To: T-10/Parallel SCSI Working Group
From: Richard Moore
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Re: Minor Issues in SPI-4 Draft

The following are some minor issues in the SPI-4 draft (rev 6):

10.4.4: In step 1, the target issues a single QAS REQUEST message. In step 2, the target waits until it detects ACK false. Step 1 does not explicitly state that the target detects ACK true before moving to step 2. Section 10.11.2 is referred to but it doesn't mention waiting for ACK either. Therefore it could be inferred (wrongly) that if ACK is false at the moment the QAS REQUEST message is issued, the target could proceed to step 2 immediately.
Proposed fix: Add the phrase "and waits for ACK to be true" to the end of step 1.

10.5.2.1: "If the arbitration was a normal arbitration..." I can't find a corresponding paragraph for QAS in this section. Recall that we recently allowed non-packetized devices to participate in QAS so QAS followed by selection with attention is possible.
Proposed fix: Insert a copy of the 3rd paragraph from 10.5.3.1 between the second and third paragraphs of 10.5.2.1.

10.7.3.3.3 contains an apparent conflict. 4th paragraph: "If the information unit that failed was not a SPI status information unit and the message received from the initiator was an INITIATOR DETECTED ERROR message" then the target sends a SPI L_Q/SPI status pair. 7th paragraph: "If the initiator is receiving a SPI L_Q information unit and the initiator detects an iuCRC error" the initiator sends an IDE message and the target goes to BUS FREE. Since an L_Q packet is "not a status packet" it looks like either paragraph would apply. The apparent contradiction goes away if one realizes that paragraph 4 is meant to be used in the case described in paragraph 2 ("If the nexus has been fully identified..."), but the relationship between paragraphs 2 and 4 is not clear because of the way this section is constructed.
Proposed fix: Change the opening of paragraph 4 from "If the information unit that failed was not a SPI status information unit…" to "If a nexus has been fully identified and the information unit that failed was not a SPI status information unit…"