical lanes of 200GBASE-SR4 shall occupy the positions depicted in Figure 138-5 when looking into the MDI receptacle with the connector keyway feature on top. The interface contains eight active lanes within 12 total positions. The four center positions are unused. The transmit optical lanes occupy the leftmost four positions. The receive optical lanes occupy the rightmost four positions."
- Add a figure: 'Figure 138-5 200GBASE-SR4 optical lane assignments' depicting the lane alignments as described above, following the style of Figure 121-9.

Comment 14, 138.10.3.2

- Comment
- Content is absent regarding optical lane assignments. There are two different array interfaces that require lane assignments: 100G-SR2 and 200G-SR4. This comment will address the second. A prior comment addressed the first. Add the content proposed in the suggested remedy. Supporting information, including the proposed figure, can be found in contribution kolesar_3cd_01_0117.

Comment 14, 138.10.3.2

- Suggested remedy
- 138.10.3.2 Optical lane assignments for 200GBASE-SR4.
- The four transmit and four receive optical lanes of 200GBASE-SR4 shall occupy the positions depicted in Figure 138-5 when looking into the MDI receptacle with the connector keyway feature on top. The interface contains eight active lanes within 12 total positions. The four center positions are unused. The transmit optical lanes occupy the leftmost four positions. The receive optical lanes occupy the rightmost four positions.

Comment 14, 138.10.3.2

- Revised proposed response, following TF discussion: **ACCEPT IN PRINCIPLE**
- See response to comment #13

Comment 15, 138.10.3.2

- Comment
- Content is absent regarding MDI requirements. All three different MDI interfaces require performance specifications, and two require physical specification: 100G-SR2 and 200G-SR4. Add the content proposed in the suggested remendy. Supporting information, including the proposed figure, can be found in contribution kolesar_3cd_01_0117. Note that this comment proposes to increment the subclause number, as implementation of prior comments regarding lane assignments consumed two subclauses rather than the one that had been allocated.

Comment 15, 138.10.3.2

- Suggested remedy
- Content is absent regarding MDI requirements. All three different MDI interfaces require performance specifications, and two require physical specification: 100G-SR2 and 200G-SR4. Add the content proposed in the suggested remendy. Supporting information, including the proposed figure, can be found in contribution kolesar_3cd_01_0117. Note that this comment proposes to increment the subclause number, as implementation of prior comments regarding lane assignments consumed two subclauses rather than the one that had been allocated.

Comment 15, 138.10.3.2

- Revised proposed response, following TF review and discussion of kolesar_3cd_01_0117: **ACCEPT IN PRINCIPLE**
- Add subclause 138.10.3.3 "MDI requirements for 100GBASE-SR2 and 200GBASE-SR4"
- Replace the magenta text with: "The MDI shall optically mate with the compatible plug on the optical fiber cabling. For 100GBASE-SR2 and 200GBASE-SR4 the MDI adapter or receptacle shall meet the dimensional specifications for interface 7-1-3: MPO adapter interface - opposed keyway configuration, or interface 7-1-10: MPO active device receptacle, flat interface, as defined in IEC 61754-7-1. The plug terminating the optical fiber cabling shall meet the dimensional specifications of interface 7-1-4: MPO female plug connector, flat interface for 2 to 12 fibers, as defined in IEC 61754-7-1. Figure 138-6 shows an MPO female plug connector with flat interface, and an MDI. The MDI connection shall meet the interface performance specifications of IEC 61753-1 and IEC 61753-022-2 for performance grade Bm/2m."
- Add a figure: "Figure 138-6 MPO female plug with flat interface and MDI active device receptacle with flat interface" depicting an MPO female plug connector with flat interface, and an MDI, following the style of Figure 121-10.
- Update/add references in Clause 1.3 for IEC 61754-7-1, IEC 61753-1 and IEC 61753-022-2

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Comment 15, 138.10.3.2, revised proposed response *continued*

- In 138.10.3 Medium dependent interface (MDI)
- Replace the text in 138.10.3 with "The 50GBASE-SR, 100GBASE-SR2 or 200GBASE-SR4 PMD is coupled to the fiber optic cabling at the MDI. The MDI is the interface between the PMD and the “fiber optic cabling” (as shown in Figure 138-3). Examples of an MDI include the following:

  a) Connectorized fiber pigtail.

  b) PMD receptacle.

  NOTE—Compliance testing is performed at TP2 and TP3 as defined in 138.5.1, not at the MDI."

- In 138.10.3.2, change the heading to "MDI requirements for 50GBASE-SR"
- Replace the magenta text with "The MDI shall optically mate with the compatible plug on the optical fiber cabling. For 50GBASE-SR, when the MDI is a connector plug and receptacle connection, it shall meet the interface performance specifications of IEC 61753-1 and IEC 61753-022-2."