Date: March 19, 2004

To: T10 Committee (SCSI)

From: Jim Coomes (Seagate)

Subject: FCP-3 Clarify PRLI impact on open sequences

Revision history

Revision 0 - (March 2, 2004) - first revision.
Revision 1- (March 19, 2004) - change Sequences in 5.5.2.5 TYPE to Exchanges to be consistent with proposal.

Overview

The impact of a repeated binding PRLI in FCP-2 is confusing because the Clearing effects describes the actions in terms of Sequences. A repeated binding PRLI is a request to establish an Image Pair between an originator and responder with a previous Image Pair. The Clearing effects of the repeated binding PRLI and the majority of Clearing effects is at the ITLQs level. This translates to Exchanges in FCP.

Text in the description of behavior for a New or repeated PRLI indicates the status of outstanding Exchanges is conditioned by the parameters in the PRLI. The receipt of a binding PRLI causes all outstanding Exchanges for the Image pair to be terminated regardless of parameters in the PRLI.

Changes are proposed below to clarify the required behavior.

Changes to FCP-3

5.5.2.5   TYPE

The value in the TYPE field shall be 08h for all frames of SCSI FCP ~~Sequences~~ Exchanges.

6.3.3   New or repeated PRLI

After the completion of any new or repeated binding PRLI, all clearing actions specified in 4.9 shall be performed.

After the completion of any new or repeated informative PRLI, the state of the Originator and Responder remains unchanged.

~~If the change in parameters affects any outstanding FCP Exchanges, those Exchanges shall be terminated by the initiator using a recovery abort operation. A recovery qualifier may be established after the recovery abort, temporarily restricting the choice of OX_ID values by the initiator and RX_ID values by the target. Only actions for image pairs that are being referenced by the PRLI are affected.~~

4.9   Clearing effects of task management, FCP, FC-FS, and FC-AL-2 actions

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Table 4 - Clearing effects of link related functions

Target object	FC link action affecting target object						
	Target Power Cycle	Reset LIP(y,x)[2]	LOGO[5], PLOGI	PRLI[4] PRLO[5],	TPRLO[3]	ABTS (Exchange)	ABTS (Sequnce)
PLOGI parameters							
For all logged-in initiator ports	Y	Y	N	N	N	N	N
Only for initiator port associated with the action	-	-	Y	N	N	N	N
Open FCP ~~Sequences~~ Exchanges Terminated							
For all initiator ports ~~with open FCP Sequences~~	Y	Y	N	N	Y	N	N
Only for initiator port associated with the action	-	-	Y	Y	-	N	N
Only for FCP ~~Sequences~~ Exchange associated with the ABTS ~~Aborted FCP Exchanges~~	-	-	-	-	-	Y	-
FCP Sequence associated with ABTS Terminated	-	-	-	-	-	-	Y
Login BB_Credit_CNT							
For all Logged-In L_Ports	Y	Y	-	N	N	N	N
For transmitting L_Port only	-	-	Y				
Hard Address Acquisition Attempted	Y[1]	Y[1]	N	N	N	N	N
PRLI parameters cleared							
For all logged-in initiator ports	Y	Y	N	N	N	N	N
Only for N_Port or L_Port associated with the action	-	-	Y	Y	N	N	N
CRN (Command Reference Number) (set to one)							
For all initiator ports	Y	Y	N	N	Y	N	N
Only for initiator port associated with the action	-	-	Y	Y	-	N	N

NOTES:

1   If the NL_Port has an AL_PA different than its hard address and the NL_Port experiences a power cycle or recognizes LIP(AL_PD,AL_PS), the NL_Port shall relinquish its current AL_PA and attempt to acquire its hard address.

2   This is also known as LIP(AL_PD,AL_PS). If the destination recognizes a selective hard reset LIP where the AL_PD matches the AL_PA of the receiving NL_Port, the receiving NL_Port shall perform the behavior described in this column.

3   For TPRLO (Third Party Process Logout), actions listed shall be performed when the GLOBAL bit is set to one. If the GLOBAL bit is set to zero, then the actions listed under PRLI/PRLO shall be performed for the designated initiator. See FC-FS.

4   The Target shall clear the object only if ESTABLISH IMAGE PAIR is set to one and if the referenced image pair is FCP type. See 6.2.

5   LOGO and PRLO may be either implicit or explicit. Implicit LOGO and PRLO are specified in FC-FS and FC-FLA.