



Further Performance Results For PAM10: 4 & 5 Span Models

**William Jones
Solarflare Communications**

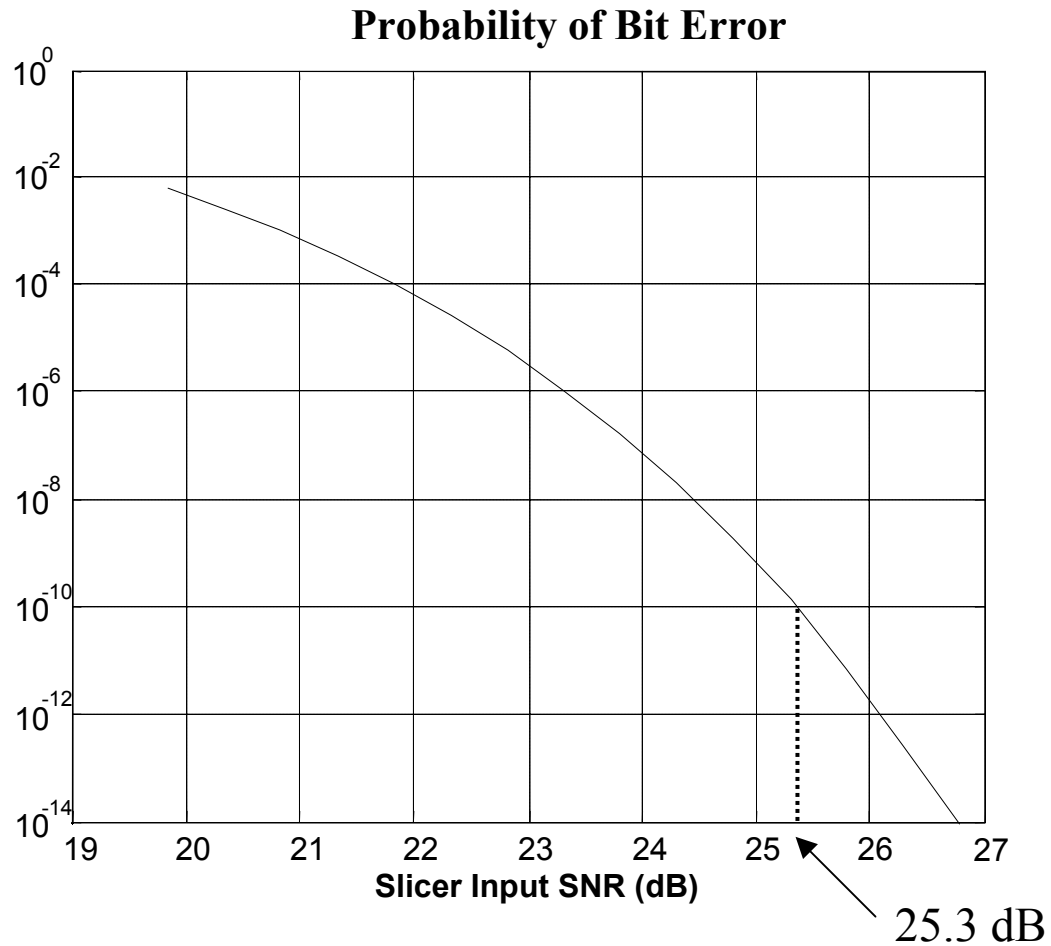
Introduction

- **Performance results presented at the November meeting were for the 3-span channel model**
- **This model does not include the cross connect or the optional transition point connector**

PAM10 System Parameters

- **Coding**
 - 4D, 8-state trellis code
 - One dimension per pair
 - 12 bits per 4D symbol
- **Modulation**
 - 10 Level PAM on each pair
 - 833 Mbaud/Sec

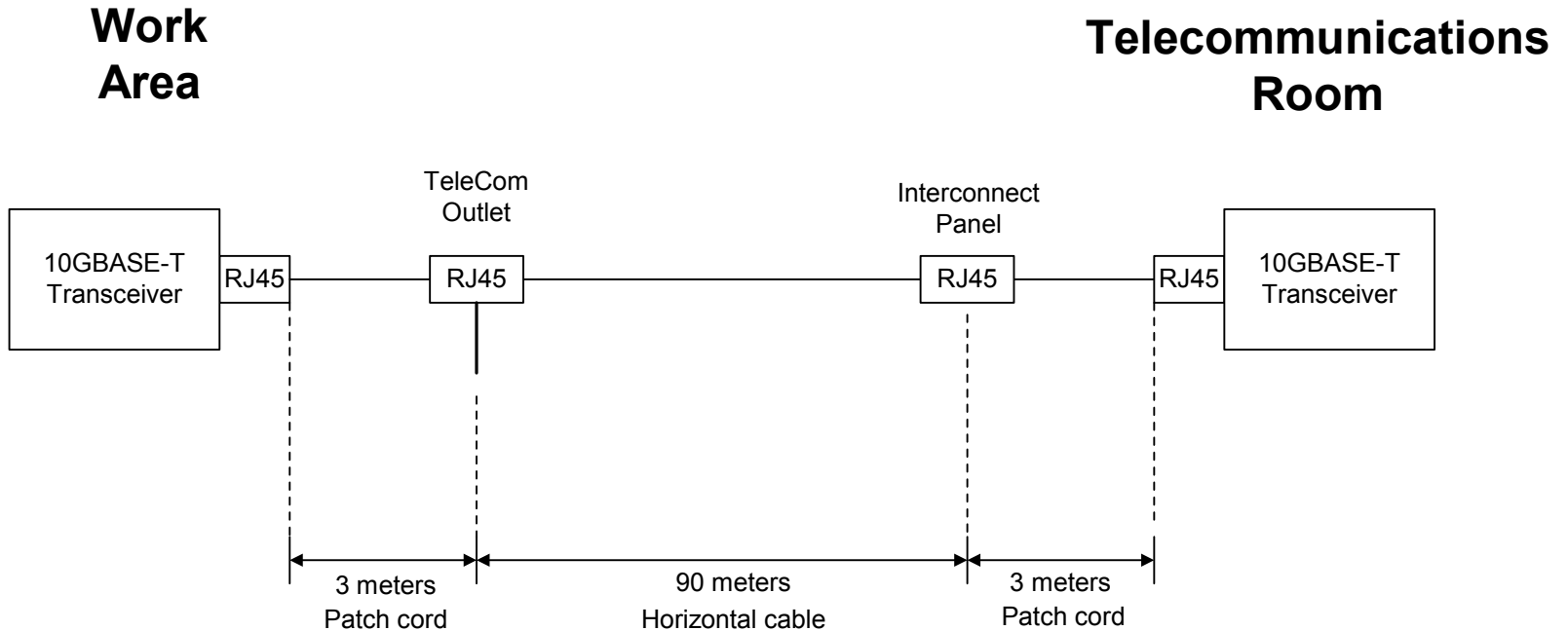
Coded Receiver Performance



Simulation Parameters

- **9.5 dBm transmit power**
- **Noise sources**
 - **Echo, NEXT & FEXT**
 - **-140 dBm/Hz Background**

3-Span Model

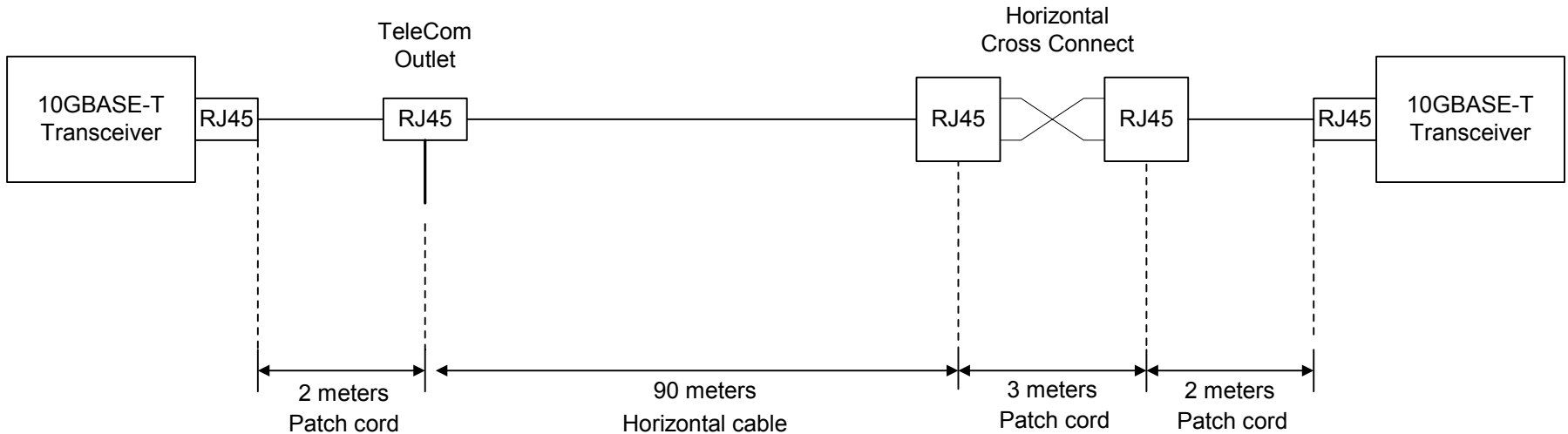


- **27.7 dB Slicer SNR**
 - Data presented at November meeting

4-Span Model

Work
Area

Telecommunications
Room

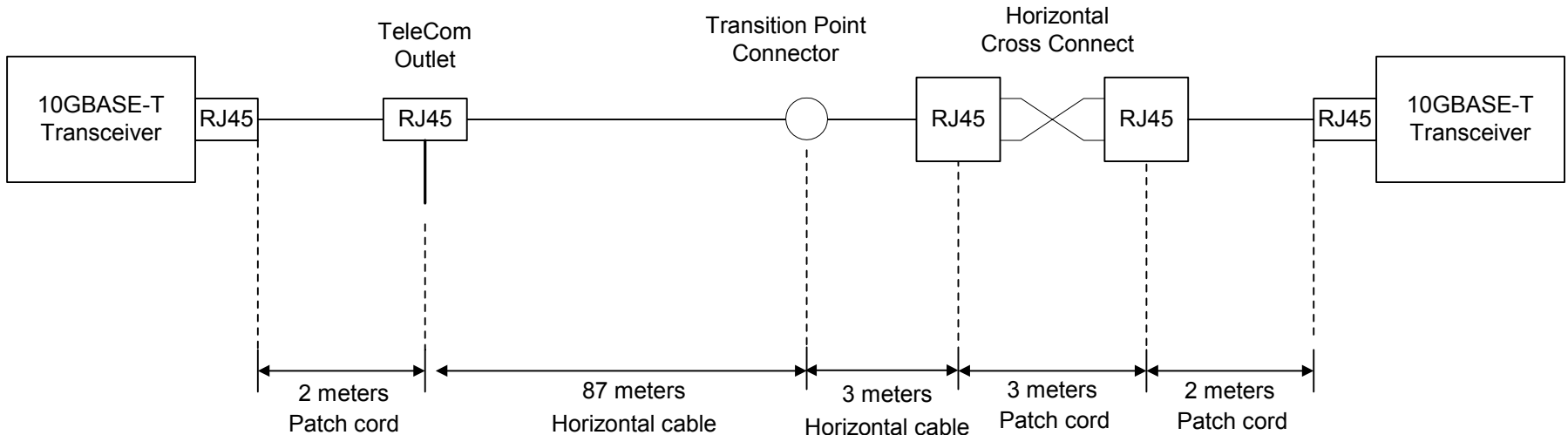


- **27.1 dB Slicer SNR**
 - Victim receiver on switch side for worst case
- NEXT**

5-Span Model

Work
Area

Telecommunications
Room



- **26.4 dB Slicer SNR**
 - Victim receiver on switch side for worst case
- NEXT**

Conclusion

- **Better than $1e-10$ bit error probability (BER) for both the 4 & 5 span models**
- **.7 dB loss due to the transition point connector**