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MEMORANDUM

09 Oct 1988

TO: John Lohmeyer, Chairman X3T9.2
FROM: Bill Spence, Texas Instruments
SUBJECT: DATA POINTER

The disclaimer of data pointer integrity introduced in Rev 5 (Scn 5.4, P 5-15 -- "...pointers...are not guaranteed to reflect...the last byte of data transferred...") may meet a coming need, but it confuses the issue for those of us who rely on such integrity. There is some opinion that the fourth sentence at the top of P 5-15, ("These pointers are used to represent the state of the interface...") originally envisioned validating the completeness of the data transfer by checking the final pointer position. The proposal below is offered to clarify the standard in this regard.

Host adapters which do not check the final data-pointer position obviously are not concerned about the matter, and host adapters which support the MODIFY DATA POINTER message would seem to have little ground for checking the final position. It would hardly be a guarantee of the completeness (or correctness) of the data transfer in such case, even if the target had at the end modified the data pointer position to reflect the intended "final" byte transferred.

The following proposal, offered to clarify the situation which has arisen, is designed to minimize the effect on future developments while protecting past positions.

PROPOSAL

Append to the end of Scn 5.6.21 (P 5-26 of Rev 5), the definition of the SDP message, the following:

A SAVE DATA POINTER message shall be issued before a RESTORE POINTERS message is issued for the purpose of restoring the status pointer. A SAVE DATA POINTER message shall be issued before a DISCONNECT message is issued if data transfer has occurred for the I/O process. Exception: If the initiator has accepted a MODIFY DATA POINTER message from the LU of the I/O process, it is permissible to omit the SAVE DATA POINTER message before a DISCONNECT message is issued following the completion of data transfer for the I/O process.