North America Physical Interfaces & Carriers Committee
Meeting Summary and Minutes

N.A. Standards SEMICON West 2013 Meetings
Wednesday, 10 July 2013, 9:00 AM – 12:00 PM PST
San Francisco Marriott Marquis Hotel in San Francisco, California

Next Committee Meeting

The next meeting of the North America Physical Interfaces & Carriers Committee is tentatively scheduled for Wednesday, October 30, 2013 at 9:00 AM -- 12:00 Noon (PST) at Intel Headquarters in Santa Clara, California and SEMI Headquarters in San Jose, California in conjunction with the NA Standards Fall 2013 Meetings.

Times and dates are subject to change without notice.
For additional meeting details, registration, travel information, and the latest schedule, please visit:
http://www.semi.org/en/node/46221

Table 1 Meeting Attendees

Co-Chairs: Matt Fuller (Entegris) / Mutaz Haddadin (Intel)
SEMI Staff: Michael Tran

Company	*Last*	*First*	*Company*	*Last*	*First*
Acteon Corporation	Komatsu	Shoji	KLA-Tencor	Crockett	Alan
Brooks Automation	Carlson	Bob	Lam Research	Gould	Richard
Daifuku Co., Ltd.	Yamagata	Kenji	Miraial	Igeta	Yasuo
Dainichi Shoji K.K.	Oyama	Koji	Miraial	Nagashima	Tsuyoshi
Entegris	Fuller	Matt	Murata Machinery	Yamamoto	Makoto
Genmark Automation	Sotirov	Zlatko	*Shimizu Consultant*	*Shimizu*	*Yasuhiro*
Global 450 Consortium	Alaestante	Angelo	Sinfonia Technology Co., Ltd.	Otani	Mikio
GLOBALFOUNDRIES	Rothe	Jan	Sumitomo Metal Industries	Makai	Tetsuya
Hitachi	Sato	Hidetoshi	Tokyo Electron	Mashiro	Supika
Intel	Radloff	Stefan	U.A. Associates	Hartsough	Larry
Intel Corporation	Quinn	Tom			
Intel/SEMATECH	He	Long	SEMI N.A.	Tran	Michael

**Italics indicates virtual participants*

Table 2 Leadership Changes

There were no leadership changes.

Table 3 Ballot Results

Passed ballots and line items will be submitted to the ISC Audit & Review Subcommittee for procedural review.
Failed ballots and line items were returned to the originating task forces for re-work and re-balloting.

Document #	*Document Title*	*Committee Action*
5557	Revision to SEMI AUX023-1211, Overview Guide to SEMI Standards for 450mm Wafers	**Passed** committee review. Superclean
5069	New Standard: Specification for 450 mm Wafer Shipping System	**Failed** committee review and reballoted.
5262A	Line Items Revision to SEMI E152-0709, Mechanical Specification of EUV Pod for 150 mm EUVL Reticles	

Document #	*Document Title*	*Committee Action*
Line Item 1	Define Two Rear Purge Port Areas	**Passed** committee review. Superclean.
Line Item 2	Define Two Front Purge Port Areas	**Passed** committee review. Superclean.
Line Item 3	Increase Maximum Component Masses and Define z23 for EUV Pod Specific OHT Flange Height	**Passed** committee review. Superclean.
Line Item 4	Define KC Pin Height z22 and Correct z15 Value	**Passed** committee review. Superclean.
Line Item 5	Define z21 for EUV Pod Latching Position	**Passed** committee review. Superclean.
Line Item 6	Define RFID Terminology and Clarify RFID Location	**Passed** committee review. Superclean.
Line Item 7	Define Eight (8) Outer Carrier Info Pad Configurations	**Passed** committee review. Superclean.
Line Item 8	Correct Values of x4, y5	**Passed** committee review. Superclean.
Line Item 9	Redefining x1 and y1 to Clarify Reticle Position within Inner Pod	**Passed** committee review. Superclean.
5465	Line Item Revision to SEMI E111-1106, Mechanical Specification for a 150 mm Reticle SMIF Pod (RSP150) Used to Transport and Store a 6 Inch Reticle	
Line Item 1	Addition of Related Information 1, Sensors for Reticle SMIF Pod (RSP150) Detection	**Passed** committee review.
5466	Line Item Revision to SEMI E112-1106, Mechanical Specification for a 150 mm Multiple Reticle SMIF Pod (MRSP150) Used to Transport and Store Multiple 6 Inch Reticles	
Line Item 1	Addition of Related Information 1, Sensors for Multiple Reticle SMIF Pod (MRSP150) Detection	**Passed** committee review.
5584	Line Item Revision to SEMI E19-0912, Standard Mechanical Interface (SMIF)	
Line Item 1	Addition of Related Information 1, Sensors for Reticle SMIF Pod (RSP150) Detection	**Passed** committee review. Superclean
5585	Line Item Revision to SEMI E19.3-0309, Standard Mechanical Interface (SMIF), Specification for 150 mm (6 inch) Port	
Line Item 1	Addition of Related Information 1, Sensors for Reticle SMIF Pod (RSP150) Detection	**Passed** committee review.

Table 4 Authorized Activities

#	*Type*	*SC/TF/WG*	*Details*
5628	SNARF	450 mm IPIC TF	Line Item Revisions to SEMI E158-1110, Mechanical Specification for Fab Wafer Carrier Used to Transport and Store 450 mm Wafers (450 FOUP) and Kinematic Coupling AND Line Item Revisions to SEMI E159-0912, Mechanical Specification for Multi Application Carrier (MAC) Used to Transport and Ship 450 mm Wafers
5626	SNARF	450 mm IPIC TF and IPPI TF	Line Item Revisions to SEMI E154-0713, Mechanical Interface Specification for 450 mm Load Port AND Line Item Revision to SEMI E166-0513, Specification for 450 mm Cluster Module Interface: Mechanical Interface and Transport Standard

Note: SNARFs and TFOFs are available for review on the SEMI Web site at:

Table 5 Authorized Ballots

#	When	SC/TF/WG	Details
5628	Cycle 5-2013	450 mm IPIC TF	Line item Revisions to SEMI E158-1110, Mechanical Specification for Fab Wafer Carrier Used to Transport and Store 450 mm Wafers (450 FOUP) and Kinematic Coupling AND Line Item Revisions to SEMI E159-0912, Mechanical Specification for Multi Application Carrier (MAC) Used to Transport and Ship 450 mm Wafers
5626	Cycle 6-2013	450 mm IPIC TF and IPPI TF	Line Item Revisions to SEMI E154-0713, Mechanical Interface Specification for 450 mm Load Port AND Line Item Revisions to SEMI E166-0513, Specification for 450 mm Cluster Module Interface: Mechanical Interface and Transport Standard
5069A	Cycle 7-2013	International Shipping Box TF	New Standard: Specification for 450 mm Wafer Shipping System

Table 6 New Action Items

Item #	Assigned to	Details
2013Jul#01	Stefan Radloff/Shoji Komatsu	Draft changes to the Related Information of SEMI E83 (Person Guided Vehicle)
2013Jul#02	Alan Crockett	Follow up with the Facilities and Gases committee regarding the transfer of ownership of SEMI E72 (300 mm Equipment footprint, Height, and Weight)

Table 7 Previous Meeting Actions Items

Item #	Assigned to	Details	Status
2013Apr#01	Yasuhiro Shimizu	Correct figures 17 and 18 in SEMI M80 because both figures show incorrect reference plane.	DONE
2013Apr#02	Larry Hartsough and Shoji Komatsu	Work together on merging and aligning the previously approved PIC charters from Japan and North America.	OPEN.
2013Apr#03	Michael Tran	Send Russell Fitzpatrick the notchless wafer presentation from Pinyen Lin.	DONE

1 Welcome, Reminders, and Introductions

1.1 Matt Fuller (Entegris) called the meeting to order at 9:01 AM PST. The meeting reminders on antitrust issues, intellectual property issues and holding meetings with international attendance were reviewed. Attendees introduced themselves.

Attachment: 01, SEMI Standards Required Meeting Elements

2 Review of Previous Meeting Minutes

2.1 The committee reviewed the minutes of the previous meeting.

Motion: To approve the previous meeting minutes as written.
By / 2nd: Jan Rothe (GLOBALFOUNDRIES) / Bob Carlson (Brooks Automation)
Discussion: None.
Vote: 13-0 in favor. Motion passed.

Attachment: 02, N.A. PIC Meeting Minutes (Spring 2013)

3 Liaison Reports

3.1 *Europe Equipment Automation Committee*

3.1.1 There was no report received.

3.2 *Japan Physical Interfaces & Carriers Committee*

3.2.1 Kenji Yamagata (Daifuku) reported for the Japan Physical Interfaces & Carriers Committee. The key items were as follows:

- Leadership Changes
    - Kenji Yamagata (DAIFUKU) is the new co-chair in addition to Tsuyoshi Nagashima (Miraial) and Tsutomu Okabe (TDK)
- Meeting Information for the committee
    - The last meeting was on June 6, 2013 at SEMI Japan in Tokyo, Japan
    - The next meeting is scheduled for September 04, 2013 at SEMI Japan in Tokyo, Japan
- Japan Physical Interfaces & Carriers Task Force reports
    - 450 mm IPIC Task Force
        - Transferred ownership of SEMI E156 (450 mm AMHS Stocker) to the JA 450 mm TF
        - Revising SEMI E154 (450 mm Load Port)
- International Process Module Physical Interface (IPPI) TF
    - SEMI E166 was published in May 2013
        - Specification for 450 mm Cluster Module Interface: Mechanical Interface and Transport Standard
    - Int'l Reticle SMIF Pod and LP Interoperability TF
        - RSP150 cover (pod shell) sensing
        - RSP150 door (pod door) sensing
        - Revising Related Information to SEMI E19 (SMIF Pods)
    - 450 mm AMHS TF
        - Currently drafting documents for the New SNARFs
        - Doc. 5524, Revision to SEMI E156-0710, Mechanical Specification for 450 mm AMHS Stocker to Transport Interface

- New Standard: Specification for Signal Tower for 450mm AMHS

- The Japan PIC committee plans to hold a 450 mm Standards Technical Education Program (STEP) in conjunction with SEMICON Japan.
- SEMI Japan contact: Hirofumi Kanno (hkanno@semi.org)

Attachment: 03, Japan Physical Interfaces & Carriers Report (West 2013)

3.3 *SEMI N.A. Staff Report*

3.3.1 Michael Tran (SEMI N.A.) gave the SEMI Staff Report. The key items were as follows:

- Some Upcoming SEMI Major Events
  - SEMICON Taiwan 2013 / LED Taiwan 2013
    - September 4-6, 2013 in Taipei
  - SEMICON Europa 2013 / Plastic Electronics Exhibition and Conference
    - October 8-10, 2013 Dresden, Germany
  - SEMICON Japan 2013
    - December 4-6, 2013 in Chiba
- Upcoming North America Standards Meeting
  - NA Standards Fall 2013 Meetings
    - October 28-31, 2013 in San Jose and Santa Clara, California
    - Inviting local companies willing and able to host some of the meetings to maintain one-week format
- Cycle 6-2013 Critical Dates for SEMI Standards Ballots
  - Cycle 6, 2013
    - Ballot Submission Date: August 15, 2013
    - Voting Period Starts: August 29, 2013
    - Voting Period Ends: September 30, 2013
- SEMI Standards Publications
  - Standards published from April 2013 to June 2013:
    - New Standards: 16
    - Revised Standards: 11
    - Reapproved Standards: 15
    - Withdrawn Standards: 0
  - There are a total of 887 SEMI Standards in portfolio and that includes 94 Inactive standards
- SEMI N.A. Standards staff contact: Michael Tran, mtran@semi.org

Attachment: 04, SEMI Standards Staff Report (West 2013)

4 Ballot Review

NOTE 1: Committee adjudication on the ballots are detailed in the Audits & Reviews (A&R) Subcommittee Forms for procedural review. These A&R forms are available as attachments to these minutes. The attachment number for each ballot document is provided under each ballot review section below.

Document #	*Document Title*	*Committee Action*
5557	Revision to SEMI AUX023-1211, Overview Guide to SEMI Standards for 450mm Wafers	**Passed** committee review. Superclean
5069	New Standard: Specification for 450 mm Wafer Shipping System	**Failed** committee review and reballoted.
5262A	Line Items Revision to SEMI E152-0709, Mechanical Specification of EUV Pod for 150 mm EUVL Reticles	
Line Item 1	Define Two Rear Purge Port Areas	**Passed** committee review. Superclean.
Line Item 2	Define Two Front Purge Port Areas	**Passed** committee review. Superclean.
Line Item 3	Increase Maximum Component Masses and Define z23 for EUV Pod Specific OHT Flange Height	**Passed** committee review. Superclean.
Line Item 4	Define KC Pin Height z22 and Correct z15 Value	**Passed** committee review. Superclean.
Line Item 5	Define z21 for EUV Pod Latching Position	**Passed** committee review. Superclean.
Line Item 6	Define RFID Terminology and Clarify RFID Location	**Passed** committee review. Superclean.
Line Item 7	Define Eight (8) Outer Carrier Info Pad Configurations	**Passed** committee review. Superclean.
Line Item 8	Correct Values of x4, y5	**Passed** committee review. Superclean.
Line Item 9	Redefining x1 and y1 to Clarify Reticle Position within Inner Pod	**Passed** committee review. Superclean.
5465	Line Item Revision to SEMI E111-1106, Mechanical Specification for a 150 mm Reticle SMIF Pod (RSP150) Used to Transport and Store a 6 Inch Reticle	
Line Item 1	Addition of Related Information 1, Sensors for Reticle SMIF Pod (RSP150) Detection	**Passed** committee review.
5466	Line Item Revision to SEMI E112-1106, Mechanical Specification for a 150 mm Multiple Reticle SMIF Pod (MRSP150) Used to Transport and Store Multiple 6 Inch Reticles	
Line Item 1	Addition of Related Information 1, Sensors for Multiple Reticle SMIF Pod (MRSP150) Detection	**Passed** committee review.
5584	Line Item Revision to SEMI E19-0912, Standard Mechanical Interface (SMIF)	
Line Item 1	Addition of Related Information 1, Sensors for Reticle SMIF Pod (RSP150) Detection	**Passed** committee review. Superclean
5585	Line Item Revision to SEMI E19.3-0309, Standard Mechanical Interface (SMIF), Specification for 150 mm (6 inch) Port	
Line Item 1	Addition of Related Information 1, Sensors for Reticle SMIF Pod (RSP150) Detection	**Passed** committee review.

Motion: Document #5069 failed committee review as balloted and will be re-balloted for Cycle 7-2013.

By / 2nd: Tom Quinn (Intel) / Stefan Radloff (Intel)

Discussion: None.

Vote: 15-0 in favor. Motion passed.

Attachment: 05, Ballot Review Summary for Document #5069

Motion: Document #5465, Line Item 1 passed committee review as balloted and will be forwarded to the A&R for procedural review.

By / 2nd: Jan Rothe (GLOBALFOUNDRIES) / Stefan Radloff (Intel)

Discussion: None.

Vote: 14-0 in favor. Motion passed.

Attachment: 06, Procedural Review A&R Form for Document #5465

Motion: Document #5466, Line Item 1 passed committee review as balloted and will be forwarded to the A&R for procedural review.

By / 2nd: Jan Rothe (GLOBALFOUNDRIES) / Stefan Radloff (Intel)

Discussion: None.

Vote: 13-0 in favor. Motion passed.

Attachment: 07, Procedural Review A&R Form for Document #5466

Motion: Document #5584, Line Item 1 passed committee review as balloted and will be forwarded to the A&R for procedural review.

By / 2nd: Jan Rothe (GLOBALFOUNDRIES) / Stefan Radloff (Intel)

Discussion: None.

Vote: 14-0 in favor. Motion passed.

Attachment: 08, Procedural Review A&R Form for Document #5584

Motion: Document #5585, Line Item 1 passed committee review as balloted and will be forwarded to the A&R for procedural review.

By / 2nd: Jan Rothe (GLOBALFOUNDRIES) / Stefan Radloff (Intel)

Discussion: None.

Vote: 14-0 in favor. Motion passed.

Attachment: 09, Procedural Review A&R Form for Document #5585

Motion: Document #5262A, Line Item 1, 2, 3, 4, 5, 6, 7, 8, and 9 passed committee review as balloted and will be forwarded to the A&R for procedural review.

By / 2nd: Supika Mashiro (Tokyo Electron) / Larry Hartsough (U.A. Associates)

Discussion: None.

Vote: 12-0 in favor. Motion passed.

Attachment: 10, Procedural Review A&R Form for Document #5262A

5 Subcommittee & Task Force Reports

5.1 *450 mm* International Physical Interfaces & Carriers (IPIC) Task Force

5.1.1 Shoji Komatsu (Acteon Corporation) reported for the International 450 mm Physical Interfaces & Carriers Task Force. Shoji worked with Angelo Alaestante from G450C to correct the dimensions z45 and z26 in Table 1 of SEMI E158 (450 FOUP). Shoji and Angelo also worked on corrections to the calculations of the x-axis and y-axis moments of Appendix 3 in SEMI E158 and E159 (MAC).

5.1.2 The Task force continued to look into the EFEM robot pocket space and proposed the following:

- The robot pocket space under RMF is for EFEM robot ONLY
- The ybackpocket = EFEMsupp has to be minimize
- This volume is to be made available for equipment (SME) that requires a higher wafer transfer plane. The volume is to be used for wafer handling robot clearance only and not for physical support of the robot or EFEM.
- Include a figure and explanation in Related Information to clarify that this space is not applicable across the board and only should be used for tools that require higher transfer plane, i.e. cluster tools and that the OEM needs to coordinate with end user/Device Maker for implementation.

Attachment: 11, International 450mm Physical Interfaces & Carriers Task Force Report (West 2013)

5.2 *International and N.A. 450 mm Shipping Box Task Force*

5.2.1 Tom Quinn (Intel) reported for the International and N.A. 450 mm Shipping Box Task Force. The TF reviewed the letter ballot results of Document 5069, *New Standard: 450 mm Wafer Shipping System* for Cycle 4-2013 and the document was failed by the committee. The TF will revise the document to better align what is in the scope to the contents of the document. It will be reballoted for Cycle 7 to be adjudicated at SEMICON Japan 2013. The scope of SEMI E162 (450 mm FOSB), SEMI E159 (MAC), and SEMI M74 (450 mm Material handling wafers) will have to be discussed as well.

Attachment: 12, International and N.A. 450mm Shipping Box Task Force Report (West 2013)

5.3 *International Process Module Physical Interface (IPPI) Task Force*

5.3.1 Supika Mashiro (Tokyo Electron Ltd.) reported for the International Process Module Physical Interface Task Force. SEMI E166 (450 mm Cluster Module Interface) was published in May and the Japanese translation is underway.

5.3.2 The TF worked with the 450 mm IPIC task force for the EFEM Pocket Volume (see § 5.1.2 of these minutes). The 450 mm IPIC TF submitted a SNARF (#5626, see §7.2 of these minutes) to add the EFEM Pocket Volume to SEMI E154 (450 mm Loadport) and SEMI E159 (MAC).

Attachment: 13, International Process Module Physical Interface (IPPI) Task Force Report (West 2013)

5.4 *International Reticle SMIF Pods and Load Ports Interoperability Task Force*

5.4.1 Koji Oyama (Dainichi Shoji K.K.) reported for the TF. The TF reviewed the ballot results for documents 5465, 5466, 5584 and 5586 (see § 4 of these minutes). The documents all passed superclean, but the TF will ballot a single ballot document to revise the same changes to multiple documents to avoid conditional ballots.

5.4.2 The TF discussed the possibility of adding purge locations to the SMIF documents as stated in the TF charter. If the TF add the purge locations, a survey will be sent to the industry. The TF is still deciding whether to carry on with adding the purge locations or remove it from the TF charter.

Attachment: 14, International Reticle SMIF Pods and Load Ports Interoperability TF Report (West 2013)

5.5 *Global PIC Maintenance Task Force*

5.5.1 Larry Hartsough (U.A. Associates) reported the TF. The TF did not have any new business.

5.6 *EUV Reticle Handling Task Force*

5.6.1 Long He (Intel/SEMATECH) reported for the TF. The TF reviewed the ballot results of Document 5262A and the results were superclean for all 9 line items (see §4 of these minutes). The TF will look into developing an EUV pellicle document as their next activity.

5.7 *N.A. 450 mm Automated Test Die Prep Task Force*

5.7.1 Stefan Radloff (Intel) reported for the TF. All of the activities have been in the Japan Assembly & Packaging committee side. The Assembly & Packaging committee is considering lowering the load port height by 200 mm for a typical Asian female in the SEMI G88 (450 mm Tape Frame Wafer), SEMI G92 (450 mm Tape Frame Cassette), and SEMI G95 (450 mm Load Port Tape Frame).

6 Old Business

6.1 *Document #5557, Revision to AUX023-1211, Overview Guide to SEMI Standards for 450mm Wafers*

6.1.1 The committee performed the IP and Safety checks and approved the document to be forwarded to the A&R for procedural review.

Motion: Document #5557 passed committee review and will be forwarded to the GCS and A&R SC for procedural review.

By / 2nd: Shoji Komatsu (Acteon Corporation) / Thomas Quinn (Intel)

Discussion: None.

Vote: 12-0 in favor. Motion passed.

Attachment: 15, Procedural Review for Document #5557

6.2 *Revision of the Physical Interfaces and Carriers Committee Charter*

6.2.1 Shoji Komatsu reported that in 2006, the Japan PIC TC chapter had previously approved a revised PIC charter in the minutes, but actual changes were not made to the PIC charter. Larry Hartsough and Shoji Komatsu will have to work together on aligning and merge the PIC charters from Japan in 2006 and North America which was previously approved in Fall 2012. Once the consolidation is completed, the charter will be sent to the PIC Global Coordinating Subcommittee (GCS) for approval.

Action Item: 2013Apr#02, Larry Hartsough and Shoji Komatsu to work together on aligning the previously approved PIC charters from Japan and North America.

6.1 *Update on SEMI E72*

6.1.1 Alan Crockett (KLA-Tencor) reported on the status of SEMI E72, *Specification and Guide for 300 mm Equipment Footprint, Height, and Weight*. The facilities and gases committee have shown interest in taking ownership of SEMI E72 and review it. The NA PIC committee will wait until the Facilities and Gases committee are ready for the transfer.

6.2 *The Committee Updated the Status of Documents Due for Five Year Reviews*

#	Details	Status
SEMI E152-0709	Mechanical Specification of EUV Pod for 150 mm EUVL Reticles	Document 5262A passed superclean.

#	Details	Status
SEMI E111-1106	Mechanical Specification for a 150 mm Reticle SMIF Pod (RSP150) Used to Transport and Store a 6 Inch Reticle	Document 5465 passed superclean.
SEMI E112-1106	Mechanical Specification for a 150 mm Multiple Reticle SMIF Pod (MRSP150) Used to Transport and Store Multiple 6 Inch Reticles	Document 5466 passed superclean.
SEMI E72-0600	Specification and Guide for 300 mm Equipment Footprint, Height, and Weight	Alan Crockett working with the Facilities / Gases committee.

7 New Business

7.1 *New SNARFs*

7.1.1 The following SNARFs were submitted for the committee's approval:

#	Type	SC/TF/WG	Details
5628	SNARF	450 mm IPIC TF	Line Item Revisions to SEMI E158-1110, Mechanical Specification for Fab Wafer Carrier Used to Transport and Store 450 mm Wafers (450 FOUP) and Kinematic Coupling AND Line Item Revisions to SEMI E159-0912, Mechanical Specification for Multi Application Carrier (MAC) Used to Transport and Ship 450 mm Wafers
5626	SNARF	450 mm IPIC TF and IPPI TF	Line Item Revisions to SEMI E154-0713, Mechanical Interface Specification for 450 mm Load Port AND Line Item Revisions to SEMI E166-0513, Specification for 450 mm Cluster Module Interface: Mechanical Interface and Transport Standard

Motion: To approve the SNARF for document 5628.
By / 2nd: Shoji Komatsu (Acteon Corporation) / Larry Hartsough (U.A. Associates)
Discussion: None
Vote: 15-0 in favor. Motion passed.

Motion: To approve the SNARF document 5626.
By / 2nd: Shoji Komatsu (Acteon Corporation) / Alan Crockett (KLA-Tencor)
Discussion: None
Vote: 15-0 in favor. Motion passed.

7.2 *New Ballot Submission*

7.2.1 The following documents were submitted for letter ballot to the committee for approval:

#	When	SC/TF/WG	Details
5628	Cycle 5 or 6-2013	450 mm IPIC TF	Line item Revisions to SEMI E158-1110, Mechanical Specification for Fab Wafer Carrier Used to Transport and Store 450 mm Wafers (450 FOUP) and Kinematic Coupling AND Line Item Revisions to SEMI E159-0912, Mechanical Specification for Multi Application Carrier (MAC) Used to Transport and Ship 450 mm Wafers

#	When	SC/TF/WG	Details
5626	Cycle 6-2013	450 mm IPIC TF and IPPI TF	Line Item Revisions to SEMI E154-0713, Mechanical Interface Specification for 450 mm Load Port AND Line Item Revisions to SEMI E166-0513, Specification for 450 mm Cluster Module Interface: Mechanical Interface and Transport Standard
5069A	Cycle 7-2013	International Shipping Box TF	New Standard: Specification for 450 mm Wafer Shipping System

Motion: To approve letter ballot of document 5628 for Cycle 5 or 6-2013.
By / 2nd: Shoji Komatsu (Acteon Corporation) / Larry Hartsough (U.A. Associates)
Discussion: None
Vote: 15-0 in favor. Motion passed.

Motion: To approve letter ballot of document 5626 for Cycle 6, 2013.
By / 2nd: Shoji Komatsu (Acteon Corporation) / Alan Crockett (KLA-Tencor)
Discussion: None
Vote: 15-0 in favor. Motion passed.

Motion: To approve the letter re-ballot of document 5069 as 5069A for Cycle 7, 2013.
By / 2nd: Tom Quinn (Intel) / Stefan Radloff (Intel)
Discussion: None.
Vote: 15-0 in favor. Motion passed.

8 Action Item Review

8.1 *Open Action Items*

8.1.1 Michael Tran (SEMI N.A.) reviewed the open action items. These can be found in the Open Action Items table at the beginning of these minutes.

8.2 *New Action Items*

8.2.1 Michael Tran (SEMI N.A.) reviewed the new action items. These can be found in the New Action Items table at the beginning of these minutes.

9 Next Meeting and Adjournment

9.1 The next N.A. Physical Interfaces & Carriers standards meetings are tentatively scheduled for October 28 - 30, 2013 at Intel Headquarters in Santa Clara, CA and/or SEMI Headquarters in San Jose, CA in conjunction with the NA Standards Fall 2013 meetings. Exact meeting date and details will be announced when finalized and available at http://www.semi.org/en/node/46221

Tentative schedule:

Monday, October 28*
· Int'l Reticle SMIF Pods and Loadports Interoperability TF (10:00 AM – 12:00 PM Noon)
· Int'l 450 mm Shipping Box TF (1:00 PM – 4:00 PM)

Tuesday, October 29*
· EUV Reticle Handling TF (10:00 AM – 12:00 PM Noon)
· Int'l Process Module Physical Interface TF (1:00 PM – 3:00 PM)
· Int'l PIC TF (3:00 PM – 5:00 PM)

Wednesday, October 30*
· Physical Interfaces & Carriers Committee (9:00 AM – 12:00 PM Noon)

*All times are in PST. Times and dates are subject to change without notice.
For meeting details, registration, the latest schedule, and travel information please visit
http://www.semi.org/en/node/46221

9.2 Having no further business, a motion was made to adjourn the N.A. Physical Interfaces & Carriers committee meeting in conjunction with the N.A. Standards SEMICON 2013 Meetings at the San Francisco Marriott Marquis Hotel in San Francisco, California.

Respectfully submitted by:

Michael Tran
Senior Standards Engineer
SEMI North America
Phone: 1-408-943-7019
Email: mtran@semi.org

Minutes approved by:

Matt Fuller (Entegris), Co-chair	August 20, 2013
Mutaz Haddadin (Intel), Co-chair	

Table 8 Index of Available Attachments [#1]

#	*Title*	#	*Title*
01	SEMI Standards Required Meeting Elements	09	Procedural Review A&R Form for Document #5585
02	N.A. PIC Meeting Minutes (Spring 2013)	10	Procedural Review A&R Form for Document #5262A
03	Japan Physical Interfaces & Carriers Report (West 2013)	11	International 450mm Physical Interfaces & Carriers Task Force Report (West 2013)
04	SEMI Standards Staff Report (West 2013)	12	International and N.A. 450mm Shipping Box Task Force Report (West 2013)
05	Ballot Review Summary for Document #5069	13	International Process Module Physical Interface (IPPI) Task Force Report (West 2013)
06	Procedural Review A&R Form for Document #5465	14	International Reticle SMIF Pods and Load Ports Interoperability TF Report (West 2013)
07	Procedural Review A&R Form for Document #5466	15	Procedural Review for Document #5557
08	Procedural Review A&R Form for Document #5584		

#1 Due to file size and delivery issues, attachments must be downloaded separately. A .zip file containing all attachments for these minutes is available at www.semi.org. For additional information or to obtain individual attachments, please contact Michael Tran at the contact information above.