SCSI signal modeling study group (SSM)   02-020r0
December 12, 13, 2001
Guadalajara, Jalisco MX

Subject: Draft minutes for the SSM working group on December 12, 13,
2001 in Guadalajara, Jalisco MX

This was the next meeting to address the general subject of modeling for
parallel SCSI. Paul Aloisi of TI led the meeting. Bill Ham of Compaq
took these minutes. Bob Gannon of JPM Pantera hosted the meeting.

Last approved minutes: 01-310r1.

1. AGENDA SSM MEETING

2. Introductions

Paul Aloisi opened the meeting and conducted the introductions and
reviewed the meeting purpose. He thanked Bob Gannon of JPM Pantera for
hosting the meeting.

3. Attendance

Attendance at working group meetings does not count toward attendance
requirements for T10 plenaries.

The people in the following list attended this meeting:

Name	Organization	e-mail	Phone
Bill Ham	Compaq	Bill_ham@ix.netcom.com	978-828-9102
Bob Gannon	JPM Pantera	rgannon@jpmco.com	860-537-6800
Mario Sahagun	JPM Pantera	msahagun@jpmpantera.com.mx	011-5233-3134-5639
Larry Barnes	LSI Logic	Larry.barnes@lsil.com	719-533-7432
Bruce Manildi	Seagate	Bruce_manildi@seagate.com	831-439-7729
Paul Aloisi	Texas Instruments	paul_aloisi@ti.com	603-222-8687

4. Agenda development

The agenda shown was that used.

5. Approval of previous minutes

The minutes of the last meeting were reviewed and approved with minor changes.

6. Action item review

Review of action items was postponed to the next meeting.

7. Administrative structure

The present administrative structure for SSM / SSM-2 is:

Paul Aloisi, TI, chair SSM / SSM-2
Larry Barnes, LSI Logic, Vice chair and SSM / SSM-2 technical editor
Bill Ham, Compaq, Secy

8. Presentation Policy

This item is included for easy reference and will be retained in future minutes.

It is the policy of the SSM working group that all material presented at the SSM working group shall be made available electronically and posted on the T10 web site.

Material presented at the meeting should be uploaded to the T10 web site two weeks prior to the meeting. Alternatively the material may be

electronically supplied to the chair or secretary at the meeting where the material is presented at the discretion of the chair.

Material should be free from any statement of confidentiality or restriction of use and should not contain any pricing or product scheduling information.

9. Presentations

9.1 Carry over presentations

9.1.1 IBIS presentations, Larry Barnes, LSILogic

Larry reviewed the present status with IBIS - no change from last meeting.

9.2 New presentations

9.2.1 Gigatest status, Bruce Manildi, Seagate

Bruce presented a document that will be uploaded to the T10 web site that describes that present status of the work being done by Gigatest relating to SCSI interconnect modeling and verification. This work is sponsored by a subset of the companies but has no official link to the SSM working group. See this document for details.

10. SSM

SSM was forwarded to NCITS at the November 2001 T10 meeting. Next step is publication.

11. SSM-2 Standard 1514-D

11.1 Move technical material from minutes to the SSM-2 document

The minutes were reviewed in detail and all material that is destined to be used in the SSM-2 document was transferred into a separate Frame file and given to the SSM-2 editor for incorporation into the document. As a result the minutes are significantly reduced in size.

11.2 How to develop IBIS model section , Barnes

Not discussed at this meeting.

11.3 Simulation integration strategy

Determine the goal of the simulation (examples: validate the basic behavior of a new component in a system, troubleshooting guidance, qualification of the signal integrity in a specific configuration, characterization of the expected EMI performance)

Determine the specific characteristics that are sought (example: ??)

Define the topology

Define the collection of components

Obtain the models for all the components

…………subject discussion truncated – will continue next meeting.

11.4 Data patterns, Bill Ham, Bruce Manildi

Not discussed at this meeting. The main issue appears to be the ability of specific simulation packages to handle logical data pattern specifications.

11.5 Data rate - group - Ultra640 & Ultra1280 additions

This item is left on the agenda due to lack of formal action on the topic. There is nothing special about the data rate that has been identified to date.

11.6 Tools:

Not discussed at this meeting. [Secy note, do we need to continue this item on the agenda?]

12. New business

None

13. Status of models supplied to the T10 web site

The following table will substitute for the information in the minutes relating to the status of the models being made available to the T10 web site.

Model	Company	T10 web content	Future intentions	Issues
VHDCI	Molex	available		
HD68	Molex	available		
SCA-2	Molex	available		
VHDCI	Tyco/AMP	no	has not supported SSM	
HD68	Tyco/AMP	no	has not supported SSM	
SCA-2	Tyco/AMP	no	has not supported SSM	
VHDCI	ERNI	no	has not supported SSM	
HD68	ERNI	no	has not supported SSM	
SCA-2	ERNI	no	has not supported SSM	
VHDCI	FCI	no	has not supported SSM	
HD68	FCI	no	has not supported SSM	
SCA-2	FCI	no	has not supported SSM	
Transceivers	LSI logic	available for Ultra160 and Ultra2	Ultra320 to be supplied when chip ships publicly	
Transceivers	Seagate	not yet	to supply soon	
Transceivers	Adaptec	no	has declared non-support for their models	
Transceivers	Maxtor	not committed	not clear	
Transceivers	Fujitsu	not committed	not clear	
Terminators	TI	available		
Terminators	Dallas	no	has not supported SSM	
Transition region	JPM	not yet	will supply in August	
Backplanes	Compaq	not committed		
Backplanes	SCSI Harbor	no	not available	data base no longer exists
Backplanes	IBM	not		

		committed		
Backplanes	HP	no	has not supported SSM	
Backplanes	Eurologic	no	has not supported SSM	
backplanes	nStor	no	has not supported SSM	
backplanes	Sun	no	has not supported SSM	
Backplanes	LSI Logic	not committed	not clear	
Backplanes	American Megatrends	no	has not supported SSM	
HBA boards	Adaptec	no	has declared non-support for their models	
HBA boards	LSI Logic	not committed	not clear	
HBA boards	Q Logic	no	has not supported SSM	
HBA boards	Tekram	no	has not supported SSM	
HBA boards	Atto	no	has not supported SSM	
Target boards	Seagate	not committed	not clear	
Target boards	Maxtor	not committed	not clear	
Target boards	Fujitsu	no	has not supported SSM	
Target boards	IBM	no	has not supported SSM	
Target boards	Quantum	no	has not supported SSM	
bulk cable point to point	Madison	not yet	committed for near future	
Shielded cable assys	Amphenol	no	has not supported SSM recently	
Unshielded cable assys	Amphenol	no	has not supported SSM recently	
Shielded cable assys	JPM	not yet	probably committed for later	

Unshielded cable assys	JPM	not yet	probably committed for later	
Bulk cable point to point	C&M	not yet	not committed	
Bulk cable multidrop	C&M	not yet	not committed	
Shielded cable assys	C&M	not yet	not committed	
Multidrop cable assys	C&M	not yet	not committed	
Bulk cable multidrop	Amphenol Spectra-Strip	2D, not yet	committed for near future	3D TBD
bulk cable point to point	Hitachi	not yet	committed for near future	
bulk cable multidrop	Hitachi	not yet	possible for later	
bulk cable multidrop	Temp-flex	not committed	not clear	

14. Next meetings

SSM is always scheduled in conjunction with PIP. An editing session is always included for one or the other project. PIP and SSM alternate in terms of which is first and which is second. The editing day is either before or after the contiguous PIP/SSM days and is identified in the schedule. To get this started SSM precedes PIP in February 2002, PIP precedes SSM in April 2002, etc.

Approved schedule:

Feb 19-20, 2002 (Tues/Wed) 9AM to 5 PM both days, Santa Cruz, CA (Seagate) (2/19 SSM working group, 2/20 SSM editing, 02/21 PIP)

Requested schedule:

April 4, 2002 (Wed) 9AM to 5PM, New Hampshire, (Hitachi) (04/02 PIP, 04/03 PIP editing, 04/04 SSM)

June 18, 19, 2002, Lisle Il, Molex 06/18 is SSM, 06/18 is SSM editing, 06/20 is PIP)

15. Action Items:

15.1 Action items from previous meetings

Status as of this meeting is shown.

Bruce Manildi to provide access information for the Seagate transceiver models to the T10 web site.
Status: done

Jie Fan, Madison Cable to provide access info for a point to point bulk cable model to the T10 web site.
Status: model is done, verified and are available internally in circuit form – still needs info supplied to T10 web site – needs web link from internal IT folks – carried over with progress – Paul A to write a brief note to Chuck Grant explaining the need to break thru Madison's internal roadblocks.

Zane Daggett, Hitachi, to provide bulk cable models to the SSM web site (per last meeting minutes).
Status: expect posting before next meeting (round 30 AWG solid will go up first followed by flat TPO) - carried over with no known progress

Paul A to send emails to all folks with open action items on Tuesday of each week (until the action item is completed).
Status: ongoing

Larry Barnes to take the material in the SPI-3 and SPI-4 document relating to the signal budget and figure out how to incorporate into the SSM document
Status: carried over

Ham to contact John Lohmeyer to determine position on providing pointers to extracted models not from suppliers.
Status: carried over

Greg Vaupotic to supply model for 30 AWG solid, TPE dielectric, twist and flat. Models for the flat region and for the twist region from 2D simulations, multiple frequencies to be supplied separately. Complete model for flat + twist needs to be constructed by the user from RLGC matrices.
Status: carried over

Jie to supply source figures describing the curve fitting extraction method to Larry.
Status: carried over

Jie to present the RLGC data resulting from the curve fitting at the October meeting.
Status: carried over

15.2 New action items from present meeting

Paul Aloisi to contact Martin O to determine if he can host the June 2002 PIP/SSM meetings
Status: new

Paul Aloisi to contact Jason Chou to determine if he intends to complete the material on instrumentation interfaces.
Status: new

Bruce Manildi to contact connector suppliers to determine how they can help to supply models for unmated connectors.
Status: new

Larry Barnes to investigate the use of Placeware for meetings
Status: new

Bob Gannon to investigate IDC effects in transition regions for flat cables.
Status: new

Bruce Manildi to investigate IDC effects in transition regions for round cables.
Status: new

16. Adjourn

The meeting adjourned at 4:30 PM