Meeting Summary and Minutes
Thursday, February 9, 2017, 10:00 – 12:00
#305, Conference Room (South), Coex, Seoul

TC Chapter Announcements
None.

Next TC Chapter Meeting
June 16, 2017 15:00 – 17:30
SEMI Korea Office, Seoul, Korea

Table 1 Meeting Attendees
*italics* indicate virtual participants

<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>ASE</td>
<td>Lee</td>
<td>Doowon</td>
<td>SEMES</td>
<td>Kim</td>
<td>Hyeong-Seok</td>
</tr>
<tr>
<td>Doople</td>
<td>Kim</td>
<td>Hyungsu</td>
<td>SEMES</td>
<td>Kim</td>
<td>Derrick</td>
</tr>
<tr>
<td>Kornic Automation</td>
<td>Kim</td>
<td>Kyung Tae</td>
<td>SK hynix</td>
<td>Ahn</td>
<td>Chulhong</td>
</tr>
<tr>
<td>Lam Research</td>
<td>Lee</td>
<td>Kevin</td>
<td>SK hynix</td>
<td>Choi</td>
<td>Yoo Ho</td>
</tr>
<tr>
<td>Linkgenesis</td>
<td>Cha</td>
<td>Kyounghwan</td>
<td>TEL</td>
<td>Im</td>
<td>Byoungmin</td>
</tr>
<tr>
<td>Linkgenesis</td>
<td>Kim</td>
<td>Byeonghee</td>
<td>Consultant</td>
<td>Park</td>
<td>Seung Chang</td>
</tr>
<tr>
<td>Linkgenesis</td>
<td>Paek</td>
<td>Inhyeok</td>
<td>SEMI HQ</td>
<td>Amano</td>
<td>James</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>5832</td>
<td>New Standard, Specification for Generic Counter Model (GCM)</td>
<td><em>Failed</em> and rework</td>
</tr>
</tbody>
</table>

Table 4 Authorized Activities
None.
Table 5 Authorized Ballots

<table>
<thead>
<tr>
<th>#</th>
<th>When</th>
<th>SC/TF/WG</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>5832A</td>
<td>Cycle 4-2017</td>
<td>GEM300 TF</td>
<td>New Standard, Specification for Generic Counter Model</td>
</tr>
</tbody>
</table>

Table 6 New Action Items

<table>
<thead>
<tr>
<th>Item #</th>
<th>Assigned to</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>20170209-1</td>
<td>Natalie Shim</td>
<td>Share author’s comments on Doc. 5832 with reject voters</td>
</tr>
<tr>
<td>20170209-2</td>
<td>Natalie Shim</td>
<td>Update current status of 6008 and 6009 activities to the committee</td>
</tr>
<tr>
<td>20170209-3</td>
<td>DDA TF</td>
<td>Collaborate Freeze 3 standardization with NA DDA TF by sharing issue list</td>
</tr>
<tr>
<td>20170209-4</td>
<td>ABFI TF</td>
<td>Complete the SNARF and first draft by June</td>
</tr>
<tr>
<td>20170209-5</td>
<td>All</td>
<td>Review and send feedback on Smart Manufacturing PPT to James Amano by February 28</td>
</tr>
</tbody>
</table>

Table 7 Previous Meeting Action Items

<table>
<thead>
<tr>
<th>Item #</th>
<th>Assigned to</th>
<th>Details</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>20161007-1</td>
<td>Natalie Shim</td>
<td>Share CUARAM SNARF with Korea I&amp;C members</td>
<td>Done</td>
</tr>
<tr>
<td>20161007-2</td>
<td>Hyungsu Kim</td>
<td>Share the EDA Freeze 3 development status with members</td>
<td>Done</td>
</tr>
<tr>
<td>20161007-3</td>
<td>Ilgun Jung</td>
<td>Make a pre-review request on 5832 ballot draft before cycle 9</td>
<td>Done</td>
</tr>
<tr>
<td>20161007-4</td>
<td>ABFI TF</td>
<td>Share the TF’s future plan in the next meeting scheduled on Feb 9, 2017</td>
<td>Done</td>
</tr>
</tbody>
</table>

1 Welcome, Reminders, and Introductions

Chulhong Ahn (SK hynix) called the meeting to order at 10:00. The meeting reminders on antitrust issues, intellectual property issues and holding meetings with international attendance were reviewed. Attendees introduced themselves.

Attachment: 01, Meeting Reminders

2 Review of Previous Meeting Minutes

The TC Chapter reviewed the minutes of the previous meeting.

Motion: Approve the previous meeting minutes as it is
By / 2nd: Hyungsu Kim (Doople)/ Byoungmin Im (TEL)
Discussion: None
Vote: 8-0, Motion Carried
Attachment: 02, Previous Meeting Minutes

3 Liaison Reports

3.1 Information & Control Japan TC Chapter

Natalie Shim (SEMI Korea) reported for the I&C Japan TC Chapter. Of note:
Document Review Summary

- Passed (Cycle 6 and 7, 2016)
  - R5601A (New Standard, Specification for Wafer Job Management (WJM))
  - 6034 (Reapproval of SEMI E54.21-1110, Specification for Sensor Actuator Network for MOTIONNET® Communication)
  - 6036 (Reapproval of SEMI E153-0310, Specification for AMHS SEM (AMHS SEM))
  - 5973 (Line Item Revision to SEMI E170-0416, Specification for Secured Foundation of Recipe Management System (SFORMS) and SEMI E170.1-0416, Specification for SECS-II Protocol for Secured Foundation of Recipe Management System)
    - Line Item 1: Revise the format of ‘Service Message Description Table’
    - Line Item 2: Correct editorial errors in ‘Table 46 Compliance Statement’

- Upcoming ballots for cycle 7, 2016
  - 6090 (Line Item Revision to SEMI E91-0600, Specification for Prober Specific Equipment Model)
    - The scope of the SNARF 6035 had to change. Therefore, per PM 2.2.6 the SNARF 6035 had been withdrawn and a new SNARF 6090 is approved.
  - 6091 (Line Item Revision to SEMI nnn-mmyy/SEMI Doc. R5601A, Specification for Wafer Job Management)
  - 6092 (New Standard, Specification for Centralized user Authentication and Role Authorization Management)
  - 6089 (Line Item Revision to ‘SEMI 170.1-0416, Specification for SECS-II Protocol for Secured Foundation of Recipe Management System (SFORMS)’ and ‘SEMI 170-0416, Specification for Secured Foundation of Recipe Management System (SFORMS)’ and ‘SEMI E5-0813, SEMI Equipment Communications Standard 2 Message Content (SECS-II)’)

- Announcement
  - TC Chapter authorized adding up Compliance table as R1-8 in E170. It was subsequently approved by the I&C GCS on January 14, 2017. The proposal is forwarded to A&R for subsequent approval.

- Equipment System Security (EISS) TF
  - The TF disbanded on December 16, 2016

- Fiducial Mark Interoperability TF
  - Task force leaders to start discussion about disbanding this TF if the TF does not have further activity.

- GEM 300 TF
  - 5973 (Line Item Revision to SEMI E170 - 0416 and E170.1 - 0416)
    - Line item 1 and 2 were passed committee adjudication but line item 3 failed. The failed line item will be discontinued.
    - The SNARF anticipated some revisions to SEMI E170.1-0416 in conjunction with the revision to SMEI E170-0416, however, no revision to SEMI E170.1-0416 is needed for these line items revisions.
  - 6089 (Line Item Revision to E170.1 and E5)
• According to comment from potential Standards user at GEM300A STEP, TF consider to simplify E170 subordinate standard by using dedicated SECS II message, instead of OSS generic service.
  • Assumed stream number for E170.1 is S20.
    o 5618 (New Standard, Specification for Preservation of Recipe Integrity (PRI))
      • TF decided to give up participating the related activity, which is owned by NA TC Chapter.
    o 6092 (New Standard, Centralized User Authentication and Role Authorization Management)
      • The scope was discussed with EISS TF. The explanation material for the concept of CUARAM is distributed to I&C TC Members in Taiwan and Korea for further feedback.
• Japan I&C Committee Maintenance TF
  o 6033 (Line Item Revision to SEMI E99 and E99.1 (Carrier ID Reader/Writer)): SNARF and ballot were submitted for Cycle 7.
  o SNARF 6035 (Line Item Revision to SEMI E91 (PSEM)) was withdrawn due to scope change. New SNARF 6091 was approved with new scope.
• Next meeting: Friday, April 21, 217 at SEMI Japan office, Tokyo
Attachment: 03, Japan Liaison report

3.2 Information & Control North America TC Chapter
Natalie Shim reported for the I&C NA TC Chapter. Of note:
• Document Review Summary (Cycle 6 and 7, 2016)
  o Passed
    • 6038 (Reapproval of SEMI E160-1211, Specification for Communication of Data Quality)
    • 6065 (Reapproval of SEMI E151-1211, Guide for Understanding Data Quality)
  o Failed
    • 5872A (Line Item Revisions to E171, Specification for SECS Equipment Data Dictionary (SEDD))
    • 6026 (Reapproval of SEMI E109-1110, Specification for Reticle and Pod Management (RPMS))
    • 6064 (Reapproval for SEMI E121-0305, Guide for Style and Usage of XML for Semiconductor Manufacturing Applications)
    • 6066 (Reapproval for SEMI E130-1104-0710R, Specification for Prober Specific Equipment Model for 300mm Environment (PSEM300) and SEMI E130.1-1104-0710R, Specification for SECS-II Protocol for Prober Specific Equipment Model for 300mm Environment (PSEM300))
    • 6067 (Reapproval for SEMI E54.16-1106, Specification for Sensor/Actuator Network Communications for Lonworks)
• Upcoming ballots for cycle 2, 2017
6066A (Reapproval for SEMI E130-1104-0710R, Specification for Prober Specific Equipment Model for 300mm Environment (PSEM300) and SEMI E130.1-1104-0710R, Specification for SECS-II Protocol for Prober Specific Equipment Model for 300mm Environment (PSEM300))

6067A (Reapproval for SEMI E54.16-1106, Specification for Sensor/Actuator Network Communications for Lonworks)


6026A (Reapproval of SEMI E109-1110, Specification for Reticle and Pod Management (RPMS))

5872B (Line Item Revisions to SEMI E172, Specification for SECS Equipment Data Dictionary (SEDD)

5549A (Revision to SEMI E30, Generic Model for Communications and Control of Manufacturing Equipment, GEM) is extended for a year.

6064A (Reapproval for SEMI E121-0305, Guide for Style and Usage of XML for Semiconductor Manufacturing Applications)

5738 (Revision to SEMI E87.1-0707, Specification for SECS-II Protocol for Carrier Management (CMS))

6116 (Reapproval for SEMI E54.17-0812, Specification of Sensor/Actuator Network for A-LINK)

- New Activities

- SNARF 3 Year Status

- Next Meetings are scheduled on April 5, 2017 at SEMI HQ, CA

Attachment: 04, North America Liaison report

3.3 Information & Control Taiwan TC Chapter

Natalie Shim reported for the Information & Control Taiwan TC Chapter. Of note:

- Backend Factory Integration TF
  - Studied the feedback of proposed SNARF “Specification of Backend Die Traceability”. Further modification will be made.

- Next Meetings are scheduled on January 6, 2017 at SEMI Taiwan Office, Taipei

Attachment: 05, Taiwan Liaison report

3.4 SEMI Staff Report

Natalie Shim gave the SEMI Staff Report. The key items were as follows:

- SEMI Standards Program Membership update (as of Q4, 2016)
- SEMI Standards Publication update
- 2017 Critical Date
- SEMICON Korea 2017 event update

Attachment: 06, SEMI Staff report
4 Ballot Review
4.1 Doc.5832 (New Standard, Specification for Generic Counter Model (GCM)) was adjudicated and failed committee review as in below.

Motion: Fail 5832 as the committee found that below negative is related and persuasive.
  • Voter: Matsuda Mitsuhiro (Hitachi Kokusai Electronics)
  • Negative 5: In Figure 7 State “BELOWLIMIT” and “OVERLIMIT”, initial transition does not exist when state isi entering in “COUNTING”

By / 2nd: Inhyeok Paek (Linkgenesis)/ Hyungsu Kim (Doople)
Discussion: None
Vote: 10-0, motion carried

Action Item 1: Share review result with reject voters/ Natalie Shim
Attachment: 07, 5832 reject comments review

5 Subcommittee and Task Force Reports
5.1 GEM300 Task Force
- 5832 (New Standard, Specification for Generic Counter Model (GCM))

Motion: Approve 5832A in cycle 4, 2017
By / 2nd: Inhyeok Paek (Linkgenesis)/ Hyungsu Kim (Doople)
Discussion: None
Vote: 10-0, motion carried

5.2 DDA Task Force
- Hyungsu Kim reported evaluated issue list for Freeze 3. He will collect more input within members and will discuss them with NA DDA TF in details.

Action Item 2: Summarize members input to Freeze 3 and send it to NA DDA TF by April 3/ DDA TF
Attachment: 08, Issue list_DDA TF

5.3 ABFI Task Force
- Kevin Lee (Lam Research) reported that the TF reviewed the urgent standardization items and decided to revise E142. The SNARF and the first draft will be submitted on next committee meeting.

Action Item 3: SNARF and draft submission by next committee meeting/ ABFI TF
Attachment: 09, ABFI TF meeting summary

6 New Business
6.1 SEMI Smart Manufacturing Activity Update
- James Amano introduced SEMI activities on Smart Manufacturing.

Action Item 4: James Amano requested committee for further feedback on Smart Manufacturing presentation material by February 28, 2017/ All members
Attachment: 10, Smart Manufacturing Update
7 Next Meeting and Adjournment

The next meeting is scheduled for June 16, 2017 at SEMI Korea Office. See [http://www.semi.org/en/events](http://www.semi.org/en/events) for the current list of meeting schedules.

Having no further business, a motion was made to adjourn. Adjournment was at 12:00.

Respectfully submitted by:

Natalie Shim
Sr. Specialist, Standards
SEMI Korea
Phone: 82.2.531.7808
Email: eshim@semi.org

Minutes approved by:

Chulhong Ahn (SK Hynix), Co-chair <Date approved>
Hyungsu Kim (Doople), Co-chair <Date approved>
Kevin Lee (Lam Research), Co-chair <Date approved>

Table 8 Index of Available Attachments*1

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<td>06, SEMI Staff report</td>
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<td>02, Previous Meeting Minutes</td>
<td>07, 5832 reject comments review</td>
</tr>
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<td>03, Japan Liaison report</td>
<td>08, Issue list_DDA TF</td>
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<tr>
<td>04, North America Liaison report</td>
<td>09, ABFI TF meeting summary</td>
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<tr>
<td>05, Taiwan Liaison report</td>
<td>10, Smart Manufacturing Update</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.