Equip: TDS794 with P6247(1GHz) and P6246(400mHz) probes
SCSI Cable: Hitachi cable p/n 20035-068, twist/flat repeats every 9.84 inch (250mm)

Probes were attached directly to the Drive0 PCB and the Host PCB, within 1 inch of the transceivers.
Test configuration hardware limitations required attachment of the target device (Drive0) 11 inches from the backplane PC board edge.
The target device was place into the cable in daisy-chain fashion to reduce stub effects.

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Transmit DB(4)
Transmit REQ
Receive DB(4)
Receive REQ

Tek stop: 1.00GS/s
295 Acqs

C2 Freq: 80.20647MHz
C3 Ampl: 560mV
C4 Ampl: 480mV

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Zero Crossing Separation

Time (ns)

Receive - Transmit Deviation (ns)

50.00 56.25 62.50 68.75 75.00 81.25 87.50 93.75 100.00 106.25 112.50 118.75 125.00 131.25 137.50 143.75 150.00 156.25 162.50 168.75 175.00 181.25 187.50 193.75 200.00 206.25 212.50 218.75 225.00 231.25 237.50

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What needs to be done

* What is worst-case ISI pattern?
* Does Data look different than REQ?
* What is the extent of ISI in terms of timing distortion?
* What is the best way to compensate for ISI effects?
* Quantify "first pulse" effects (not really ISI) at the receiver.

Observations

* Why does 12 m cable cause 50 mv offset at the receiver
  when the driver end has no offset?
* What is the best way to remove pulse slimming due to the "first pulse" effect?
  Either increase amplitude or reduce the starting distance from zero crossing.

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