To: T10 Technical CommitteeFrom: Sriram Srinivasan and Brian Day, LSI Logic CorporationDate: May 14, 2001Subject: Exception Handling and Streaming Transfers

## Attention Condition on a Data Stream Information Unit

Section 12.2 (Attention condition) states:

"g) If the attention condition is detected during an information unit transfer, the target shall enter MESSAGE OUT phase at the completion of the current SPI information unit."

In case the negotiated offset happens to be greater than the size of the SPI data stream information unit, the word "current SPI information unit" is ambiguous. Does "current SPI information unit" refer to the one for which REQs are being sent or the one for which ACKs are being received? Also, paragraph 10 of section 14.3.4 in SPI-4 rev4:

"In the event that the SPI data stream information unit size is smaller than the negotiated offset the target may continue the sequence of SPI data stream information units across two SPI data stream information units but shall not continue across three."

is inconsistent with the requirement g) stated in section 12.2 as the target cannot stop at the current SPI IU boundary (assuming "current" means "all ACKs received from the initiator for the SPI data stream IU") since it has already sent REQs for the "next" SPI data stream IU. Hence, we propose that g) in section 12.2 be reworded as follows:

"g) If the attention condition is detected during an information unit transfer other than a SPI data stream information unit, the target shall enter MESSAGE OUT phase at the completion of the current SPI information unit, i.e. after receiving all the ACKs from the initiator for the current SPI information unit. If the attention condition is detected during the transfer of a SPI data stream information unit, the target shall terminate the current stream by entering into MESSAGE OUT phase at the end of any SPI data stream information unit in the current stream."

This would make it similar to the way a target handles iuCRC errors during streaming where it can send the SPI L\_Q/Status information unit pair before sending another SPI L\_Q for a data transfer (section 10.8.3.3.4. paragraph 3. In fact, paragraph 3 of 10.8.3.3.4. is worded erroneously as it says "... before sending another SPI L\_Q information unit, switch to a DT DATA IN phase and send a SPI L\_Q ..." as it precludes the target from sending another SPI L\_Q information unit!?!?!. The statement needs to be modified to only preclude the target from sending a SPI L\_Q information unit with the TYPE field set to a code other than 08h.).