

Installed link return loss

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Introduction

At the 40 Gb/s and 100 Gb/s Fiber Optic Task Force SMF Ad Hoc call held on 30 October 2012 [farhood_01a_1012_smf](#) discussed the effect of reflections due to connectors in the link and used a return loss of -35 dB.

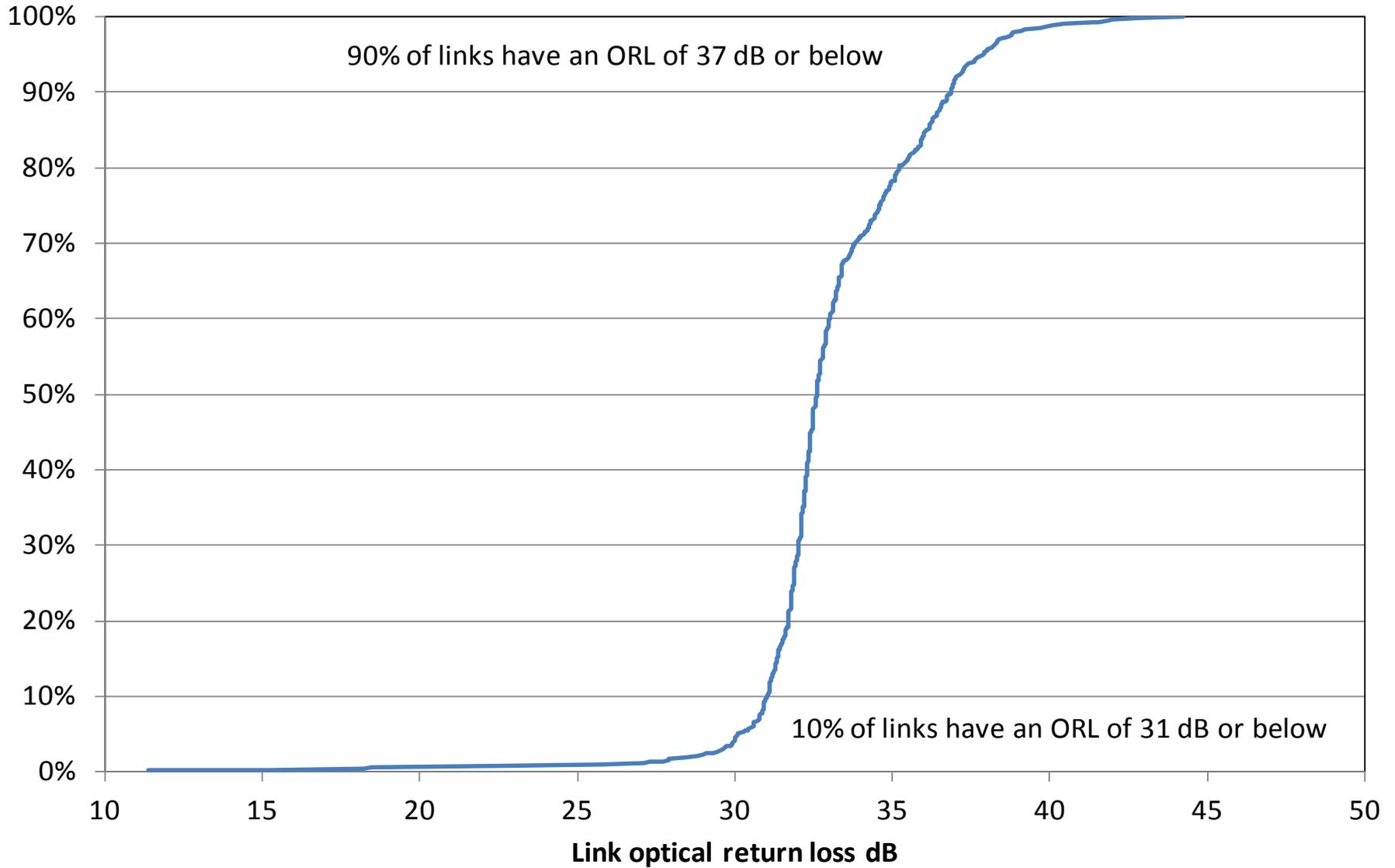
During the discussion of this contribution, the question was raised as to whether -35 dB was representative of installed connectors.

In order to try to answer this question, the data that was used to create Figure 10-8 of [G.Sup39](#) was re-analysed because it included reflectance measurements. This data used was from ~650 link ends from 8 operators measured between 2003 and 2005.

Because these were, in general, fairly long links it can be assumed that reflections from connectors at the far end of the link (or part way down for multi-segment links) are negligible due to the loss of the fibre. In most cases, the measurement is likely to be dominated by a single connector pair at an optical distribution frame prior to the buried cable.

A graph of the cumulative distribution for link optical return loss is shown on the next page.

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Thanks!