FROM:      J. Stai

DATE:      April 20, 1993

Subject:   Comment for SPI rev 13

I would like to commend my colleagues in X3T9.2 for their good work in developing the SCSI-3 Parallel Interface. I respectfully request the consideration by X3T9.2 of these comments on X3T9.2/855D revision 13, as forwarded for public review. All of these comments refer to clause 10.

1) Ref 10.1.1 Bus free request, "...the PIA shall release all SCSI bus signals within a [delay]." Within a delay of what event?

I would propose the following wording to replace this sentence: "When a bus free request is received the PIA shall release the BSY signal and the SEL signal, and shall release any other asserted SCSI signals within a [delay] of the release of the BSY signal and SEL signal."

2) Ref 10.1.2 Bus free indication. The definition in the second sentence (also paragraph) is wrong. Very wrong.

I would propose the following wording to replace the second sentence: "The PIA shall generate a bus free indication when the SEL and BSY signals are both continuously false for at least a bus settle delay. The PIA shall continue to generate this indication as long as the SEL and BSY signals remain false."

3) Ref 10.3.1 Selection request. In the third paragraph, there is apparently a mixed message here. Step 1) does not refer to the bus free indication, even though that seems appropriate. Steps 2) & 3) then refer to "detecting the bus free", even though the term "bus free" has not been defined in this context. This is further carried into the following note, where it refers (erroneously, I think) to the "BUS FREE service".

Is the intent to avoid the use of bus free indication? Or is the intent to use bus free services here? It seems that to be consistent with the layering here, the bus free services should NOT be referenced.

I would propose the following wording to replace steps 2) & 3):
    2)      not assert any SCSI BUS signal with a [delay] of step 1);
    3)      assert the BSY signal...no sooner than a [delay] and no later than a [delay] of step 1);

Further, the note should remove any reference to "BUS FREE service". The first sentence of the note should end: "...as long as the SEL and BSY signals remain false."

4) Ref 10.3.1 Selection request, top of page 36. Step 2) of the selection steps should read: "2) assert its assigned SCSI ID, assert the requested SCSI ID..."

5) Ref 10.3.3 Selection response. Option a) in paragraph 2 refers to a "selection event". Where is that event defined? It seems that the "event" is really equivalent to the conditions of the selection indication.

I would propose the following wording to replace option a): "a) assert the BSY signal within a [time] of the when the target last detected that the SEL signal and the SCSI ID bit assigned to the target PIA were true, and the BSY and I/O signals were false."

6) Ref 10.3.4 Selection confirmation. Paragraph 3 has a parenthetical note that seems to imply that the initiator PIA shall validate that the target has asserted BSY after a bus settle delay. The correct statement is that the initiator should delay that long before looking.

MEMORANDUM    --    17 May 1993

TO:        John Lohmeyer, Chairman, and Members, X3T9.2

FROM:      Bill Spence, ex-Chair, ex-SPI WG

SUBJECT:   Proposal for Recouping Seemingly Lost Ground


In SPI document revisions prior to Rev 12, there was useful material
which did not make it into Rev 12.  It is true that in the process,
Rev 12 may have become somewhat more clean and internally consistent.
The following two proposals attempt to restore the lost value without
doing harm to the new virtues.

The affected area is in Clause 6, p. 19 in both Rev 11 and Rev 12.

SCSI BUS CABLING

Pre Rev 12, the SPI document carried the concept that printed wiring
boards (backplanes) can carry the SCSI bus and are subject to the same
implementation rules as round and flat cables.  This is useful and
valid information of steadily increasing importance as increasingly
backplanes are utilized in disk arrays.

This concept is validated by a very successful board-and-cable imple-
mentation in a leading workstation.  The SPI rules were followed
very carefully.

The new wording in Rev 12 takes away this useful guidance.

PROPOSAL 1:  Restore the wording which comprises backplanes.

CABLE NAMES

The terms A cable, P cable, and Q cable are well established in SCSI
terminology by now and are used in the SPI document--but the words
introducing them became shifted in Rev 11 and disappeared in Rev 12.
They are now nowhere defined in the document which might most logic-
ally be consulted.

PROPOSAL 2:  Add definitions of the A, P, and Q cables in the SPI
Definitions (Clause 3.1).   Possible definitions:

    A cable:  A 50-conductor cable which carries an 8-bit data bus
              and the signals used to provide the services specified
              in clause 10.

    P cable:  A 68-conductor cable which carries a 16-bit data bus
              and the signals used to provide the services specified
              in clause 10.

    Q cable:  A 68-conductor cable which carries a second 16-bit data bus
              bus, providing a 32-bit data path.