Information & Control Committee  
NA Chapter  
Meeting Summary and Minutes  
NA Fall 2015 Meetings  
November 4, 2015  
SEMI HQ, San Jose, CA

Next Chapter Meeting  
April 6, 2016 09:00 – 16:30 Pacific  
NA Spring 2016 Meetings, SEMI HQ, San Jose, CA

Table 1 Meeting Attendees
*Italics* indicate virtual participants  
**Co-Chairs:** Jack Ghiselli (Ghiselli Consulting), Brian Rubow (CiMetrix), Lance Rist (Risttex)

**SEMI Staff:** James Amano

<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>CiMetrix</td>
<td>Rubow</td>
<td>Brian</td>
<td>University of Michigan</td>
<td>Moyne</td>
<td>James</td>
</tr>
<tr>
<td>Screen</td>
<td>Nishimura</td>
<td>Takayuki</td>
<td>Veeco Precision Surface Processing</td>
<td>Lawrence</td>
<td>Elena</td>
</tr>
<tr>
<td>Ghiselli Consulting</td>
<td>Ghiselli</td>
<td>Jack</td>
<td>Windtree Technologies</td>
<td>Kim</td>
<td>Won Tae</td>
</tr>
<tr>
<td>PEER Group</td>
<td>McKenzie</td>
<td>Alison</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risttex</td>
<td>Rist</td>
<td>Lance</td>
<td>SEMI</td>
<td>Amano</td>
<td>James</td>
</tr>
<tr>
<td>Tokyo Electron</td>
<td>Asakawa</td>
<td>Terry</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2 Leadership Changes
None

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.

<table>
<thead>
<tr>
<th>Document #</th>
<th>Document Title</th>
<th>Committee Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>5274F</td>
<td>Revision to Add a New Subordinate Standard: Specification for Sensor/Actuator Network Specific Device Model of a Generic Equipment Add-On Sensor (ADDON) to SEMI E54-0413, Sensor/Actuator Network Standard</td>
<td>Failed</td>
</tr>
<tr>
<td>5821A</td>
<td>New Standard: Specification for Subsystem Energy Savings Mode Communication (SESMC)</td>
<td>Failed</td>
</tr>
<tr>
<td>5844A</td>
<td>Line Item Revision to SEMI E54, Sensor/Actuator Network Standard with title change to: Specification for Sensor/Actuator Network</td>
<td></td>
</tr>
<tr>
<td>LI 1</td>
<td>Correct Nonconforming Title of SEMI E54</td>
<td>Passed</td>
</tr>
<tr>
<td>LI 2</td>
<td>Correct Nonconforming Title of SEMI E54.1</td>
<td>Passed</td>
</tr>
<tr>
<td>LI 3</td>
<td>Correct Nonconforming Title of SEMI E54.2</td>
<td>Passed</td>
</tr>
<tr>
<td>LI 4</td>
<td>Correct Nonconforming Title of SEMI E54.4</td>
<td>Passed</td>
</tr>
</tbody>
</table>
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.

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<tr>
<th>Document #</th>
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<th>Committee Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>LI 5</td>
<td>Correct Nonconforming Title of SEMI E54.11</td>
<td>Passed</td>
</tr>
<tr>
<td>LI 6</td>
<td>Correct Nonconforming Title of SEMI E54.20</td>
<td>Passed</td>
</tr>
</tbody>
</table>

Table 4 Authorized Ballots

<table>
<thead>
<tr>
<th>#</th>
<th>When</th>
<th>SC/TF/WG</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>5872</td>
<td>Cycle 2-2016</td>
<td>GEM300 TF</td>
<td>Line Item Revisions to SEMI E172, Specification for SECS Equipment Data Dictionary (SEDD)</td>
</tr>
<tr>
<td>5912</td>
<td>Cycle 2-2016</td>
<td>GEM300 TF</td>
<td>Line Item Revisions to: -SEMI E142.1-0211, XML Schema for Substrate Mapping -SEMI E142.2-0211, SECS II Protocol for Substrate Mapping -SEMI E142.3-0211, Web Services for Substrate Mapping To correct nonconforming titles</td>
</tr>
<tr>
<td>5913</td>
<td>Cycle 2-2016</td>
<td>GEM300 TF</td>
<td>Reapproval for SEMI E157-0611, Specification for Module Process Tracking</td>
</tr>
<tr>
<td>5914</td>
<td>Cycle 2-2016</td>
<td>Sensor Bus TF</td>
<td>Reapproval for SEMI E54.3-0698 (Reapproved 1110), Specification for Sensor/Actuator Network Specific Device Model for Mass Flow Device</td>
</tr>
</tbody>
</table>

Table 5 Authorized Activities

<table>
<thead>
<tr>
<th>#</th>
<th>Type</th>
<th>SC/TF/WG</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>5966</td>
<td>SNARF</td>
<td>GEM300 TF</td>
<td>Line Item Revision to E90 (SPECIFICATION FOR SUBSTRATE TRACKING), E90.1 (SPECIFICATION FOR SECS-II PROTOCOL SUBSTRATE TRACKING)</td>
</tr>
</tbody>
</table>

NOTE 1: SNARFs and TFOFs are available for review on the SEMI Web site at:
http://downloads.semi.org/web/wstdsbal.nsf/TFOFSNARF

Table 6 New Action Items

<table>
<thead>
<tr>
<th>Item #</th>
<th>Assigned to</th>
<th>Details</th>
</tr>
</thead>
</table>
Table 7 Previous Meeting Action Items

<table>
<thead>
<tr>
<th>Item #</th>
<th>Assigned to</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012Oct #02</td>
<td>Paul Trio</td>
<td>Draft SNARF and ballot proposal for E30 revision (reorganization of introductory sections) and send to GEM300 TF leaders for review.</td>
</tr>
</tbody>
</table>

1 Welcome, Reminders, and Introductions

Jack Ghiselli called the meeting to order at 08:05. 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

The committee reviewed the minutes of the previous meeting, held during SEMICON West 2015.

Motion: To approve as written
By / 2nd: Brian Rubow/Wontae Kim
Discussion: None
Vote: 5-0

3 Liaison Reports

3.1 Japan I&C TC Chapter

Takayuki Nishimura reported. Of note:

- Equipment Information System Security (EISS) TF
  - Access control with RBAC (Role Based Access Control) is now discussing.
    - The discussion items:
      - Access Control General Discussion
      - RBAC - Issues
      - SEMI Standards – Issues
  - GEM 300 TF
    - #5829: Line Item Revision to E171 and E171.1
      - Draft Document #5829 was reviewed at the Japan Fall TC Chapter Meeting
      - Line item #1,#2, #5, #6 and #7 were passed
      - Line Item #3 and #4 was failed and sent to TF for rework
    - Draft Document #5829A is submitted to 2015 Cycle 8
      - Re-Ballot modified line item #3 and #4
      - Some small changes are added as new line items.
      - To be Reviews at the next Japan TC Chapter meeting conjunction with SEMICON Japan. #5888: Revision to E170 and E171
      - Submitted to 2015 Cycle 8
      - To be adjudicated at the next Japan TC Chapter meeting in conjunction with SEMICON Japan.
    - #5601: New Standards for “Wafer Job Management”
      - Change concept “Wafer Object” to “Wafer Job”
      - Revision SNARF is approved by GCS.
      - Plan to submit #5601A at 2016 Cycle 1 or Cycle 2.

Attachment: 151030_JA-ICC_Liaison_v2.ppt
3.2 Korea I&C TC Chapter

Wontae Kim reported. Of note:

- Gunwoo Lee is now at LAM Research.
- Authorized Ballots (Cycle 9-2015 or Cycle 1-2016)
  - 5832 (New Standard, Specification for Generic Counter Model)
  - 5833 (New Standard, Specification for Maintenance Program Model)
- DDA TF
  - The Korean translations of E120 and E125 were published on Oct 5, 2015.
- GEM300 TF
  - 3 Activities currently holding due to SML Notation copyright issue
    - 4946 (E87 revision, Add carrier ready to unload prediction feature)
    - 5738 (E87.1 Revision)
    - 5320 (E116 and E116.1 revision)

**Attachment:** KR_I&C_liaison_20151023.ppt

3.3 Taiwan I&C TC Chapter

James Amano reported. Of note:

- This committee has been inactive for more than 3 years
  - Started evaluating current industry need in Taiwan since late 2014 and prepared to propose a new 3-TF committee structure going forward
  - Continued to recruit new TC and TF members
  - Held a preparatory TC chapter meeting on June 18 to review and discuss the scope of 3 TFs
  - Promoted I&C Committee to broader industry audience in Smart Manufacturing Seminar of SEMICON Taiwan on Sep 2
- Held TC chapter meeting on Sep 3 in conjunction with eMDC Symposium during SEMICON Taiwan and approved the establishment of 3 renewed TFs:
  - GEM300
  - Equipment Information Integration
  - Backend Factory Integration

**Attachment:** Taiwan I&C Standard Committee Liaison Report Oct 2015 (NARSC).ppt

3.4 Europe I&C TC Chapter

James Amano reported. Of note:

- Process Control Systems TF
  - Leader: Martin Schellenberger (FhG IISB)
  - No New Activity.
  - No New Ballots.
  - May sunset by the next meeting if there is further interest.
- Predictive Model Markup Language (PMML) is currently used by other industries, but not in semiconductor
  - PMML could be a topic for PCS TF, however, volunteers are needed.

**Attachment:** 151023_Europe_I&C_LiaisonReport.ppt

3.5 SEMI Staff Report

James Amano (SEMI) gave the Staff Report. Of note:

- Upcoming NA Meetings
• NA Spring, April 4-7, 2016, at SEMI HQ in San Jose, California
• SEMICON West, July 11-14, 2016, San Francisco, California

• 9 ballot cycles for 2016
  o http://www.semi.org/Standards/Ballots

• SEMI Standards Publications
  o Total SEMI Standards in portfolio: 949

• New Requirements/Process Reminders for TC Chapter Meetings from December 2014 Regulations
  o Standards Document Development Project Period
    • Project period shall not exceed 3 years (Regs 8.3.2)
    • If document development activity is found to be continuing, but cannot completed within the project period, TC Chapter may grant one-year extension at a time, as many times as necessary.
  
  o SNARF Review Period
    • A submitted SNARF for a new, or for a major revision to an existing, Standard or Safety Guideline is made available to all members of a TC Chapter’s parent global technical committee for two weeks for their review and comment. (Regs 8.2.1)
    • If the SNARF is submitted at a TC Chapter meeting, the committee can review and approve, but the SNARF will need to be distributed for two weeks and then approved via GCS.
  
  o Procedures for Correcting Nonconforming Titles of Published Standards Document (PM Appendix 4)
    • Some Standards qualify for a special procedure where a line item change can be used to correct the titles. Otherwise, the corrective action will likely require a major revision.

Attachment: SEMI Staff Report (10 22 2015) IC.ppt

4 Ballot Review

• 5844A, Line Item Revisions to SEMI E54, Sensor/Actuator Network Standard with title change to: Specification for Sensor/Actuator Network. Passed


Motion: To find Mitsuhiro Matusda’s negative # 5 related and persuasive. (“Table 8 defines services for the Context. However, details of the services are not defined. We cannot implement the services in standard way.”)

By / 2nd: James Moyne/Wontae Kim

Discussion: None

Vote: 4-0


Motion: To find Mitsune Sakamoto’s negative # 3 related and persuasive. (“I think this “StatusChange” shall be notified at all transition. However text “indicates the subsystem has transitioned to a new state” means no notification of transition 4 and transition 5. Is it this document intension or not?”)

By / 2nd: James Moyne/Wontae Kim
Discussion: None
Vote: 4-0

Motion: To issue ballots for 5274G and 5821B in Cycle 2-2016
By / 2nd: James Moyne/Wontae Kim
Discussion: None
Vote: 4-0

5 Subcommittee & Task Force Reports

5.1 DDA TF
Brian Rubow reported. The TF is planning SNARFS for Spring meetings with preparation for EDA Freeze 3 activities
Attachment: SEMI NA-ICC-DDA-TF Fall 2015 Report.ppt

5.2 ESEC TF
Mitsuiro Matsuda reported.
- Meeting Attendance: 3 in person, 3 remote
- No Leadership Changes
- Old Task Force Business
  - Ballot 5821A received 5 negatives
  - Task force decided to fail the ballot to address all voter negatives and comments
- New Task Force Business
  - Task force will rework ballot 5821A and resubmit for SEMI 2016 Cycle 1 or 2
Attachment: ESEC TF - Report to I&CC Fall 2015.PPT

5.3 PCS TF
Brian Rubow reported
- Old Task Force Business
  - Ballots Reviewed: None
  - Documents in Development: 5650 and 5716; Line Items changes to E133 and E133.1 to support XML alignment with XML style guide and other improvements related to XML implementation
- New Task Force Business
  - Ballot Plans: 5650 and 5716 planned to be balloted in Cycle 2, 2016
Attachment: ICC Reprt from PCS TF-November 2015.ppt

5.4 GEM300 TF
- Ballot Adjudication
  - None
- New/Updated SNARF(s)
  - E90/E90.1 for substrate bonders/debonders
- Ballot Plans
5.5 Sensor Bus Task Force

James Moyne reported

- Old Task Force Business
  - Ballots Reviewed:
    - 5844E, 6 line items (all superclean)
    - 5274F (fail and re-submit)
  - Documents in Development: See above
  - New Task Force Business
  - New SNARFs: None
  - Ballot Plans: Resubmission of 5274G, Cycle 1 or 2 of 2016

Other Notes:

6 Old Business

6.1 Review of SNARFs approaching three years

- 5549, Revision to SEMI E30, Generic Model for Communications and Control of Manufacturing Equipment (GEM) with title change to: Specification for the Generic Model for Communications and Control of Manufacturing Equipment (GEM)
- 5618, New Standard: Specification for Preservation of Recipe Integrity

Motion: To grant a one-year extension to SNARFs 5549, 5589, and 5618
By / 2nd: Brian Rubow/Mitsuhiro Matsuda
Discussion: None
Vote: 6-0
7 New Business

7.1 New SNARFs

- Brian Rubow presented a SNARF for Line Item Revision to E90 (SPECIFICATION FOR SUBSTRATE TRACKING) and E90.1 (SPECIFICATION FOR SECS-II PROTOCOL SUBSTRATE TRACKING)

Motion: To approve the SNARF
By / 2nd: Brian Rubow/Mitsuhiro Matsuda
Discussion: None
Vote: 6-0


Motion: To approve the SNARF
By / 2nd: Brian Rubow/Mitsuhiro Matsuda
Discussion: None
Vote: 6-0

7.2 Ballot Issuance Approval

Motion: To issue ballot 5912, Line Item Revisions to:
- SEMI E142.1-0211, XML Schema for Substrate Mapping
- SEMI E142.2-0211, SECS II Protocol for Substrate Mapping
- SEMI E142.3-0211, Web Services for Substrate Mapping
  To correct nonconforming titles, in Cycle 2-2016
By / 2nd: Brian Rubow/Wontae Kim
Discussion: None
Vote: 6-0

By / 2nd: Brian Rubow/Wontae Kim
Discussion: None
Vote: 6-0

Motion: To issue ballot 5914, Reapproval for SEMI E54.3-0698 (Reapproved 1110), Specification for Sensor/Actuator Network Specific Device Model for Mass Flow Device, in Cycle 2-2016
By / 2nd: Brian Rubow/Wontae Kim
Discussion: None
Vote: 6-0

Motion: To issue ballots 5274G, 5821B, and 5872 in Cycle 2-2016
By / 2nd: Brian Rubow/Mitsuhiro Matsuda
Discussion: None
Vote: 6-0
8 Action Item Review

8.1 Open Action Items

James Amano (SEMI) 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

James Amano (SEMI) 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

The next meeting of the NA I&C TC Chapter is scheduled for April 6 during the Spring 2016 NA Standards meetings at SEMI HQ in San Jose, CA.

#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.