



Information & Control Korea TC Chapter

Meeting Summary and Minutes

Friday, October 20, 2017, 13:00 – 17:30
#4205, Trade Tower, SEMI Korea Office, Seoul

TC Chapter Announcements

None.

Next TC Chapter Meeting

February 1, 2018 10:00 – 12:00

#305, Coex, Seoul, Korea

Table 1 Meeting Attendees

Italics indicate virtual participants

Co-Chairs: Chulhong Ahn (SK hynix), Kevin Lee (Lam Research), Hyungsu Kim (Doople)

SEMI Staff: Natalie Shim

| <i>Company</i> | <i>Last</i> | <i>First</i> | <i>Company</i> | <i>Last</i> | <i>First</i> |
|--------------------|-------------|--------------|----------------------|-------------|--------------|
| ASM | Jung | Il Gun | Linkgenesis | Cha | Kyounghwan |
| ASM | Kim | Risson | Linkgenesis | Kim | Byeonghee |
| Doople | Kim | Hyungsu | Miracom Inc. | Lim | Youngshin |
| Kornic Automation | Kim | Kyung Tae | Tokyo Electron Korea | Im | Byoungmin |
| Lam Research Korea | Lee | Kevin | SEMI HQ | Amano | James |

Table 2 Leadership Changes

| <i>Document #</i> | <i>Document Title</i> | <i>Committee Action</i> | <i>A&R Forms for Approved Ballots</i> |
|-------------------|--|---------------------------|---|
| 4946C | Line Item Revisions to SEMI E87-0312, Specification for Carrier Management (Cms) and E87.1-Xxxx Specification for SECS-II Protocol for Carrier Management (CMS); Adding Carrier Ready to Unload Prediction Feature | Failed and re-work | |

Note 1: **Passed** ballots and line items will be submitted to the ISC Audit & Review Subcommittee for procedural review.

Note 2: **Failed** ballots and line items were returned to the originating task forces for re-work and re-balloting or abandoning.

Table 3 Ballot Results

None.

Table 4 Authorized Activities

| <i>#</i> | <i>Type</i> | <i>SC/TF/WG</i> | <i>Details</i> |
|----------|-------------|-----------------|--|
| 5832 | SNARF | GEM300 TF | Title change from “Generic Counter Model” to “Equipment Generic Counter Model” |



Table 4 Authorized Activities

| # | Type | SC/TF/WG | Details |
|------|-------|----------|--|
| 6301 | SNARF | ABFI TF | New SNARF (Line Item Revision to E142-0211(Reapproved 1016) Specification for Substrate Mapping: Adding packaging raw materials traceability method) |

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

Table 5 Authorized Ballots

| # | When | SC/TF/WG | Details |
|-------|---------|-----------|--|
| 4946D | Cycle 9 | GEM300 TF | Line Item Revisions to SEMI E87-1017, Specification for Carrier Management (Cms) and E87.1-1017 Specification for SECS-II Protocol for Carrier Management (CMS); Adding Carrier Ready to Unload Prediction Feature |
| 5832A | Cycle 9 | GEM300 TF | New Standard, Specification for Equipment Generic Counter Model |
| 6301 | Cycle 9 | ABFI TF | Line Item Revision to E142-0211(Reapproved 1016) Specification for Substrate Mapping: Adding packaging raw materials traceability method |

Table 6 New Action Items

| Item # | Assigned to | Details |
|------------|--------------|---|
| 20171020-1 | Natalie Shim | Share SNARF 6087 (Line Item Revision to E87) with GEM300 TF. |
| 20171020-2 | James Amano | Prepare a report that contains the differences between GEM300 and GEM300A and share it with TC chapter. |
| 20171020-3 | Natalie Shim | Coordinate with Taiwan BFI TF and Korea ABFI TF to prevent activity duplication |
| 20171020-4 | Natalie Shim | Share the information about E167 and E175 (energy control solution) with manufacturing companies for their reference. |
| 20171020-5 | Natalie Shim | Share the draft of EDA freeze 3 to members |

Table 7 Previous Meeting Action Items

| Item # | Assigned to | Details | Status |
|------------|--------------|---|--------|
| 20170616-1 | Natalie Shim | Reflect the latest 87.1 title with revision date in 4946 SNARF | Done |
| 20170616-2 | Natalie Shim | Send out two weeks review for the SNARF draft(Line Item revision to E142- 0211 (Reapproved 1016) Specification for Substrate Mapping) GCS Approval request for the SNARF | Done |
| 20170616-3 | ABFI TF | SNARF and draft submission by next committee meeting | Done |

1 Welcome, Reminders, and Introductions

Hyungsu Kim (Doople) called the meeting to order at 13:00. 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: Byoungmin Im(TEL)/ Kelvin Lee(Lam Research)
Discussion: None
Vote: 6-0, 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:

- Announcement
 - Diagnostic Data Acquisition TF newly formed. Mitsune Sakakimoto (ZAMA Consulting) and Takashi Nakagawa (Yokogawa Solution Service) appointed as co-leaders.
 - Y.Takasaki (Screen Semiconductor Solutions) stepped down from GEM300 TF leader. Y.Toyoshima (Hitachi High-Technologies) appointed as successor.
 - Fiducial Mark Interoperability TF is discharged.
- Newly Authorized SNARF
 - GEM300 TF
 - SNARF 6287 (Line Item Revision to E87-0312: Specification for Carrier Management (CMS))
 - SNARF 6202 (Revision to SEMI E174-0817: Specification for Wafer Job Management (WJM))
- Upcoming ballots for cycle 8, 2017
 - 6287 (Line Item Revision to E87-0312: Specification for Carrier Management (CMS))
 - 6202 (Revision to SEMI E174-0817: Specification for Wafer Job Management (WJM))
- Next meeting Schedule
 - Friday, December 15, 2017 in conjunction with SEMICON Japan 2017
 - 2018 meeting schedule (tentative): April, June, and September of 2018

Attachment: 03, Japan Liaison report

3.2 *Information & Control North America TC Chapter*

Natalie Shim reported for I&C NA TC Chapter. Of note:

- Announcement
 - None
- Document Review Summary (Cycle 5, 2017)
 - **Passed**
 - 5716 (Revisions to SEMI E133-1104-0710R, Specification for Automated Process Control Systems Interface and SEMI E133.1-1104-0710R, Provisional Specification for XML Messaging for Process Control Systems (PSC))
 - 5872C (Line Item Revisions to SEMI E172, Specification for SECS Equipment Data Dictionary (SEDD))



- 6183 (Reapproval to SEMI E82-0307(Reapproved 0612), Specification for Interbay/Intrabay AMHS SEM, IBSEM)
- 6187 (Reapproval to SEMI E88-0307(Reapproved 0612), Specification for AMHS Sotrage SEM, Stocker SEM)
- **Failed**
 - 6066B (Reapproval of SEMI E130.1-1104 (Reapproved 0710), Specification for SECS-II Protocol for Prober Specific Equipment Model for 300 mm Environment, PSEM300)
 - 6068B (Reapproval of SEMI E116.1-0707, Specification for SECS-II Protocol for Equipment Performance Tracking, EPT)
 - 6114A (Line Item Revision to SEMI E5-0813, SEMI Equipment Communications Standard 2 Message Content, SECS-II)
 - 6185 (Line Item Revision to SEMI E4-0699 (Reapproved 0612), SEMI Equipment Communications Standard 1 Message Transfer (SECS-I) to correct nonconforming title to: Specification for SEMI Equipment Communications Standard 1 Message Transfer (SECS-I)
- Upcoming ballots for Cycle 7, 2017
 - Cycle 7
 - 6005 (Line Item Revision to SEMI E30-0717, Generic Model for Communications and Control of Manufacturing Equipment, GEM)
 - 6114A (Line Item Revision to SEMI E5-0831, SEMI Equipment Communications Standard 2 Message Content, SECS-II)
 - 6185A (Line Item Revision to SEMI E4-0699 (Reapproved 0612), SEMI Equipment Communications Standard 1 Message Transfer (SECS-I) to correct nonconforming title to: Specification for SEMI Equipment Communications Standard 1 Message Transfer (SECS-I) Diagnostic Data Acquisition task force)
 - TBD 1 (Reapproval of SEMI E116.1-0707 Specification for SECS-II Protocol for Equipment Performance Tracking)
 - TBD 2 (Reapproval of SEMI E130.1-1104 (Reapproved 0710), Specification for SECS-II Protocol for Prober Specific Equipment Model for 300 mm Environment (PSEM300)
 - TBD 3 (Line-item Revision to SEMI E37-0413, High-Speed SECS Message Services (HSMS) Generic Services, to correct nonconforming title)
 - TBD 4 (Line-item Revision to SEMI E37.1-0702 (Reapproved 0413), High-Speed SECS Message Services Single Selected-Session Mode (HSMS-SS), to correct nonconforming title)
 - TBD 5 (Reapproval of SEMI E54.23-0513, Specification for Sensor/Actuator Network Communications for CC-Link IE Field Network)
 - TBD 6 (Reapproval of SEMI E126-0708 (Reapproved 0613), Specification for Equipment Quality Information Parameters (EQIP)
 - Cycle TBD
 - TBD (SEMI E172-1015, Specification for SECS Equipment Data Dictionary (SEDD) to address editorial changes in complementary file)
- Diagnostic Data Acquisition (DDA) task force
 - EDA Freeze 3 development plan and coordination with the Korea DDA TF were discussed.
- Energy Saving Equipment Communication (ESEC) task force
 - Proposed SNARF for Line Items Revision to SEMI E167. Key points in provisional SNARF Draft:



- The original standard (SEMI E167 and SEMI S23) has not been adopted nor implemented in any fab. Communication standard between tool and subfab components (SEMI E175) has been approved and needs to be integrated with the factory via SEMI E167.
- Task force will review the terminology and logic between the two standards to make sure they are aligned, determine any corrections needed and apply them to remove any inconsistencies and obstacles for implementation.
- Potential revision items are under discussion.
- Generic Equipment Model 300 (GEM300) task force
 - Ballot Adjudication
 - FAILED
 - 6066B E130.1 reapproval
 - 6068B E116.1 reapproval
 - 6114 E5 Simple Large Recipe
 - 6185 (E4 conforming title)
 - PASSED
 - 5872C E172 additions
 - 6183 E82 reapproval (superclean)
 - 6187 E88 reapproval (superclean)
 - Ballot Plans Cycle 7
 - 6114A E5, Simple Large Recipe
 - E116.1, E130.1 reapprovals (with new SNARFS)
 - 6185A (E4 conforming title)
 - 6005 E30 Add SMN
 - #TBD for E172 (editorial changes)
- Process Control Systems (PCS) task force
 - Ballots Adjudicated
 - PASSED - 5716 E133 and E133.1 revisions
- Plans
 - Submit abstract to APC Conference to describe updated standard (www.apconference.com)
 - Enhance E133, Specification for Automated Process Control Systems Interface, long term to support Virtual Metrology
- Graphical User Interfaces (GUI) task force
 - Consensus to finish cleaning up the graphics, add color and all other necessary editing of E95 as quickly as possible.
 - Next TF task: creating a “Style Guide” for the efficient use of E95
 - To explain the power of using E95 with examples and recommendations, in essence a use “cook book”
- Next Meetings are scheduled on November 8, 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 task force
 - Drafting Doc. 5800 "New Standard: Specification of Backend Die Traceability"
 - Proposed Document schedule
 - 1st Draft by: 05/25/2018
 - Letter Ballot by: 11/16/2018
 - TC Chapter Approval By: 05/24/2019
- Next Meeting is scheduled in March, 2018 at SEMI Taiwan Office, Taipei

Attachment: 05, Taiwan Liaison report

4 SEMI Staff Report

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

- SEMI Global events
- 2017 Critical Date
- SEMI Standards Publication update

Attachment: 06, SEMI Staff report

5 Ballot Review

5.1 4946C (Line Item Revisions to SEMI E87-0312, Specification for Carrier Management (Cms) and E87.1-Xxxx Specification for SECS-II Protocol for Carrier Management (CMS); Adding Carrier Ready to Unload Prediction Feature) was adjudicated and failed as in below.

Motion: Fail 4946C as the committee found that below negative is related and persuasive. And authorize 4946D in cycle 9 of 2017.

- Voter: Mochizuki Tadashi (TEL)
- Negative 2: On table 4 Variable Data Item Mapping Table of E87.1, THE Format (value) of CaRTUPStatusAtLoadPorti and CarrierReadyToUnloadPredictionStatus should be the same value. Because CaRTUPStatusAtLoadPorti described as "The current state of the carrier's READY TO UNLOAD prediction at the ith Load Port." in the description of Table 37 Variable Data Definitions of E87. So I think that the values of CaRTUPStatusAtLoadPorti and CarrierReadyToUnloadPredictionStatus should be the same.

By / 2nd: Byeongmin Im (TEL)/ Jongsub Shim (ASM)

Discussion: None

Vote: 8-0, motion carried

Attachment: 07, 4946C Review result



6 Subcommittee and Task Force Reports

6.1 GEM300 Task Force

- 4946 (Line Item Revision to E87-0312, Specification for Carrier Management (CMS) and E87.1-XXXX, Specification for SECS-II Protocol for Carrier Management (CMS), Adding Carrier Ready to Unload Prediction Feature)
 - 4946D authorized cycle 9 of 2017 as written in above.
- 5832(New Standard, Specification for Equipment Generic Counter Model (EGCM))
 - The SNARF with new title approved. (Specification for Generic Counter Model to Specification for Equipment Generic Counter Model)

Motion: Authorize revised SNARF 5832 for title change and 5832A for cycle 9 of 2017

By / 2nd: Ilgun Jung (ASM)/ Kyunghwuan Cha (Linkgenesis)

Discussion: None

Vote: 9-0, Motion Carried

6.2 DDA Task Force

- Inhyeok Paek (Linkgenesis) reported the coordinating status with NA DDA TF. The details will be reported after NA Fall meeting.

6.3 ABFI Task Force

- YS Lim (Miracom Inc.) introduced new SNARF and draft.

Motion: Approved SNARF 6301 (Line Item Revision to E142-0211, Specification for Substrate Mapping: Adding packaging raw materials traceability method) and authorized 6301 for cycle 9 of 2017.

By / 2nd: Youngsin Lim (Miracon Inc)/ Gunwoo Lee (Lam Research)

Discussion: None

Vote: 9-0, Motion Carried

Attachment: 08, Revised SNARF 5832

09, SNARF 6301

6.4 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

7 Old Business

None

8 New Business

None

9 Action Item Review

See the action item list in above.



10 Next Meeting and Adjournment

The next meeting is scheduled for February 1, 2018 at Coex, Seoul. See <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 17:30.

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

| <i>Title</i> | <i>Title</i> |
|----------------------------------|--|
| 01, Meeting Reminders | 05, Taiwan Liaison report |
| 02, Previous Meeting Minutes | 06, SEMI Staff report |
| 03, Japan Liaison report | 07, Revised SNARF 4946 |
| 04, North America Liaison report | 08, SNARF Draft for line item revision to E142 |

#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.