To: T10 SCSI Committee From: Richard Moore (QLogic Corp.) Re: Forcing Bus Free from QAS -- Initiator Method

A method for initiators to force a BUS FREE phase to break out of a sequence of QAS arbitrations is described.

Ordinarily this may be done by the initiator sending a DISCONNECT message to the target. The drawback of this method is that the initiator must first win the bus using QAS and connect to a QAS target. (It is presumed that non-QAS initiators will not be guaranteed to respond to a QAS selection). This seems like an undesirable step, particularly when the initiator is attempting to select a different (non-QAS) target.

The alternate method described here does not have this drawback.

The method could be described in an implementer's note as follows:

NOTE: A QAS initiator may interrupt a prolonged sequence of QAS cycles with the following procedure:

1) Perform a QAS arbitration.

2) On winning QAS arbitration, assert SEL while asserting only the initiator's own ID on the data bus.

3) After detecting BSY false, release SEL and the data bus.

4) After a bus settle delay from SEL and BSY false, the bus is in BUS FREE phase. The initiator may then arbitrate using a normal arbitration and perform a selection if it wins.

In order to allow this procedure, one of the fairness rules must be relaxed for initiators implementing this note. The second sub-item under item 2 in Annex B.3 becomes (text added is underscored with '^'):

If the SCSI device wins arbitration, the lower priority SCSI IDs that lost shall be saved in order to determine fairness during the next arbitration cycle, except when the winning device is an

SCSI device or queuing implementations).

Note to the editor: The portion in parentheses seems unclear and may need rewording; it is straight out of the current revision of the document. Is it "as is the case", "as the case may be", or something else?