FCP-2 problem recovering the proper command

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I propose the following solution to this problem:

For this proposal, I am defining "FCP-2 target" as a FC SCSI/FCP target device in a system where both the FCP-2 target and the Initiator have set the Retry bit in their PRLI/ACC (Process Login) frames.

This proposal attempts to minimize the severity of the changes, yet keep the performance at an acceptable level. This proposal uses the Parameter field to define an FCP2_Handle that is used to uniquely identify the proper command. The initiator assigns a unique FCP2_Handle to every new command, and transmits this handle in the Parameter field of the FC header for the command. The F_CTL Relative Offset Present bit shall not be set, as this may confuse some hardware. The FCP-2 target shall save the FCP2_Handle for use in error recovery.

The FCP2_Handle is used in the REC and SRR commands in order to recover the proper command. The Initiator and the FCP-2 target shall transmit the FCP2_Handle in each REC and SRR command frame. The FCP2_Handle is used to uniquely identify the command being recovered. The S_ID, OX_ID, and RX_ID fields shall still be verified before returning the ACC, LS_RJT, FCP_ACC, or FCP_RJT frame.

This new behavior could be run transparently to current FCP devices, as they would ignore a non-zero Parameter field in an FCP command. This method is a simple yet very effective way to ensure proper command identification.