

To: John Lohmeyer
From: George Hahn
Adaptec, Inc.
638 Gibraltar Court
Milpitas, CA 95035
Subject: Dealing with multi-initiator issues
Date: 25 July 1991

Recently, one of our engineers was running test programs on a customer's drive using two initiators. He ran into a problem which doesn't seem to be adequately covered in the standard. I am therefore writing to suggest that the topic be covered more thoroughly in the SCSI-3 documents.

The basic problem was that one initiator successfully negotiated for a synchronous transfer and completed the command. The second initiator then attempted an Inquiry command, expecting the transfer to be asynchronous. The target, however, sent the data synchronously with predictably negative results.

The target drive obviously has a problem. But in researching it, I could find no place in the standard that clarifies what an implementation should do to handle that sort of thing. It seems obvious to me that the target should maintain in internal table keeping track of this sort of thing by initiator ID. The standard, however, only makes vague suggestions such as "Target may examine the DATA BUS in order to determine the SCSI ID of the selecting initiator" (page 41) or "If the target recognizes that negotiation is required, it sends an SDTR message to the initiator" (Page 67). It also says that the default transfer method is asynchronous, but does not say that this is true on an initiator-by-initiator basis.

As makers of SCSI test equipment, we see our customers becoming increasingly sophisticated in the use of such SCSI capabilities as multi-initiator systems. I believe that we must make the issues in implementing these systems clear to avoid confusion in the marketplace.

Thank you.

George Hahn