NCR CORPORATION

Microelectronics Products Division

X3T9.2/93-101 r0



## NCR

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Dear Bob,

I am submitting the following comments with my "yes" vote to forward SCSI-3 Parallel Interface (SPI) Rev 12a to X3. I believe X3T9.2 should be consulted on whether SPI should be revised prior to forwarding it to OMC. (I would perfer that the OMC compliance review be held in parallel with this activity, but alas, the X3 rules do not permit overlapped standards processing.)

- 1. Per agenda item 4.2 of X3T9.2/93-092, the transmit hold time for slow synchronous data transfers should be increased from 33 ns to 53 ns (Table 10 on page 31). This provides enough hold time so that SCSI-1 and SCSI-2 devices may receive the slow synchronous data transfer.
- 2. Per agenda item 4.5 of X3T9.2/93-092, the following wording should replace the third paragraph of Clause 6, which begins with "Interconnection of SCSI devices...". This revised paragraph clarifies that backplane implementations of the SCSI bus are subject to the electromagnetic concepts documented in SPI:

"Interconnection of SCSI devices by means other than cables is allowed, e.g., by backplanes using printed wiring boards. Detailed descriptions of these other means are not part of this standard, however, all segments of an SCSI bus are subject to the electromagnetic concepts presented in this standard. These are a) characteristic impedance (see table 5); b) propagation delay (see table 6); c) cumulative length; d)stub length; and e) device spacing (see 6.4 and 6.5)."

- 3. Per agenda item 4.6 of X3T9.2/93-092, definitions for the A, P, and Q cables should be included in the SPI definitions (3.1). Suggested definitions are included in X3T9.2/93-090.
- 4. Table 11 contains a typographical error in the first line. "DB(31-0,P1,P2,P3,P4)" should be "DB(31-0,P,P1,P2,P3)". There is no P4 signal.
- 5. If X3T9.2 elects to correct SPI prior to public review, then it should also consider fixing problems identified in the comments from Jeff Stai in document X3T9.2/93-081. Jeff points out some rather serious errors that crept into SPI during the translation into service interface terminology.

Sincerelv.

CC:

Del Shoemaker, X3T9 Chair Reinhard Knerr, AT&T Principal Larry Lamers, SPI Editor

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