Subject: Wide SCSI Cabling Proposal

I believe that most of us would agree the market potential for 16-bit SCSI is larger than 32-bit, just as 8-bit SCSI is much larger than potential 16-bit devices. My concern is that many devices which conceivably could use 16-bit SCSI will be precluded from using it simply due to the large connector/cable requirement in the present SCSI-2 document. An additional 60-pin cable is required for either 16 or 32-bit options.

I propose that a smaller 26-pin connector/cable option replace the present 60-pin option for 16-bits and that an additional 50-pin cable replace the 60-pin option for 32-bits.

Here is how it could work:

Example SCSI System: 8/16/32-bit width on same system

8-bit device 16-bit device 32-bit device 8-bit device 16-bit device 32-bit device
50-pins: original 8-bit SCSI
26-pins: add for 16-bit SCSI
26-pins: add for 16-bit SCSI
50-pins: add for 32-bit SCSI

By adopting this proposal, physically smaller devices could more easily move to 16-bits by adding only a 26-pin instead of a 60-pin connector. Likewise those smaller number of devices which need 32-bits are not paying too large a penalty with the additional 26-pin and 50-pin connectors. They tend to be physically larger and less cost sensitive and thus can absorb the additional board area and cost more easily.

The sample schematics Steve Goldman of DPT provided will extend logically to three REQ's and ACK's just as they work for two. In addition, no changes are necessary to the Wide SCSI Message added to SCSI-2 for arbitration of bus width.

See additional pages for specific changes to SCSI-2 rev. 1.

Jim Schuessler
### Table 4-1: Single Ended Pin Assignments

#### Cable B

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**NOTES:**
1. All odd pins except pin 21 shall be connected to ground.
2. Pin 21 shall be connected to TERMWRB.
3. The minus sign next to the signals indicates active low.
Table A-1: Differential Pin Assignments
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**NOTES:**
1. SHIELD GROUND is optional. (Implementors note: Some shielded flat ribbon cables use pin 1 as a connection to the shield.)

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Table A-1: Single Ended Pin Assignments
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1. SHIELD GROUND is optional. (Implementors note: Some shielded flat ribbon cables use pin 1 as a connection to the shield.)

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Other sections which mention the B cable are:

- 4.4.3 paragraphs 2 and 3.
- 4.6 last paragraph
- 5.1.6.3 throughout
- There are most likely others...