February 9, 1995

To: X3 Secretariat Cc: Bob Snively

The following are public review comments against FCP revision 10. The vast majority of the comments are regarding the description and payload of Process Login / Process Logout (PRLI / PRLO) services.

Thank you for your attention,

Greg Scherer Emulex Corporation 3535 Harbor Blvd., Costa Mesa, CA 92626 Ph: (714) 513-8121, E-mail: g\_scherer@emulex.com

#1 (T) Comment on Annex A (normative) Extended link services

Background for the comment:

In Annex A of FCP an FC-4 login/logout service is defined in order to implement specific FCP functionality. This login/logout service is stated to be generic and therefore designed to support multiple FC-4's within it's framework.

The login service (PRLI) supports FC-4 TYPE and or Process Associators to be exchanged during login, in order to differentiate between separate FC-4 logins (e.g. FCP, IPI, etc.), or even separate FC-4 image pairs (FCP image pair 1, FCP image pair 2, etc.). This architecturally allows two N\_PORT's with independent FC-4's to communicate using independent FC-4 login parameters.

My issue comes from the fact that the logout service (PRLO) does not support

FC-4 TYPE specific logout. This means that if two N\_PORT's choose not to use Process Associators, (that will ensure image pair uniqueness), any PRLO (logout) from a single FC-4 will affect all others. Although today there may not be many co-existing FC-4's that use PRLI/PRLO, I believe the intent in Annex A was to document an enabling service that could be used in a much broader scope in the future.

Specific comment:

In Annex A the PRLO / ACC payloads define Parameter Page Word 0 Bit 31:16 as RESERVED. This is the same field in the PRLI / ACC payload that is defined as the FC-4 TYPE and TYPE code expansion. Without the TYPE and TYPE code expansion area defined in the PRLO / ACC payload it is not possible (without using Process Associators) to logout one FC-4 on a given N\_PORT without potentially affecting others.

## Recommendation:

Add FC-4 TYPE and TYPE code expansion fields to the PRLO / ACC payloads, as per the definition and field position of TYPE and TYPE code expansion fields defined in the PRLI / ACC payloads.

In any case, tables 11 and 12 (PRLO / ACC payloads listed in section 6) must be made to match tables 29 and 31 (from Annex A) as they currently contradict each other regarding the definition of Parameter Page Word 0 Bit 31:16 (TYPE and TYPE code expansion fields).

#2 (E) Comment on Annex A (normative) Extended link services

Page 39 first bullet: - Word 0, Bit 14 Establish Image Pair Should be bit 13 (as listed in table 24). #3 (E) Comment on Annex A (normative) Extended link services Page 41 fourth bullet: - Word 0, Bit 14 Establish Image Pair Image pair established only if bit 14..... Should be bit 13 (as listed in table 26). #4 (E) Comment on Annex A (normative) Extended link services Table 31 entry 7 is 13-0 should be 7-0: Item

ltem	Word	Bit
Logout parm response page	0-3	31- 0
Reserved	0	31-16
Originator	0	15
Responder	0	14
Reserved	0	13-12
Response code	0	11- 8
Reserved	0	13- 0

#5 (E) Comment on Section 6 PRLO / PRLI Field definitions

Tables 8 and 10 document Parameter Page payload Word 0 bit 13 as RESERVED. This same bit in tables 24 and 26 (of Annex A) is defined as "Establish Image Pair" an "Image Pair Established" respectively. The bit definitions in both sets of tables (8 / 24 and 10 / 26) and text should match.

#6 (I) Comment on Annex A (normative) Extended link services

I would like to see more detail in the general description for PRLI Parameter Page Word 0, bit 13 "Establish Image Pair". If this bit = 1 (Establish Image Pair and exchange parameters), must bits 15-14 (Process Associators) also be =1? There is no indication in the text that they are tightly coupled, although I believe that they are. Relationships such as these should be clearly defined (even though potentially obvious).

----- End of Comments -----

Sincerely,

Greg Scherer -Fibre Channel Engineering Emulex Corporation 3535 Harbor Blvd, Costa Mesa, CA 92626

g\_scherer@emulex.com