Change 146.7.1 to recognize UTP for 10BASE-T1L, change last sentence of first paragraph of 146.7.1 (P146 L50) as shown:

The transmission characteristics for the 10BASE-T1L link segment are specified to support applications requiring long reach such as industrial and process control, for up to at least 1000 m. 10BASE-T1L link segments may be shielded or screened, consistent with the specification in 146.7.1.6 and 146.7.2 or unshielded consistent with the specifications in 146.7.1.6 and 146.7.1.4.

Change 146.8.2 MDI electrical specification (P155 L11)

Change: The MDI connector mated with a specified single balanced-pair connector shall meet the electrical requirements specified in 146.7.

To: The electrical requirements specified in 146.5.4 and 146.5.5 shall be met when the PHY is connected to the MDI connector mated with the specified plug connector.

Insert new subclause 146.8.4 MDI mode conversion loss, following 146.8.3 (P155 L13) and renumber subsequent subclauses as shown:

146.8.4 MDI mode conversion loss

Mode conversion LCL (Sdc11) or TCL (Scd11) of the PHY measured at the MDI shall meet the values determined using Equation (146-xx) at all frequencies from 0.1 MHz to 20 MHz.

$$ConversionLoss\left(f\right)\geq \left\{\begin{array}{c} \\\begin{array}{c} 25 for 0.1 MHz \leq f\leq 10 MHz\\25-20×log\_{10}\left(\frac{f}{10}\right) for 10 MHz<f\leq 20 MHz\end{array}\end{array}\right\} dB$$

where f is the frequency in MHz.

PICS:

Add new PICS item after MDI2 (P166 L9) and renumber subsequent PICS items

MDI3 MDI mode conversion loss Shall meet Equation 146-xx M Yes []