



## North America Information & Control Committee Meeting Summary and Minutes



SEMI®  
International  
Standards

**NA Standards Spring 2014 Meetings**  
2 April 2014, 0800 – 1630 Pacific Time  
SEMI Headquarters in San Jose, California

**Committee Announcements**

*Next Committee Meeting*

NA Standards Meetings at SEMICON West 2014  
Wednesday, July 9, 2014; 0800 – 1630 Pacific Time  
San Francisco Marriott Marquis Hotel in San Francisco, California

**Table 1 Meeting Attendees**

*Italics indicate virtual participants*

**Co-Chairs:** Jack Ghiselli (Ghiselli Consulting), Lance Rist (SEMATECH), Brian Rubow (Cimetrix)

**SEMI Staff:** Paul Trio

<i>Company</i>	<i>Last</i>	<i>First</i>	<i>Company</i>	<i>Last</i>	<i>First</i>
Applied Materials	Park	Song	PEER Group	McKenzie	Alison
Applied Materials	Flores	Robert	RistTex	Rist	Lance
Cimetrix	Rubow	Brian	SEMATECH	Ferrell	Jackie
<i>Consultant</i>	<i>Crispieri</i>	<i>Gino</i>	Tokyo Electron	Asakawa	Terry
Ghiselli Consulting	Ghiselli	Jack	Tokyo Electron	Mochizuki	Tadashi
Hitachi Kokusai	Matsuda	Mitsuhiro	Tokyo Electron	Sakamoto	Mitch
Intel	Maloney	Chris			
IT Innovation	Kim	Won Tae	SEMI	Trio	Paul

**Table 2 Leadership Changes**

<i>Group</i>	<i>Previous Leader</i>	<i>New Leader</i>
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.

<i>Document #</i>	<i>Document Title</i>	<i>Committee Action</i>
<i>Cycle 8, 2013 Ballots</i>		
<b>5274B</b>	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	<b>Failed</b> , to be reballoted
<b>5650</b>	Line Item Revisions to SEMI E133-0212, Specification for Automated Process Control Systems Interface	
Line Item 1	Abbreviation correction	<b>Passed</b> with editorial changes
Line Item 2	Incorrect table references and placement of tables	<b>Passed</b> as balloted
Line Item 3	Incorrect figure reference	<b>Passed</b> as balloted. Superclean
<i>Cycle 1, 2014 Ballots</i>		
<b>5678</b>	Reapprovals for SEMI E39-0703 (Reapproved 1109), Object Services Standard: Concepts, Behavior, and Services and SEMI E39.1-0703 (Reapproved 1109), SECS-II Protocol for Object Services Standard (OSS)	<b>Passed</b> as balloted
<b>5679</b>	Reapproval for SEMI E91-0600 (Reapproved 1109), Specification for Prober Specific Equipment Model (PSEM)	<b>Failed</b> , to be reballoted
<b>5680</b>	Reapproval for SEMI E148-1109, Specification for Time Synchronization and Definition of the TS-Clock Object	<b>Passed</b> as balloted. Superclean
<i>Cycle 2, 2014 Ballots</i>		
<b>5619</b>	Line Item Revision to Add New GEM Additional Capability: SECS Equipment Data Dictionary (SEDD), and Complementary Files to SEMI E30-0611, Generic Model for Communications and Control of Manufacturing Equipment (GEM)	
Line Item 1	SECS Equipment Data Dictionary	<b>Failed</b> , to be reballoted



**Table 4 Authorized Activities**

#	Type	SC/TF/WG	Details
5589	Revised SNARF	GEM300 TF	<p>Revisions to:</p> <ul style="list-style-type: none"> <li>- SEMI E5, SEMI Equipment Communications Standard 2 Message Content (SECS-II);</li> <li>- SEMI E30, Generic Model for Communications and Control of Manufacturing Equipment (GEM);</li> <li>- SEMI E30.1, Inspection and Review Specific Equipment Model (ISEM);</li> <li>- SEMI E40.1, SECS-II Support for Processing Management Standard;</li> <li>- SEMI E82, Specification for Interbay/Intrabay AMHS SEM (IBSEM);</li> <li>- SEMI E87.1, Provisional Specification for SECS-II Protocol for Carrier Management (CMS);</li> <li>- SEMI E88, Specification for AMHS Storage SEM (Stocker SEM);</li> <li>- SEMI E90.1, Specification for SECS-II Protocol Substrate Tracking;</li> <li>- SEMI E91, Specification for Prober Specific Equipment Model (PSEM);</li> <li>- SEMI E94.1, Specification for SECS-II Protocol for Control Job Management (CJM);</li> <li>- SEMI E109, Specification for Reticle and Pod Management (RPMS);</li> <li>- SEMI E109.1, Specification for SECS-II Protocol for Reticle and Pod Management (RPMS);</li> <li>- SEMI E116.1, Specification for SECS-II Protocol for Equipment Performance Tracking (EPT);</li> <li>- SEMI E122, Standard for Tester Equipment Specific Equipment Model (TSEM);</li> <li>- SEMI E122.1, Specification for SECS-II Protocol for Tester Specific Equipment Model (TSEM);</li> <li>- SEMI E123, Standard for Handler Equipment Specific Equipment Model (HSEM);</li> <li>- SEMI E123.1, Specification for SECS-II Protocol for Handler Specific Equipment Model (HSEM);</li> <li>- SEMI E138, XML Semiconductor Common Components; and</li> <li>- SEMI E153, Specification for AMHS SEM (AMHS SEM)</li> </ul> <p>Remove references and content related to SML and SML Notation.</p> <p>Updated list of Standards to be revised.</p> <ul style="list-style-type: none"> <li>- SEMI E5, SEMI Equipment Communications Standard 2 Message Content (SECS-II);</li> <li>- SEMI E40.1, SECS-II Support for Processing Management Standard;</li> <li>- SEMI E90.1, Specification for SECS-II Protocol Substrate Tracking;</li> <li>- SEMI E94.1, Specification for SECS-II Protocol for Control Job Management (CJM);</li> <li>- SEMI E109, Specification for Reticle and Pod Management (RPMS);</li> <li>- SEMI E109.1, Specification for SECS-II Protocol for Reticle and Pod Management (RPMS);</li> <li>- SEMI E116.1, Specification for SECS-II Protocol for Equipment Performance Tracking (EPT);</li> </ul> <p>One ballot is limited to 10 line items, one line item per standard. Therefore, the task force plans to perform corresponding revisions in phases. Additional SNARF(s) will be submitted as this revision effort progresses.</p>
5716	SNARF	Process Control System (PCS) TF	<p>Revisions to SEMI E133, Specification for Automated Process Control Systems Interface and SEMI E133.1, Provisional Specification for XML Messaging for Process Control Systems (PCS)</p> <p>Adjustments are needed to existing E133 and E133.1 standards content to better align with the XML guidelines document, as necessary. Technical changes are needed to clarify the implementation of the PCS analysis engine type. SEMI E133.1 still contain the term “Provisional” that is no longer used in SEMI Standards.</p>

Note: 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
5507A	Cycle 3, 2014 (or C4-14)	Diagnostic Data Acquisition (DDA) TF	Line Item Revisions to: <ul style="list-style-type: none"> <li>- SEMI E120-0310, Specification for the Common Equipment Model (CEM);</li> <li>- SEMI E120.1-0310, XML Schema for the Common Equipment Model (CEM);</li> <li>- SEMI E125-0710, Specification for Equipment Self Description (EqSD);</li> <li>- SEMI E125.1-0710, Specification for SOAP Binding for Equipment Self Description (EQSD);</li> <li>- SEMI E128-0310, Specification for XML Message Structures;</li> <li>- SEMI E132-0310E2, Specification for Equipment Client Authentication and Authorization;</li> <li>- SEMI E132.1-0310, Specification for SOAP Binding for Equipment Client Authentication and Authorization (ECA);</li> <li>- SEMI E134-0813, Specification for Data Collection Management;</li> <li>- SEMI E134.1-0813, Specification for SOAP Binding of Data Collection Management (DCM);</li> <li>- SEMI E138-0709, XML Semiconductor Common Components;</li> <li>- SEMI E145-0213, Classification for Measurement Unit Symbols in XML; and</li> <li>- SEMI E164-0313, Specification for EDA Common Metadata;</li> </ul> E132 line item rework.
5677	Cycle 3, 2014 (or C4-14)	Diagnostic Data Acquisition (DDA) TF	Revision to SEMI E164, Specification for EDA Common Metadata
5508	Cycle 3, 2014 (or C4-14)	GEM300 TF	Revisions to: <ul style="list-style-type: none"> <li>- SEMI E5, SEMI Equipment Communications Standard 2 Message Content (SECS-II);</li> <li>- SEMI E90, Specification for Substrate Tracking; and</li> <li>- SEMI E90.1, Specification for SECS-II Protocol Substrate Tracking</li> </ul>
5589A	Cycle 3, 2014 (or C4-14)	GEM300 TF	Revisions to: <ul style="list-style-type: none"> <li>- SEMI E5, SEMI Equipment Communications Standard 2 Message Content (SECS-II);</li> <li>- SEMI E40.1, SECS-II Support for Processing Management Standard;</li> <li>- SEMI E90.1, Specification for SECS-II Protocol Substrate Tracking;</li> <li>- SEMI E94.1, Specification for SECS-II Protocol for Control Job Management (CJM);</li> <li>- SEMI E109, Specification for Reticle and Pod Management (RPMS);</li> <li>- SEMI E109.1, Specification for SECS-II Protocol for Reticle and Pod Management (RPMS); and</li> <li>- SEMI E116.1, Specification for SECS-II Protocol for Equipment Performance Tracking (EPT);</li> </ul> Remove references and content related to SML and SML Notation.
5619A	Cycle 3, 2014 (or C4-14)	GEM300 TF	Line Item Revision to Add New GEM Additional Capability: SECS Equipment Data Dictionary (SEDD), and Complementary Files to SEMI E30-0611, Generic Model for Communications and Control of Manufacturing Equipment (GEM)
5620	Cycle 3, 2014 (or C4-14)	GEM300 TF	Revision to SEMI E5, SEMI Equipment Communications Standard 2 Message Content (SECS-II) and New Complementary File: SECS-II Message Notation using XML
5716	Cycle 3, 2014 (or C4-14)	Process Control System (PCS) TF	Revisions to SEMI E133, Specification for Automated Process Control Systems Interface and SEMI E133.1, Provisional Specification for XML Messaging for Process Control Systems (PCS)  Adjustments are needed to existing E133 and E133.1 standards content to better align with the XML guidelines document, as necessary. Technical changes are needed to clarify the implementation of the PCS analysis engine type. SEMI E133.1 still contain the term “Provisional” that is no longer used in SEMI Standards.

**Table 6 New Action Items**

<i>Item #</i>	<i>Assigned to</i>	<i>Details</i>
2014Apr #01	Paul Trio	Notify Korea I&C that E116.1 (revised by ballot 5320) is part of the list of Standards identified in SML Copyright discussion.
2014Apr #02	NA I&C Chairs	Help draft ballot and SNARF language for Korea I&C activity (#4946). Include Mitch Sakamoto in the communication.
2014Apr #03	NA I&C Chairs	Discuss with Gases Committee better alignment of Intercommittee Ballots
2014Apr #04	Paul Trio	Remove completed 5-year review activities from SNARF view in SEMI website.
2014Apr #05	Paul Trio	Investigate status of PCS TF SNARF #4692
2014Apr #06	Paul Trio	Investigate status of Sensor Bus TF SNARF #5181

**Table 7 Previous Meeting Actions Items**

<i>Item #</i>	<i>Assigned to</i>	<i>Details</i>	<i>Status</i>
2013Jul #05	Paul Trio	Consult with the ISC Regulations Subcommittee on what should be done to SEMI E30 in light of the existing SML copyright issue.	Open
2012Oct #02	Paul Trio	Draft SNARF and ballot proposal for E30 revision (reorganization of introductory sections) and send to GEM300 TF leaders for review.	Open

**1 Welcome, Reminders, and Introductions**

Jack Ghiselli, committee co-chair, called the meeting to order at 8:10 AM. After welcoming all attendees, a round of introductions followed. The SEMI meeting reminders on membership requirements, antitrust, patentable technology, and meeting guidelines were then presented and explained.

**Attachment:** 01, SEMI Standards Required Meeting Elements

**2 Review of Previous Meeting Minutes**

The committee reviewed the minutes of the previous meeting held October 30 in conjunction with the NA Standards Fall 2013 Meetings.

**Motion:** Accept the minutes of the previous meeting as written.

**By / 2<sup>nd</sup>:** Lance Rist (SEMATECH) / Jackie Ferrell (SEMATECH)

**Discussion:** None

**Vote:** 9-0 in favor. Motion passed.

**Attachment:** 02, NA I&CC Fall 2013 meeting (October 30) minutes

**3 Liaison Reports**

*3.1 SEMI Staff Report*

Paul Trio (SEMI) gave the SEMI Staff Report. The key items were as follows:

- 2014 Global Calendar of Events
  - European 3D TSV Summit (January 21-22, Grenoble, France)
  - SEMICON Korea / LED Korea (February 12-14, Seoul)
  - SEMICON China (March 18-20, Shanghai)
  - SEMICON Singapore (April 23-25, Marina Bay Sands)



- SEMICON Russia (May 14-15, Moscow)
- SEMI Advanced Semiconductor Manufacturing Conference [ASMC] (May 19-21, Saratoga Springs, New York)
- SEMICON West (July 8-10, San Francisco, California)
- SEMICON Taiwan (September 3-5, Taipei)
- SEMICON Europa / Plastic Electronics (October 7-9, Grenoble, France)
- SEMICON Japan (December 3-5, Tokyo)
- NA Standards Spring 2014 Meetings (March 31 – April 3)
  - Committees meeting at SEMI Headquarters (San Jose)
    - 3DS-IC | EHS | Facilities & Gases | Information & Control | Metrics | PV Materials
  - SEMI thanks Intel (Santa Clara) for hosting the PIC and Silicon Wafer meetings
- Upcoming North America Meetings (2014)
  - NA Compound Semiconductor Materials in conjunction with CS MANTECH 2014 (May 21, Denver, Colorado)
  - NA Standards Meetings at SEMICON West 2014 (July 7-10, San Francisco, California)
  - NA Standards Fall 2014 Meetings (November 3-6, San Jose, California)
- Standards Publications Report
  - November 2013 Cycle
    - New Standards – 1, Revised Standards – 6, Reapproved Standards – 3, Withdrawn Standards – 0
  - December 2013 Cycle
    - New Standards – 2, Revised Standards – 11, Reapproved Standards – 4, Withdrawn Standards – 0
  - January 2014 Cycle
    - New Standards – 3, Revised Standards – 3, Reapproved Standards – 0, Withdrawn Standards – 1
  - February 2014 Cycle
    - New Standards – 4, Revised Standards – 5, Reapproved Standards – 0, Withdrawn Standards – 1, Total in portfolio – 901 (includes 99 Inactive Standards)
- Official SEMI Standards Groups
  - LinkedIn
    - <http://www.linkedin.com/groups/Official-SEMI-Standards-Group-1774298/about>
  - Twitter
    - @SEMI\_standard

**Attachment:** 03, SEMI Standards Staff Report

### 3.2 Japan Information & Control Committee

Mitsuhiro Matsuda presented the Japan I&C liaison report. The key items were as follows:

- Leadership and Structure Change
  - GEM300 TF
    - Tadashi Mochizuki (Tokyo Electron) stepped down as TF co-leader



- Document Review Summary (Japan Standards Winter 2013 Meetings in conjunction with SEMICON Japan)

<i>Document #</i>	<i>Description</i>	<i>Committee Action</i>
5422A	New Standard: Guide for Equipment Information System Security	Superclean
5538	New Standard: Specification for Production Recipe Cache (PRC)	Failed and was returned to the Task Force for rework
5602	Reapproval of SEMI E54.19-0308: Specification of Sensor/Actuator Network for MECHATROLINK	Superclean
5603	Line-Item Revision to SEMI E54.12-0701E (Reapproved 1211): Specification for Sensor/Actuator Network Communications for CC-Link	
Line Item 1	Add SDM (specific device model) Mapping	Superclean
Line Item 2	Correct existing obvious error	Superclean

- Upcoming ballots to be reviewed at Japan Standards Spring 2014 Meetings

<i>Document #</i>	<i>Description</i>	<i>SC / TF / WG</i>
5538A	New Standard: Specification for Production Recipe Cache (PRC) Note: Title was changed from the SNARF	GEM300 TF

- Authorized Ballots (adjudication information to be announced with ballot)

<i>Document #</i>	<i>Description</i>	<i>SC / TF / WG</i>
	<i>Cycle 3, 2014</i>	
5486A	New Standard: Specification for Predictive Carrier Logistics (PCL)	Predictive Carrier Logistics (PCL) TF
	<i>Cycle 3 or 4, 2014</i>	
5600	Line-item revision to SEMI E5: SEMI Equipment Communications Standard 2 Message Content (SECS-II), SEMI E40: Standard for Processing Management, and E40.1: SECS-II Support for Processing Management Standard, the Removal of inconsistencies	GEM300 TF

- Equipment Information System Security (EISS) TF

- Doc. 5422A (New Standard: *Guide for Equipment Information System Security*) passed both committee and A&R procedural reviews.

- Fiducial Mark Interoperability TF

- Originating Global Technical Committee:
  - Traceability, Silicon Wafer, Physical Interfaces & Carriers, Assembly & Packaging, Information & Control
- Originating TC Chapter Region/Locale:
  - Japan
- Kick off meeting was held on December 3, 2013 with 23 attendees
  - Shared current fiducial mark development status at G450C based on G450C/F450C Standard Workshop presentation
  - Discussed potential areas for Standardization
    - Recognized potential need for communication of Fiducial Mark condition/readability information but not reached any conclusion.

- GEM300 TF
  - #5538 – New Standard: *Specification for Production Recipe Cache (PRC)*
    - Failed and was returned to the task force for rework at Japan I&C Committee meeting on December 6 in conjunction with SEMICON Japan 2013.
    - The reworked document #5538A to be balloted for Cycle 2 and reviewed at Japan I&C Committee meeting on April 16, 2014.
  - #5600 – Line-item revision to SEMI E5, SEMI E40, and SEMI E40.1
    - To remove of inconsistencies in Process Job Attributes.
    - To be balloted for Cycle 3 or Cycle 4
  - #5601 – Specification for Wafer Object Model
    - Introduce Wafer Object and its behavior.
  - Proposal to NA activity #5619: Revision to SEMI E30 (GEM)
    - Discussed Recipe Integrity & SEDD (SECS Equipment Data Dictionary) / SDT (SECS-II Data Template)
- Japan I&CC Maintenance
  - #5615 – Revision to SEMI E98, *Provisional Specification for Object-Based Equipment Model* and SEMI E98.1, *Provisional Specification for SECS-II Protocol for The Object-Based Equipment Model*
    - To remove “provisional”
    - Ballot was approved to submit to Cycle 2/3-2014 at Japan I&C Committee meeting on December 6, 2013
    - However, ballot submission will be postponed, because it appears that SEMI E98.1 contains SML Notation.
- Predictive Carrier Logistics (PCL) TF
  - #5486: New Standard: *Specification for Predictive Carrier Logistics (PCL)*
    - Balloted for Cycle 3 and reviewed at Japan I&C Committee summer meeting
    - Discussed Carrier Logistics Job (CLJ) scenario
- Sensor Bus TF
  - #5602 – Reapproval for SEMI E54.19-0308, *Specification for Sensor/Actuator Network for MECHATROLINK*
    - Passed as balloted at Japan I&C Committee meeting on December 6 in conjunction with SEMICON Japan 2013 and also passed at A&R review on January 24, 2014.
  - #5603 – Revision to SEMI E54.12-0701E (Reapproved 1211), *Specification for Sensor/Actuator Network Communications for CC-Link*
    - Two line items:
      - Add SDM (specific device model) Mapping
      - Correct existing obvious error
    - Passed as balloted at Japan I&C Committee meeting on December 6 in conjunction with SEMICON Japan 2013 and also passed at A&R review on January 24, 2014.
- Next meeting: April 16 for the Japan Spring 2014 Meetings (SEMI Japan, Tokyo, Japan)
- Japan I&CC Meeting Schedule
  - Summer in June, 2014 (TBD)
  - Fall in September, 2014 (TBD)
  - Winter in December 5, in conjunction with SEMICON Japan 2014
- Staff Contact: Chie Yanagisawa (cyanagisawa@semi.org)

**Attachment:** 04, Japan I&C Liaison Report



### 3.3 Korea Information & Control Committee

Paul Trio presented the Korea I&C liaison report. The key items were as follows:

- Next meeting:
  - June 13 at SEMI Korea office (Seoul)
- Major Updates
  - Reviewed Ballot (Cycle 7, 2013)
    - 5320C (Line Item Revision to SEMI E116-0707E, Specification for Equipment Performance Tracking and SEMI E116.1-0707, Specification for SECS-2 Protocol for Equipment Performance Tracking: Adding New Attributes to EPTTracker Object) – Failed
  - Authorized Ballots
    - 4946C (E87/E87.1 [carrier management] revisions, Adding Carrier Ready to Unload Prediction feature) in Cycle 3 or 4, 2014.
- GEM300 TF
  - 5320 (E116 and E116.1 Revision)
    - 5320C failed committee review.
    - There were several comments on the purpose of the activity but the committee did not make any official decision because the author was not able to attend the meeting.
    - Due to the author's personal reason, the activity will be on hold until May.
  - 4946 (E87 and E87.1 Revision)
    - Removal of "provisional"
      - Korea GEM300 TF has received several comments on removal "Provisional" on E87.1-0707. However there is no clear written guidance in the current Regulations.
      - The TF obtained ISC Regulations Subcommittee's recommendation that E87.1 removal provisional should be done by major revision.
      - To avoid any schedule/ activity duplication, I&C GCS is coordinating this issue now.
- DDA TF
  - No activity
- Staff Contact: Natalie Shim (eshim@semi.org)

**Action Item:** 2014Apr #01, Paul Trio to notify Korea I&C that E116.1 (revised by ballot 5320) is part of the list of Standards identified in SML Copyright discussion.

**Action Item:** 2014Apr #02, NA I&C Chairs to help draft ballot and SNARF language for Korea I&C activity (#4946). Include Mitch Sakamoto in the communication.

**Attachment:** 05, Korea I&C Liaison Report

### 3.4 Europe Equipment Automation Committee (Information & Control, Metrics, Physical Interfaces & Carriers)

No updates received.

### 3.5 Taiwan Information & Control Committee

No activities to report.

#### 4 E30/SML Copyright Update

Paul Trio reported that SEMI instructs the committee to discontinue any additional discussion with regard to the disposition of SML-related content in the previously identified SEMI Standards. More analysis is needed with regard to the SML copyright matter and any additional discussions will occur between SEMI and its legal counsel.

Alison McKenzie asked whether SEMI had any issues with regard to the SNARF #5589 activity from continuing. Paul Trio responded that it is the committee's decision whether or not it wants to move forward with the #5589 document development activity.

#### 5 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.

NOTE 1: Committee adjudication on Cycle 8, 2013 and Cycle 1 and 2, 2014 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 document is provided below the summary tables.

##### 5.1 Cycle 8, 2013 Ballots

<i>Document #</i>	<i>Document Title</i>	<i>Committee Action</i>
5274B	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	<b>Failed</b> , to be reballoted
5650	Line Item Revisions to SEMI E133-0212, Specification for Automated Process Control Systems Interface	
Line Item 1	Abbreviation correction	<b>Passed</b> with editorial changes
Line Item 2	Incorrect table references and placement of tables	<b>Passed</b> as balloted
Line Item 3	Incorrect figure reference	<b>Passed</b> as balloted. Superclean

##### 5.2 Cycle 1, 2014 Ballots

<i>Document #</i>	<i>Document Title</i>	<i>Committee Action</i>
5678	Reapprovals for SEMI E39-0703 (Reapproved 1109), Object Services Standard: Concepts, Behavior, and Services and SEMI E39.1-0703 (Reapproved 1109), SECS-II Protocol for Object Services Standard (OSS)	<b>Passed</b> as balloted
5679	Reapproval for SEMI E91-0600 (Reapproved 1109), Specification for Prober Specific Equipment Model (PSEM)	<b>Failed</b> , to be reballoted
5680	Reapproval for SEMI E148-1109, Specification for Time Synchronization and Definition of the TS-Clock Object	<b>Passed</b> as balloted. Superclean

##### 5.3 Cycle 2, 2014 Ballots

<i>Document #</i>	<i>Document Title</i>	<i>Committee Action</i>
5619	Line Item Revision to Add New GEM Additional Capability: SECS Equipment Data Dictionary (SEDD), and Complementary Files to SEMI E30-0611, Generic Model for Communications and Control of Manufacturing Equipment (GEM)	
Line Item 1	SECS Equipment Data Dictionary	<b>Failed</b> , to be reballoted

**Attachment:** 06, Ballot Review for Doc. 5274B  
07, Ballot Review for Doc. 5650  
08, Ballot Review for Doc. 5678  
09, Ballot Review for Doc. 5679  
10, Ballot Review for Doc. 5680  
11, Ballot Review for Doc. 5619

## 6 Task Force Reports

### 6.1 *Diagnostic Data Acquisition (DDA) Task Force*

Brian Rubow reported for the DDA Task Force. The key items were as follows:

- Attendance: 8 in person and 1 attended remotely
- Ballot Plans (for Cycle 3 or 4, 2014):
  - 5507A (E132 line item rework) and 5677 (E164 revision, EDA Common Metadata)

**Attachment:** 12, Diagnostic Data Acquisition Task Force Report

### 6.2 *Energy Saving Equipment Communication Task Force*

Brian Rubow reported for the Energy Saving Equipment Communication Task Force. The key items were as follows:

- Attendance: 5 in person and 3 attended remotely
- Task force reviewed current status of Phase I work and planned next steps for a Phase II activity.
- Task Force plans to meet before SEMICON West to discuss changes to the TFOF and a potential SNARF request to address energy savings communication between equipment and subsystems.
- Changes on the TFOF are related to its charter and the scope of the task force work. These changes will be determined prior to SEMICON.

**Attachment:** 13, Energy Saving Equipment Communication Task Force Report

### 6.3 *GEM300 Task Force*

Brian Rubow reported for the GEM300 Task Force. The key items were as follows:

- Attendance: 12 in person and 1 attended remotely
- Revised SNARFs
  - Revisions to:
    - SEMI E5, SEMI Equipment Communications Standard 2 Message Content (SECS-II);
    - SEMI E30, Generic Model for Communications and Control of Manufacturing Equipment (GEM);
    - SEMI E30.1, Inspection and Review Specific Equipment Model (ISEM);
    - SEMI E40.1, SECS-II Support for Processing Management Standard;
    - SEMI E82, Specification for Interbay/Intrabay AMHS SEM (IBSEM);
    - SEMI E87.1, Provisional Specification for SECS-II Protocol for Carrier Management (CMS);
    - SEMI E88, Specification for AMHS Storage SEM (Stocker SEM);
    - SEMI E90.1, Specification for SECS-II Protocol Substrate Tracking;



- SEMI E91, Specification for Prober Specific Equipment Model (PSEM);
- SEMI E94.1, Specification for SECS-II Protocol for Control Job Management (CJM);
- SEMI E109, Specification for Reticle and Pod Management (RPMS);
- SEMI E109.1, Specification for SECS-II Protocol for Reticle and Pod Management (RPMS);
- SEMI E116.1, Specification for SECS-II Protocol for Equipment Performance Tracking (EPT);
- SEMI E122, Standard for Tester Equipment Specific Equipment Model (TSEM);
- SEMI E122.1, Specification for SECS-II Protocol for Tester Specific Equipment Model (TSEM);
- SEMI E123, Standard for Handler Equipment Specific Equipment Model (HSEM);
- SEMI E123.1, Specification for SECS-II Protocol for Handler Specific Equipment Model (HSEM);
- SEMI E138, XML Semiconductor Common Components; and
- SEMI E153, Specification for AMHS SEM (AMHS SEM)

Remove references and content related to SML and SML Notation.

- Updated list of Standards to be revised:
  - SEMI E5, SEMI Equipment Communications Standard 2 Message Content (SECS-II);
  - SEMI E40.1, SECS-II Support for Processing Management Standard;
  - SEMI E90.1, Specification for SECS-II Protocol Substrate Tracking;
  - SEMI E94.1, Specification for SECS-II Protocol for Control Job Management (CJM);
  - SEMI E109, Specification for Reticle and Pod Management (RPMS);
  - SEMI E109.1, Specification for SECS-II Protocol for Reticle and Pod Management (RPMS);
  - SEMI E116.1, Specification for SECS-II Protocol for Equipment Performance Tracking (EPT);

One ballot is limited to 10 line items, one line item per standard. Therefore, the task force plans to perform corresponding revisions in phases. Additional SNARF(s) will be submitted as this revision effort progresses.

- SNARF Rationale: SEMI Regulations, March 2013 version, section 15.1 states: “...Published Documents should be written in such a way that the ... reproduction of copyrighted items is not necessary.”

SEMI Required Elements June 2, 2010 states the following:

”When possible, SEMI Standards and Safety Guidelines should be written in such a way that patented technology or copyrighted information is not necessary to use, comply with, or implement the Standard or Safety Guideline.”

The current 0611 E30 publication indicates that SECS Message Language™ is trademarked, and that SML® a registered trademark. The PEER Group has made it known to the NA I&CC that “SML Notation” is copyrighted.

In order to follow SEMI’s policy to avoid copyrighted material in the standards, all references to SML and SML Notation will be removed from SEMI E30 and related SEMI Standards. SML and SML Notation are not necessary to use.

- Revised SNARF Scope: References and content related to “SML” and “SML Notation” will be removed from: E5, E40.1, E90.1, E94.1, E109, E109.1, and E116.1.



**Motion:** Approve revised SNARF #5589  
**By / 2<sup>nd</sup>:** Brian Rubow (Cimetrix) / Wontae Kim (IT Innovation)  
**Discussion:** None.  
**Vote:** 11-1 in favor. Motion passed.

- Ballot Plans (Cycle 3 or 4, 2014):
  - 5508 (E5, E90, and E90.1 revisions; provide generalized support for multiple substrate groups such as those used in HB-LED's material management approach)
  - 5589A (see above)
  - 5619A (Line Item Revision to Add New GEM Additional Capability: SECS Equipment Data Dictionary [SEDD], and Complementary Files to SEMI E30, Generic Model for Communications and Control of Manufacturing Equipment [GEM])
  - 5620 (E5 revision and New Complementary File: SECS-II Message Notation using XML)

Additional Discussion:

- Lance Rist reported that the task force is considering of making the SECS Equipment Data Dictionary (SEDD) into a standalone document rather than an E30 revision proposal. If the TF decides to move forward with a standalone document, then GCS approval will be requested.

**Attachment:** 14, GEM300 Task Force Report

#### 6.4 Process Control System (PCS) Task Force

Chris Maloney reported for the PCS Task Force. The key items were as follows:

- Attendance: 3
- New SNARF
  - (#5716) Revisions to SEMI E133, Specification for Automated Process Control Systems Interface and SEMI E133.1, Provisional Specification for XML Messaging for Process Control Systems (PCS)
    - Rationale: Adjustments are needed to existing E133 and E133.1 standards content to better align with the XML guidelines document, as necessary. Technical changes are needed to clarify the implementation of the PCS analysis engine type.  
SEMI E133.1 still contain the term "Provisional" that is no longer used in SEMI Standards.
    - Scope: This ballot will be a major revision to E133 and E133.1.  
This ballot will propose the following changes:
      - Enhancements to E133.1 (XML specification). Adjustments will be made to existing E133 and E133.1 standards content to better align with the XML guidelines document, as necessary. Technical changes will be made to clarify the implementation of the PCS analysis engine type.
      - Changes to the schema
      - Removal of "Provisional"

Some of the changes listed above will also require related/corresponding changes in the E133 primary standard.

**Motion:** Approve new SNARF for E133 and E133.1 revisions  
**By / 2<sup>nd</sup>:** Chris Maloney (Intel) / Jack Ghiselli (Ghiselli Consulting)  
**Discussion:** None.  
**Vote:** 9-0 in favor. Motion passed.



- Ballot Plans (for Cycle 3 or 4, 2014):
  - 5716 (see above)

**Attachment:** 15, PCS Task Force Report

### 6.5 *Sensor Bus Task Force*

Paul Trio reported for the Sensor Bus Task Force. The key items were as follows:

- Attendance: 4
- Ballot Plans (for Cycle 4, 2014):
  - 5274C (New E54 Subordinate Standard: Specification for Sensor/Actuator Network Specific Device Model of a Generic Equipment Add-On Sensor [ADDON])

**Attachment:** 16, Sensor Bus Task Force Report

## **7 Proposed Meeting Schedule for SEMICON West 2014 Meetings**

July 7-10, 2014

San Francisco Marriott Marquis Hotel

780 Mission Street

San Francisco, California 94103

U.S.A.

The tentative schedule is provided below:

- Monday, July 7
  - I&C Leadership (11:00 AM to 12:00 Noon)
  - Diagnostic Data Acquisition [DDA] TF (1:00 PM to 3:00 PM)
- Tuesday, July 8
  - GEM300 TF (8:00 AM to 3:00 PM)
  - Energy Saving Equipment Communication [ESEC] TF (9:00 AM to 12:00 Noon)
  - Sensor Bus TF (1:00 PM to 3:00 PM)
  - Process Control System [PCS] TF (3:00 PM to 5:00 PM)
  - I&C GCS (5:00 PM to 6:00 PM)
- Wednesday, July 9
  - I&C Committee (8:00 AM to 4:30 PM)

## 8 Old Business

### 8.1 Status update on action items generated from the previous meetings:

<i>Item #</i>	<i>Assigned to</i>	<i>Details</i>	<i>Status</i>
2013Oct #01	Lance Rist	Organize and schedule SML copyright working group teleconference.	Completed. Closed.
2013Oct #02	Paul Trio	Send updated SNARFs #5618 and #5619 to Lance Rist.	Completed. Closed.
2013Oct #03	NA I&C Cochairs	Inform the Sort Map TF and AMHS IBSEM TF leaders that the committee approved to disband their task force.	Completed. Closed.
2013Jul #05	Paul Trio	Consult with the ISC Regulations Subcommittee on what should be done to SEMI E30 in light of the existing SML copyright issue.	Open
2012Oct #02	Paul Trio	Draft SNARF and ballot proposal for E30 revision (reorganization of introductory sections) and send to GEM300 TF leaders for review.	Open

## 9 New Business

### 9.1 NA I&C Standards due for 5-Year Review

The committee approved to issue reapproval ballots for the following SEMI Standards:

- SEMI E39, Object Services Standard: Concepts, Behavior, and Services
- SEMI E91, Specification for Prober Specific Equipment Model (PSEM)
- SEMI E148, Specification for Time Synchronization and Definition of the TS-Clock Object

### 9.2 New Ballot Submission Summary

Paul Trio reviewed the TFOFs, SNARFs, and letter ballot submission information presented to the committee for approval. These can be found in the Authorized Ballots and Authorized Activities tables (Table 4 and Table 5, respectively) at the beginning of these minutes.

The committee also agreed to allow SEMI E54.9 (*Specification for Sensor/Actuator Network Communication for Modbus/TCP Over TCP/IP*) to go into Inactive Status.

NOTE 2: Per section 4.2.19 of the SEMI Standards Regulations, Inactive Status is used to describe a Standard or Safety Guideline that is not currently supported by the global technical committee. Inactive Standards and Inactive Safety Guidelines are still available from SEMI. Inactive Standards and Inactive Safety Guidelines contain an 'Inactive' watermark, but will still be available in the 'Current Standards' section of the SEMI Web site.

**Motion:** Approve all SNARFs, TFOFs, and letter ballots (as presented in tables 4 and 5 above) as well as allow SEMI E54.9 to go into Inactive Status.

**By / 2<sup>nd</sup>:** Chris Maloney (Intel) / Jackie Ferrell (SEMATECH)

**Discussion:** None.

**Vote:** 11-1 in favor. Motion passed.

**Action Item:** 2014Apr #03, NA I&C Chairs to discuss with Gases Committee better alignment of Intercommittee Ballots.



### 9.3 SNARF Maintenance & Tracking

The committee reviewed the list of NA I&CC SNARFs listed in the SEMI website. The committee identified which SNARFs should be removed from the web either because the activity has been completed or the responsible TF has decided to discontinue standards development work.

#### 9.3.1 DDA TF SNARFs

- Discontinued activity

- SNARF #5003 – Revisions to:
  - SEMI E125, Specification for Equipment Self Description (EqSD)
  - SEMI E128, Specification for XML Message Structures
  - SEMI E132, Specification for Equipment Client Authentication and Authorization
  - SEMI E134, Specification for Data Collection ManagementFor reliable messaging for EDA Standards
- SNARF #5100 – Revision to SEMI E132, Specification for Equipment Authorization and Authentication. For introducing the new capability: client password

#### 9.3.2 ESEC TF SNARFs

- Completed Activity

- SNARF #5411 – New Standard: Specification for Equipment Energy Saving Mode Communications (EESM)
- SNARF #5453 – Revision to Add a New Subordinate Standard: Specification for SECS-II Protocol for Equipment Energy Saving Mode to SEMI Draft Document 5411, New Standard: Specification for Equipment Energy Saving Mode Communications (EESM)

#### 9.3.3 GEM300 Task Force SNARFs

- Completed Activity

- SNARF #5509 – Line Item Revision to SEMI E94, Specification for Control Job Management

- Discontinued Activity

- SNARF #5510 – Revision to SEMI E157, Specification for Module Process Tracking. For corrections and to include more detailed explanation to improve future implementations of SEMI E157

#### 9.3.4 NA I&C 5-Year Review SNARFs

- Completed Activity

- SNARF #5511 – Reapproval of SEMI E54.20, Standard for Sensor/Actuator Network Communications for EtherCAT
- SNARF #5455 – Reapproval of SEMI E37.1-0702 (Reapproved 0308), High-Speed SECS Message Services Single Selected-Session Mode (HSMS-SS)
- SNARF #5456 – Reapproval of SEMI E54.1-0708, Standard for Sensor/Actuator Network Common Device Model
- SNARF #5457 – Reapproval of SEMI E126-0708, Specification for Equipment Quality Information Parameters (EQIP)
- SNARF #5458 – Reapproval of SEMI E139.2-1108, SECS-II Protocol for Recipe and Parameter Management (RaP)





### 9.3.5 PCS TF SNARFs

- Completed Activity
  - SNARF #5650 – Line Item Revisions to SEMI E133, Specification for Automated Process Control Systems Interface and SEMI E133.1, Provisional Specification for XML Messaging for Process Control Systems (PCS)
- Unknown Status
  - SNARF #4692 – Revision to SEMI E133, Provisional Specification for Automated Process Control Systems Interface. Line item changes and enhancements to E133: Fault Prediction Enhancements.

### 9.3.6 Sensor Bus TF SNARFs

- Unknown Status
  - SNARF #5181 – New E54.x Subordinate Standard: Specification for CC-Link Industrial Ethernet (IE) Field Network

**Motion:** Approve to discontinue SNARFs # 5003, 5100, and 5510 (see above for details)

**By / 2<sup>nd</sup>:** Jackie Ferrell (SEMATECH) / Chris Maloney (Intel)

**Discussion:** None.

**Vote:** 8-0 in favor. Motion passed.

**Action Item:** 2014Apr #04, Paul Trio to remove completed 5-year review activities from SNARF view in SEMI website.

**Action Item:** 2014Apr #05, Paul Trio to investigate status of PCS TF SNARF #4692.

**Action Item:** 2014Apr #06, NA I&C to investigate status of Sensor Bus TF SNARF #5181.

## 10 Action Item Review

### 10.1 Open Action Items

Paul Trio (SEMI) reviewed the open action items. These can be found in the Open Action Items table at the beginning of these minutes.

### 10.2 New Action Items

Paul Trio (SEMI) reviewed the new action items. These can be found in the New Action Items table at the beginning of these minutes.

## 11 Adjournment

Having no further business, a motion was made to adjourn the NA I&C Committee meeting on April 2 in conjunction with the NA Standards Spring 2014 meetings in San Jose, California. Adjournment was at 11:25 AM.



**Respectfully submitted by:**

Paul Trio  
Senior Manager, North America Standards  
SEMI North America  
Phone: +1.408.943.7041  
Email: ptrio@semi.org

**Minutes approved by:**

Jack Ghiselli (Ghiselli Consulting), Co-chair	June 2, 2014
Lance Rist (Industry Consultant), Co-chair	
Brian Rubow (Cimetrix), Co-chair	June 5, 2014

**Table 8 Index of Available Attachments #1**

#	<i>Title</i>	#	<i>Title</i>
1	SEMI Standards Required Meeting Elements	9	Ballot Review for Doc. 5679
2	NA I&CC Fall 2013 (October 30) meeting minutes	10	Ballot Review for Doc. 5680
3	SEMI Standards Staff Report	11	Ballot Review for Doc. 5619
4	Japan I&C Liaison Report	12	Diagnostic Data Acquisition Task Force Report
5	Korea I&C Liaison Report	13	Energy Saving Equipment Task Force Report
6	Ballot Review for Doc. 5274B	14	GEM300 Task Force Report
7	Ballot Review for Doc. 5650	15	PCS Task Force Report
8	Ballot Review for Doc. 5678	16	Sensor Bus Task Force Report

#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](http://www.semi.org). For additional information or to obtain individual attachments, please contact Paul Trio at the contact information above.