September 11, 2002

To: T10 Membership

From: R. Roberts
Subject: Minutes of the SAS STP Study Group (T10/02-369R0)

Study Group was called to order at 9:00AM. It was noted by the meeting is held using the rules of INCIT T10 Technical Committee. It was also noted subjects covered by NDAs should not be discussed in this meeting as it was a public meeting.
The results of the sessions and recommendations will be forwarded to the SAS working group for approval and forwarding to the Plenary for inclusion in the SAS standard.

Attendees were asked to signup as attending this session. The list of attendees follows:

NAME	COMPANY	NAME	COMPANY
Ron Roberts	Adaptec	Matt Otto	I-Tech
Ed Gardner	Basil Networks	William Petty	LSI
Jim Lott	Dallas Semi	Brian Day	LSI
Terumi Takashi	Hitachi	Brad Besmer	LSI
Werner Cilinka	Hitachi	Steve Johnson	LSI
Hitoshi Ogawa	Hitachi	Tim Hoglund	LSI
Tim Reif	HPQ	Pete McLean	Maxtor
Tom Grieff	HPQ	Marty Czekalski	Maxtor
Steve Fairchild	HPQ	Scott Younger	Seagate
Dan Colegrove	IBM	Jim Coomes	Seagate
Rick Beckett	Intel	Tom Hanan	WDC
Chris Simpson	Intel		
Bob Sheffield	Intel		
Pak Seto	Intel		

The group was asked to provide items for discussion since no agenda was presented. The following items were proposed.
1. STP INITIATOR CLOSING CONNECTIONS,
2. STP ERROR PRIMITIVE,
3. STP DUAL INITIATORS,
4. SAS EXPANDER BIS/FIS,
5. OOB SEQUENCE FOR SATA1.0,
6. PIO READ CLOSING

STP Initiator Closing Connection - Day- Discussion on proposal resulted in modifications to the proposal . Brian will bring in a revision.

STP Error Primitive - SATA_ERROR – instead of propagating SATA_ERROR the suggestion is to insert an ALIGN. LSI to provide a proposal.

STP DUAL INITIATORS – The sense of the group was that this would not work except in a fail-over mode. The consensus is that the number of register sets to store in the expander would be excessive. Suggestion: if the drive is waiting for a host to respond to an outstanding command and another Initiator wants access to that Target the Initiator must reset the target before issuing the command to that target. Note: statement in standard about multi-initiators in SATA environment needs to be removed. ACTION ITEM: WDC to bring in proposal for multi-initiators clarification for SATA devices.

SAS Expander BIS/FIS – HPQ to bring in proposal to include in the standard that a STP initiator shall not support BIS/FIS.

OOB Sequence for SATA 1.0 – the suggestion is to include this in the standard because it is not shown anywhere else and the consensus of the group is that it needs to be included.

It was suggested that the study group review the documented sequences to insure that the standard includes all of the necessary information to implement the STP protocol. Steve Fairchild agreed to provide some working documents for the group to work with. He will post these to the reflector for review by the group before the next meeting. (Conf Call or F2F)

<u>ISSUES LIST</u>

1. Expanders(STP) new speed detection in OOB sequence
2. SATA compatibility with SAS (Physical signals)

Possible Meeting Schedule
Oct 24th Las Vegas 5PM – 8PM
Nov 6th Huntington Beach   9AM – 12Noon
There was also discussion of additional conference calls. Ron will look into scheduling the calls.