ISI Testing at 25 Meters

1st setup:
- Test board is 25 meters away from host
- No other loads on bus
- Host contains Symbios 895 controller card
- Data measured at test card and at host

2nd setup:
- Test card mounted very close to host box, to simulate host sourced DT signals
- Ultra-II backplane located 25 meters away
- Differential probes mounted on drive side of the SCA connector on the (electrical) first backplane position.
- Data measured at host and inside first Ultra-II drive in backplane.
Test board at end of 25m round cable
all data lines at 1/24 duty cycle

Pulse width @ cvr = 11.0 ns

Host amplitude drops 791 → 617 mv
Host negation voltage drops 391 → 220 mv

Both ends of one of 16 data lines in Ultra-3 Data_IN

\[
\begin{align*}
A - B &= -3.309999 \mu s - 260 \ mV \\
B - C &= -3.3673510 \mu s - 706 \ mV \\
D &= 225.6181 \ \text{ns} \ 617 \ mV \\
1/\Delta f &= 7.941983 \ \text{MHz}
\end{align*}
\]
Test board at end of 25m round cable
all data lines at 1/24 duty cycle

pulse width @ xmit = 12.0 ns

Host amplitude drops 731 → 617 mv
Host negation voltage drops 331 → 220 mv

Both ends of one of 16 data lines in Ultra-3 Data_IN
Setup 2

Test board at host end, measure at all drive levels until backplane.
Host levels: 394 - 406mv, swing = 800mv
Both ends of one of 16 data lines in Ultra-3 Data_IN
Test board at host end, measure at first drive in full backplane.

Pulse width = 12.9 ns @ host

Both ends of one of 16 data lines in Ultra-3 Data_IN

Test board at host end, measure at first drive in full backplane.

Assertion voltage = 155 mv

Pulse width = 11.5 ns @ backplane

Both ends of one of 16 data lines in Ultra-3 Data_IN
Test board at host end, measure at first drive in full backplane.

Pulse width = 12.0 ns @ host

Negative voltage = -145 mv.

Both ends of one of 16 data lines in Ultra-3 Data_IN

Test board at host end, measure at first drive in backplane.

Pulse width = 0.5 ns

Negative voltage = -145 mv.

Both ends of one of 16 data lines in Ultra-3 Data_IN