Japan TC Chapter of
Physical Interfaces & Carriers Global Technical Committee
Meeting Summary and Minutes

Japan Standards Summer 2015 Meetings
Thursday, July 30, 2015, 1:30 p.m. – 5:00 p.m.
SEMI Japan office, Tokyo, Japan

Next Committee Meeting
Wednesday, September 30, 2015, 1:30 p.m. – 5:00 p.m. <Japan Standard Time>
Japan Standards Fall 2015 Meetings
SEMI Japan office, Tokyo, Japan

Committee Announcements (optional)
None

Table 1 Meeting Attendees
Italics indicate virtual participants
Co-Chairs: Tsuyoshi Nagashima (Miraial), Tsutomu Okabe (TDK), Kenji Yamagata (Daifuku)
SEMI Staff: Chie Yanagisawa (SEMI Japan)
Attendees: 15 + SEMI: 1

<table>
<thead>
<tr>
<th>Company</th>
<th>Last</th>
<th>First</th>
<th>Company</th>
<th>Last</th>
<th>First</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acteon</td>
<td>Komatsu</td>
<td>Shoji</td>
<td>Self</td>
<td>Sakamoto</td>
<td>Mitch</td>
</tr>
<tr>
<td>Daifuku</td>
<td>Yamagata</td>
<td>Kenji</td>
<td>Shin-Etsu Polymer</td>
<td>Shida</td>
<td>Hiroyuki</td>
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<tr>
<td>Kumai Consulting</td>
<td>Kumai</td>
<td>Sadao</td>
<td>Sinfonia Technology</td>
<td>Otani</td>
<td>Mikio</td>
</tr>
<tr>
<td>Hirata Corporation</td>
<td>Toyoda</td>
<td>Noriyoshi</td>
<td>SUMCO</td>
<td>Nakai</td>
<td>Tetsuya</td>
</tr>
<tr>
<td>Hitachi Kokusai Electric</td>
<td>Matsuda</td>
<td>Mitsuhiro</td>
<td>TDK</td>
<td>Okabe</td>
<td>Tsutomu</td>
</tr>
<tr>
<td>Miraial</td>
<td>Nagashima</td>
<td>Tsuyoshi</td>
<td>Tokyo Electron</td>
<td>Asakawa</td>
<td>Terry</td>
</tr>
<tr>
<td>Murata Machinery</td>
<td>Yamamoto</td>
<td>Makoto</td>
<td>Tokyo Electron</td>
<td>Mashiro</td>
<td>Supika</td>
</tr>
<tr>
<td>Nihon Entegris</td>
<td>Fukunaga</td>
<td>Tsukasa</td>
<td>SEMI Japan</td>
<td>Yanagisawa</td>
<td>Chie</td>
</tr>
</tbody>
</table>

* alphabetical order by company name

Table 2 Leadership Changes

<table>
<thead>
<tr>
<th>Group</th>
<th>Previous Leader</th>
<th>New Leader</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEMI E84 Study Group (newly set up)</td>
<td>--</td>
<td>Mitsuhiro Matsuda (Hitachi Kokusai Electric) as a temporary leader</td>
</tr>
</tbody>
</table>

Table 3 Ballot Results (or move to Section 4, Ballot Review)

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.

<table>
<thead>
<tr>
<th>Document #</th>
<th>Document Title</th>
<th>Committee Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>5524A</td>
<td>Revisions to SEMI E156-0710: Mechanical Specification for 450 mm AMHS Stocker to Transport Interface, with title change to Specification for Mechanical Interfaces between 450 mm AMHS Stocker and Transport Equipment</td>
<td>Passed as balloted Supereclean</td>
</tr>
<tr>
<td>5869</td>
<td>Line Item Revision to SEMI E84-1109: Specification for Enhanced Carrier Handoff Parallel I/O Interface</td>
<td></td>
</tr>
<tr>
<td>Line Item 1</td>
<td>Add to § R1-2.2 of RELATED INFORMATION 1</td>
<td>Failed and returned to the task force for rework</td>
</tr>
</tbody>
</table>
1 Welcome, Reminders, and Introductions

Tsuyoshi Nagashima (Mirial), co-chair, called the meeting to order at 1:30 p.m. The meeting reminders on antitrust issues, intellectual property issues and holding meetings with international attendance were reviewed. Attendees introduced themselves.

2 Review of Previous Meeting Minutes

The committee reviewed the minutes of the previous meeting.

<table>
<thead>
<tr>
<th>Item #</th>
<th>Assigned to</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>150415-1</td>
<td>SEMI Staff</td>
<td>To get SEMI NA Staff send out the email to PIC GCS members reporting the three SNARFs, #5867 (Line item revision to SEMI E21-94 (Reapproved 0309), with title change to: Specification for Cluster Tool Module Interface: Mechanical Interface and Wafer Transport), #5868 (Line item revision to SEMI E22-0697 (Reapproved 0309), with title change to: Specification for Cluster Tool Module Interface: Transport Module End Effector Exclusion Volume), #5869 (Line Item Revision to SEMI E84-1109, Specification for Enhanced Carrier Handoff Parallel I/O Interface), proposed by Global PIC Maintenance TF were approved at the NA TC Chapter meeting on April 1, 2015 per Procedure Manual ¶6.4.6.4.3. =&gt; CLOSE</td>
</tr>
<tr>
<td>150415-2</td>
<td>SEMI Staff</td>
<td>To send the email to PIC GCS members to ask for their agreement of Ballot #5869 (Line Item Revision to SEMI E84-1109) submission for Cycle 5-2015 due to the Japan TC Chapter’s authorization of the ballot submission at the Japan PIC TC Chapter meeting on April 15, 2015. =&gt; CLOSE</td>
</tr>
<tr>
<td>150415-3</td>
<td>Supika Mashiro</td>
<td>To get approval disbandment of IPPI TF from EU TC Chapter. =&gt; OPEN</td>
</tr>
</tbody>
</table>

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Table 4 Authorized Ballots (or move to Section 7, New Business)

<table>
<thead>
<tr>
<th>#</th>
<th>When</th>
<th>SC/TF/WG</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>TBD</td>
<td>Cycle 7/8-2015</td>
<td>Global PIC Maintenance T</td>
<td>Reapproval to SEMI E23-1104, Specification for Cassette Transfer Parallel I/O Interface</td>
</tr>
</tbody>
</table>

Table 5 Authorized Activities (or move to Section 7, New Business)

<table>
<thead>
<tr>
<th>#</th>
<th>Type</th>
<th>SC/TF/WG</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>--</td>
<td>SG</td>
<td>SEMI E84</td>
<td>The scope of this study group is to understand current issues of SEMI E84 and the study group will be held with Information &amp; Control Japan TC Chapter.</td>
</tr>
<tr>
<td>TBD</td>
<td>SNARF</td>
<td>Global PIC Maintenance TF</td>
<td>SNARF for Reapproval to SEMI E23-1104, Specification for Cassette Transfer Parallel I/O Interface</td>
</tr>
</tbody>
</table>

Note: SNARFs and TFOFs are available for review on the SEMI Web site at: [http://downloads.semi.org/web/wstdsbal.nsf/TFOFSNARF](http://downloads.semi.org/web/wstdsbal.nsf/TFOFSNARF)

Table 6 New Action Items (or move to Section 8, Action Item Review)

<table>
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<tr>
<th>Item #</th>
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<tbody>
<tr>
<td>150730-1</td>
<td>SEMI Staff</td>
<td>To ask the co-chairs of I&amp;C Japan TC Chapter that they should include the information in the I&amp;C Japan TC Chapter liaison report to the other regions that the PIC Japan TC Chapter proposed the reapproval of SEMI E23-1104 (Reapproved 0710).</td>
</tr>
<tr>
<td>150730-2</td>
<td>Kenji Yamagata</td>
<td>To report to Jan Rothe that there is no volunteer as the TF leader of Japan region.</td>
</tr>
</tbody>
</table>

Table 7 Previous Meeting Action Items (or move to Section 8, Action item Review)

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<tr>
<td>150415-3</td>
<td>Supika Mashiro</td>
<td>To get approval disbandment of IPPI TF from EU TC Chapter. =&gt; OPEN</td>
</tr>
</tbody>
</table>
3 Liaison Reports

3.1 Europe TC Chapter of PI&C Global Technical Committee
Chie Yanagisawa (SEMI Japan) reported there was no report from the Europe TC Chapter.

3.2 North America TC Chapter of PI&C Global Technical Committee
Tsuyoshi Nagashima (Mirical) reported for the North America TC Chapter of PI&C Global Technical Committee as attached.

Attachment: 01_NA PIC Report West 2015 DLB

3.3 SEMI Staff Report
Chie Yanagisawa (SEMI Japan) gave the SEMI Staff Report as attached.

Attachment: 02_SEMI Staff Report 2015 July R0.1

4 Ballot Review
There were two ballots reviewed at this meeting and the committee actions for each document and each line item are listed in the Table 3 Ballot Results. The details of ballot review are found in the attachment.

Attachment: 03_5524A_BallotReport and 04_5869_BallotReport

5 Subcommittee & Task Force Reports

5.1 Global PIC Standards Maintenance Task Force
Shoji Komatsu (Acteon), co-leader, reported for Global PIC Maintenance Task Force. Of note:
- #5869 (Line Item Revision to SEMI E84-1109 “Specification for Enhanced Carrier Handoff Parallel I/O Interface) was reviewed and failed at this meeting”.
- The task force to propose the reapproval of SEMI E23-1104 (Reapproved 0710) “Specification for Cassette Transfer Parallel I/O Interface” at the New Business of this meeting.
- The task force to propose to make no action for SEMI E101-1104 (Reapproved 0710) “Guide for EFEM Functional Structure Model” to be discussed at the New Business of this meeting.

Attachment: 05_450mm IPIC TF meeting Minutes rev1-20150714

5.2 International 450 mm Physical Interfaces & Carriers (IPIC) Task Force
Shoji Komatsu (Acteon), co-leader, reported for the task force as attached.

Attachment: 06_Maintenance TF meeting Minutes rev0-20150730

5.3 International Process Module Physical Interface (IPPI) Task Force
No report was made.

5.4 Int'l Reticle SMIF Pod & Load Port Interoperability Task Force
No report was made.

5.5 450 mm AMHS Task Force
Kenji Yamagata (DAIFUKU) reported that Ballot #5524A: Revisions to SEMI E156-0710 “Mechanical Specification for 450 mm AMHS Stocker to Transport Interface”, with title change to “Specification for Mechanical Interfaces between 450 mm AMHS Stocker and Transport Equipment” was reviewed and passed at this TC Chapter meeting.
5.6 Fiducial Mark Interoperability Task Force

Mitsuhiro Matsuda (Hitachi Kokusai Electric) reported for the task force as attached. Of note:

- The task force decided to revise SEMI T7-0415 “Specification for Back Surface Marking of Double-Side Polished Wafers with a Two-Dimensional Matrix Code Symbol”
  - SNARF was approved by GCS. (SNARF #5890)
  - To be submitted to Cycle 7.
  - To be adjudicated at the next JA TC Chapter meeting of Traceability TC in conjunction with SEMICON Japan 2015.

Tetsuya Nakai (SUMCO) also mentioned that the SNARF for new Standard for 450mm Development Wafer with fiducial Mark was withdrawn at Silicon Wafer North America TC Chapter held on July 13, 2015.

**Attachment:** 07_20150731FMI-TF-Report_r1

5.7 International 450mm Shipping Box Task Force and JA Shipping Box Task Force (under Silicon Wafer Global Technical Committee)

Shoji Komatsu (Acteon) reported for those two task forces as attached.

**Attachment:** 08_450 ISB TF Minutes- 2015_07_14 (SEMICON WEST)

5.8 International 450mm related activities under Silicon Wafer Global Technical Committee

Tetsuya Nakai (SUMCO) reported for the 450mm related activities under Silicon Wafer Global Technical Committee as attached. Of note:

Tsuyoshi Nagashima (Mirial) mentioned the report was included at the section 5.7 above.

6 Old Business

None

7 New Business

7.1 Check on documents for 5 Year Review

7.1.1 SEMI E23-1104 (Reapproved 0710) “Specification for Cassette Transfer Parallel I/O Interface”

The TC Chapter went through the proposed SNARF for Reapproval of SEMI E23-1104 (Reapproved 0710) at this meeting and then the following motion was made.

**Motion:** Approve the SNARF for Reapproval of SEMI E23-1104 (Reapproved 0710) “Specification for Cassette Transfer Parallel I/O Interface”

**By / 2nd:** Shoji Komatsu (Acteon) / Kenji Yamagata (DAIFUKU)

**Discussion:** None

**Vote:** 13 in favor and 0 opposed. **Motion passed.**

**Action Item 1:** SEMI Staff to ask the co-chairs of I&C Japan TC Chapter that they should include the information in the I&C Japan TC Chapter liaison report to the other regions that the PIC Japan TC Chapter proposed the reapproval of SEMI E23-1104 (Reapproved 0710).

The following motion was also made.

**Motion:** Approve the Submission of Ballot for Reapproval of SEMI E23-1104 (Reapproved 0710) "Specification for Cassette Transfer Parallel I/O Interface" for Cycle 7 or Cycle 8

**By / 2nd:** Shoji Komatsu (Acteon) / Mitsuhiro Matsuda (Hitachi Kokusai Electric)

**Discussion:** None
7.1.2 SEMI E101-1104 (Reapproved 0710) “Guide for EFEM Functional Structure Model”
The PIC Japan TC Chapter agreed that the Global PIC Standards Maintenance Task Force would not take any action to SEMI E101.

7.2 Check on SNARFs for 3 Year Status
The PIC Japan TC Chapter confirmed that there was no SNARF to be considered for extension in 2015.

7.3 Leadership of International Reticle SMIF Pod & Load Port Interoperability TF
Kenji Yamagata (DAIFUKU) addressed to the TC Chapter that the task force leader of Europe region, Jan Rothe (GlobalFoundries), asked for a new leader from Japan region. Koji Ohyama stepped down for the leader of Japan region and the North America leader also stepped down. No TC Member was nominated as the task force leader from Dainichi Shoji, which Koji Ohyama used to belong to.

Action Item 2: Kenji Yamagata to report to Jan Rothe that there is no volunteer as the TF leader of Japan region.

7.4 Future action to SEMI E84-1109 “Specification for Enhanced Carrier Handoff Parallel I/O Interface”
The Japan TC Chapter made a decision that Ballot 5890: Line Item Revision to SEMI E84-1109 “Specification for Enhanced Carrier Handoff Parallel I/O Interface” failed and returned to the task force for rework at the Ballot Review section of this TC Chapter meeting. However, the TC Chapter recognized there were some issues to be discussed further for SEMI E84-1109. So, the following motion was made.

<table>
<thead>
<tr>
<th>Motion:</th>
<th>Approve the setting up the study group of SEMI E84</th>
</tr>
</thead>
<tbody>
<tr>
<td>By / 2nd:</td>
<td>Mitsuhiro Matsuda (Hitachi Kokusai Electric) / Supika Mashiro (Tokyo Electron)</td>
</tr>
<tr>
<td>Discussion:</td>
<td>Mitsuhiro Matsuda is appointed as the temporary leader of the Study Group. The Scope of the Study Group is to understand current issues. The Study Group will be held with I&amp;C Japan TC Chapter.</td>
</tr>
<tr>
<td>Vote:</td>
<td>12 in favor and 0 opposed. <strong>Motion passed.</strong></td>
</tr>
</tbody>
</table>

8 Action Item Review

8.1 Open Action Items
Chie Yanagisawa (SEMI Japan) reviewed the open action item. This can be found in the Previous Meeting Action Items table at the beginning of these minutes.

8.2 New Action Items
Chie Yanagisawa (SEMI Japan) reviewed the new action item. This can be found in the New Action Items table at the beginning of these minutes.

9 Next Meeting and Adjournment
The next meeting of the Japan TC Chapter of PI&C Global Technical Committee is scheduled for Wednesday, September 30, 1:30 p.m. – 5:00 p.m. at Japan Standards Fall 2015 Meetings at SEMI Japan office in Tokyo.
Respectfully submitted by:
Chie Yanagisawa
Senior Standard Coordinator
SEMI Japan
Phone: +81.3.3222.5863
Email: cyanagisawa@semi.org

Minutes approved by:
Tsuyoshi Nagashima (Miraial), Co-chair
Tsutomu Okabe (TDK), Co-chair
Kenji Yamagata (DAIFUKU), Co-chair

Table 8 Index of Available Attachments #1

<table>
<thead>
<tr>
<th>#</th>
<th>Title</th>
<th>#</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>NA PIC Report West 2015 DLB</td>
<td>05</td>
<td>450mm IPIC TF meeting Minutes rev1-20150714</td>
</tr>
<tr>
<td>02</td>
<td>SEMI Staff Report 2015 July R0.1</td>
<td>06</td>
<td>Maintenance TF meeting Minutes rev0-20150730</td>
</tr>
<tr>
<td>03</td>
<td>5524A_BallotReport</td>
<td>07</td>
<td>20150731FMI-TF-Report_r1</td>
</tr>
<tr>
<td>04</td>
<td>5869_BallotReport</td>
<td>08</td>
<td>450 ISB TF Minutes- 2015_07_14 (SEMICON WEST)</td>
</tr>
</tbody>
</table>

#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 [SEMI Staff Name] at the contact information above.