

802.3 RTPGE Draft Channel Reach Objective

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Overview

- **A channel reach objective is needed for 802.3 RTPGE SG deliverables**
- **A short channel of 15m versus a long channel of 40m reach objective is being considered by 802.3 RTPGE SG.**
- **Short channel covers majority of the automotive, and may support truck, bus, and other applications where lengths do not exceed 15 meters.**
- **For long channel applications, it has been stated by end-users that an operation over low crosstalk or well-balanced cabling is acceptable but not specified. Therefore,
→ The longer channel is not well-defined at the moment. For example, in industrial applications even longer than 40m+ channels have been noted and the impediments may be different.**
- **Long channel PHY solution has a different design point which can be much more complex and costlier than short channel PHY.**
- **The solution is to study & define an improved channel which a 15m PHY can operate over in high volume. This leaves opportunity to partition and optimize technology in a way that maximizes market contribution.**

Draft Channel Reach Objective(s)

- **Define a single PHY to support point-to-point operation over a link segment with less than three twisted pairs supporting up to four inline connectors using balanced copper cabling for at least 15m for the automotive channel.**
- **Investigate a higher-performance channel with longer reach for industrial controls and/or automation, transportation (aircraft, railway, bus and heavy trucks) applications.**