

## T10/06-406 revision 1

Date: September 06, 2006

To: T10 Committee (SCSI)

From: George Penokie (IBM)

Subject: FCP-4: LS\_RJT for REC Conflict between FC-LS and FCP-4

### 1 Overview

A recent change to the description of the REC ELS in the FC-LS standard has created a conflict in wording FCP. The new wording in FC-LS (see below) indicates a condition in which an LS\_RJT would be returned that would indicate something other than that the REC ELS is not supported.

#### From FC-LS rev 1.4:

##### 4.2.42 Read Exchange Concise (REC)

###### 4.2.42.1 Description

This ELS shall be used only for purposes specific to an FC-4. The REC (Read Exchange Concise) Extended Link Service requests an Nx\_Port to return Exchange information for the RX\_ID and OX\_ID originated by the S\_ID specified in the Payload of the request Sequence. The S\_ID specified in the Payload of the request Sequence may differ from address identifiers of both the source and destination of the REC request itself. The specification of OX\_ID and RX\_ID shall be provided for the destination Nx\_Port to locate the status information requested. A Responder destination Nx\_Port shall use the RX\_ID and verify that the OX\_ID is consistent, unless the RX\_ID is unassigned (i.e., RX\_ID = FFFFh). If the RX\_ID is unassigned in the request, the Responder shall identify the Exchange by means of the S\_ID specified in the Payload of the request Sequence and OX\_ID. An Originator Nx\_Port shall use the OX\_ID and verify that the RX\_ID is consistent.

[If the destination Nx\\_Port of the REC request determines that the Originator S\\_ID, OX\\_ID, or RX\\_ID are inconsistent, then it shall reply with an LS\\_RJT Sequence with a reason code of "Unable to perform command request" and a reason code explanation of "Invalid OX\\_ID-RX\\_ID combination".](#)

The value of the Parameter field in the frame header of an REC ELS and an LS\_ACC in response to an REC ELS shall be specified by the FC-4 that sends the frame. The Relative offset present bit in the frame header of an REC ELS or an LS\_ACC in response to an REC ELS shall be set to zero.

#### From FCP-4 rev 0:

##### 4.6 Retransmission of unsuccessfully transmitted IUs

Error detection and IU retransmission algorithms are defined in clause 12.

The Read Exchange Concise (REC) ELS may be used by the initiator FCP\_Port to determine the state of an ongoing Exchange. See 6.5.

Support for the REC ELS by both the initiator FCP\_Port and target FCP\_Port is indicated by the REC\_SUPPORT bit in the PRLI request FCP Service Parameter page and PRLI accept FCP Service Parameter page (see 6.3.4 and 6.3.5).

If the target FCP\_Port responds with the REC\_SUPPORT bit set to one and an error is identified by any of the detection mechanisms defined in clause 12, then the initiator FCP\_Port may use the REC ELS to determine the nature of the error.

[Target FCP\\_Ports that do not support the REC\\_SUPPORT bit indicate they do not support REC by performing a Link Service Reject \(LS\\_RJT\) in response to an REC ELS. See 8.3.](#)

### 2 Proposed Fix

Modify the FCP-4 text to the following:

Target FCP\_Ports that do not support the REC\_SUPPORT bit indicate they do not support REC by performing a Link Service Reject (LS\_RJT) Sequence with a reason code of "Command not supported". See 8.3.