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| REVISION REQUEST |
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DATE: 2 September 2023
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REQUESTED REVISION:
  STANDARD: IEEE Std 802.3cy-2023
  CLAUSE NUMBER: 165.8.2.1
  CLAUSE TITLE: MDI return loss
PROPOSED REVISION TEXT:

[1] Change the 'less than or equal to' symbol in equation 165–42:

MDI_Return_Loss(f) <= {...} (dB) (165–42)

to a 'greater than or equal to' symbol:

MDI_Return_Loss(f) >= {...} (dB) (165–42)

[2] Move the text 'meets equation constraint' in Figure 165–38 from above the plot of equation 165–42 to below the plot of equation 165–42.

RATIONALE FOR REVISION:

Subclause 165.8.2.1 'MDI return loss' says that 'The differential impedance at the MDI ... for each transmit/receive channel shall be such that any reflection ... is attenuated relative to the incident signal per Equation (165–42).'. In addition, Figure 165–38 'MDI return loss calculated limit in Equation (165–42)' is annotated with 'meets equation constraint' above the line, which is the area less than or equal to the equation.

It isn't correct to require the MDI return loss to be less than or equal to the value specified, that is to require that any reflection be attenuated less than or equal to the value specified, as the equation currently requires and the figure is annotated.

Instead, the MDI return should be required to be greater than or equal to the value specified, that is to require that any reflection is attenuated greater than or equal to the value specified, as proposed in this change.

IMPACT ON EXISTING NETWORKS:

This change will impact any 25GBASE-T1 PHY implementation that has a return loss value that is less than the value specified.

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|Please attach supporting material, if any                                |
|Submit to:-   David Law, Chair IEEE 802.3                                |
|and copy:-    Adam Healey, Vice-Chair IEEE 802.3                         |
|                                                                         |
|At:-          E-Mail: stds-802-3-maint-req@ieee.org                      |
|                                                                         |
|             +------------ For official use ------------+                |
|             |  REV REQ NUMBER: 1416                     |               |
|             |  DATE RECEIVED: 7 September, 2023         |               |
|             |  EDITORIAL/TECHNICAL                      |               |
|             |  ACCEPTED/DENIED                          |               |
|             |  BALLOT REQ'D    YES/NO                   |               |
|             |  COMMENTS:                                |               |
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| For information about this Revision Request see -                       |
|http://www.ieee802.org/3/maint/requests/revision_history.html#REQ1416    |
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