



North America Information & Control Committee Meeting Summary and Minutes



SEMI®
International
Standards

North America Standards Fall 2014 Meetings
5 November 2014, 0800 – 1630 Pacific Time
SEMI Headquarters in San Jose, California

Committee Announcements

Next Committee Meeting

NA Standards Spring 2015 Meetings

Wednesday, April 1, 2015; 0800 – 1630 Pacific Time

SEMI Headquarters in San Jose, California

Table 1 Meeting Attendees

Italics indicate virtual participants

Co-Chairs: Jack Ghiselli (Ghiselli Consulting), Lance Rist (RistTex), 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	Flores	Robert	RistTex	Rist	Lance
Cimetrix	Rubow	Brian	Roos Instruments	Roos	Mark
Consultant	Crispieri	Gino	Tokyo Electron	Asakawa	Terry
Ghiselli Consulting	Ghiselli	Jack	Tokyo Electron	Mochizuki	Tadashi
Hitachi Kokusai	Matsuda	Mitsuhiro	Tokyo Electron	Sakamoto	Mitch
Intel	Brown	Jim	Windtree Automation	Kim	Won Tae
PEER Group	McKenzie	Alison	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.

Document #	Document Title	Committee Action
<i>Cycle 6, 2014 Ballots</i>		
5274C	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	Failed , to be reballoted
5508	Line Revisions to SEMI E90-0312, Specification for Substrate Tracking; SEMI E90.1-0312, Specification for SECS-II Protocol Substrate Tracking; and SEMI E5-0813, SEMI Equipment Communications Standard 2 Message Content (SECS-II). Add Batch Object SEMI E90 & E90.1 and a New Material Format in SEMI E5	
Line Item 1	New Material Format to Allow Batches	Failed , to be reworked
Line Item 2	New Batch Object and Batch State Model	Failed , to be discontinued
5618	New Standard: Specification for Preservation of Recipe Integrity (PRI)	Failed , to be reballoted
5619A	New Standard: Specification for SECS Equipment Data Dictionary (SEDD)	Passed as balloted
5620A	New Standard: Specification for SECS-II Message Notation (SMN)	Passed with editorial changes

Table 4 Authorized Activities

#	Type	SC/TF/WG	Details
5762	Revised SNARF	Diagnostic Data Acquisition (DDA)TF	Revision to SEMI E132.1, Specification for Soap Binding for Equipment Client Authentication and Authorization (ECA). Adding EDA freeze versions to E132.1 SNARF revised from E132 revision (Specification for Equipment Client Authentication and Authorization) to E132.1 revision.
5824	SNARF	GEM300 TF	Revision to Specification for SECS Equipment Data Dictionary (SEDD) [formerly SEMI Draft Document 5619A] <i>SEMI Draft Document 5619A (New Standard: Specification for SECS Equipment Data Dictionary {SEDD}) passed technical committee review on November 5, 2014. Pending successful procedural review, Document 5619A will be published as a SEMI Standard. This SNARF proposes additional refinements to the SEDD Standard.</i>

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
5274D	Cycle 1 or Cycle 2, 2015	Sensor Bus TF	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
5618A	Cycle 1 or Cycle 2, 2015	GEM300 TF	New Standard: Specification for Preservation of Recipe Integrity (PRI)
5677	Cycle 2, 2015	Diagnostic Data Acquisition (DDA) TF	Revision to SEMI E164, Specification for EDA Common Metadata
5716	Cycle 2, 2015	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)
5762	Cycle 2, 2015	Diagnostic Data Acquisition (DDA)TF	Revision to SEMI E132.1, Specification for Soap Binding for Equipment Client Authentication and Authorization (ECA). Adding EDA freeze versions to E132.1
5821	Cycle 2, 2015	Energy Saving Equipment Communication (ESEC) TF	New Standard: Specification for Energy Savings Mode Communication between Semiconductor Equipment and Sub-Systems
5824	Cycle 2, 2015	GEM300 TF	Revision to Specification for SECS Equipment Data Dictionary (SEDD) [formerly SEMI Draft Document 5619A] <i>SEMI Draft Document 5619A (New Standard: Specification for SECS Equipment Data Dictionary {SEDD}) passed technical committee review on November 5, 2014. Pending successful procedural review and publication, this ballot will propose additional refinements to the SEDD Standard.</i>

Table 6 New Action Items

Item #	Assigned to	Details
2014Nov #01	Mitsuhiro Matsuda	Provide updated Japan I&C liaison report that will include information on E99/carrier ID activity.
2014Nov #02	NA I&C Co-chairs	Work with Sensor Bus TF leaders in addressing negatives submitted in 5274 ballots.

Table 7 Previous Meeting Actions Items

Item #	Assigned to	Details	Status
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 8:05 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 July 9 in conjunction with SEMICON West 2014.

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

By / 2nd: Gino Crispieri (Consultant) / Lance Rist (RistTex)

Discussion: None

Vote: 9-0 in favor. Motion passed.

Attachment: 02, NA I&CC West 2014 meeting (July 9) 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
 - International Technology Partners Conference [ITPC] (November 9-12, Big Island, Hawaii)
 - Collaborative Alliance for Semiconductor Test [CAST] Workshop: Implementing Next Generation Data Logging (November 12-13, San Jose, California)
 - SEMI South America Semiconductor Strategy Summit (November 18-20, Buenos Aires, Argentina)
 - SEMICON Japan (December 3-5, Tokyo)
- 2015 Global Calendar of Events
 - Industry Strategy Symposium (January 11-14, Half Moon Bay, California)
 - European 3D TSV Summit (January 19-21, Grenoble, France)
 - SEMICON Korea / LED Korea (February 4-6, Seoul)
 - Industry Strategy Symposium [ISS] Europe (February 22-24, Amsterdam, Netherlands)
 - SEMICON China / FPD China (March 17-19, Shanghai)
 - LED Taiwan (March 25-28, Taipei)
 - SEMICON Southeast Asia (April 22-24, Penang, Malaysia)
 - Advanced Semiconductor Manufacturing Conference [ASMC] (May 3-6, Saratoga Springs, New York)
 - Intersolar Europe (June 10-12, Munich Germany)
 - SEMICON Russia (June 17-18, Moscow)
 - SEMICON West (July 14-16, San Francisco, California)
 - SEMICON Taiwan (September 2-4, Taipei)
 - European MEMS Summit (September 17-18, Milan, Italy)
 - SEMICON Europa (October 6-8, Dresden, Germany)
 - SEMICON Japan (December 16-18, Tokyo)
- NA Standards Fall 2014 Meetings (November 2-6)
 - Committees meeting at SEMI Headquarters (San Jose)



- 3DS-IC | EHS | Facilities & Gases | HB-LED | Information & Control | Liquid Chemicals | MEMS/NEMS | Metrics | PV Materials
 - SEMI thanks Intel (Santa Clara) for hosting the Physical Interfaces & Carriers (PIC) and Silicon Wafer committees.
- SEMI Standards Publications
 - July 2014 Cycle
 - New Standards – 1, Revised Standards – 6, Reapproved Standards – 0, Withdrawn Standards – 1
 - August 2014 Cycle
 - New Standards – 2, Revised Standards – 7, Reapproved Standards – 0, Withdrawn Standards – 0
 - September 2014 Cycle
 - New Standards – 2, Revised Standards – 7, Reapproved Standards – 1, Withdrawn Standards – 1
 - October 2014 Cycle
 - New Standards – 3, Revised Standards – 9, Reapproved Standards – 1, Withdrawn Standards – 0, Total in portfolio – 917 (includes 108 Inactive Standards)
- NA Standards Spring 2015 Meetings
 - March 30 – April 2 at SEMI Headquarters (San Jose, California)
 - Inviting local companies willing and able to host some of the meetings to help maintain one-week format.
- Upcoming North America Meetings (2015)
 - NA Standards Spring 2015 Meetings (March 30 – April 2, San Jose, California)
 - NA Compound Semiconductor Materials TC Chapter Meeting (May 20 in conjunction with CS MANTECH, Scottsdale, Arizona)
 - NA Standards Meetings at SEMICON West 2015 (July 13-16, San Francisco, California)
 - NA Standards Fall 2015 Meetings (November 2-5, San Jose, California)

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:

- Document Review Summary
 - Cycle 5 (Japan Standards Fall 2014 Meetings)

<i>Document #</i>	<i>Description</i>	<i>Committee Action</i>
5601	New Standard: Specification for Wafer Object Model (WOMS)	Failed and was returned to the TF for rework.



- Approved SNARFs (Japan Standards Fall 2014 Meetings)

<i>Document #</i>	<i>Description</i>	<i>Committee Action</i>
5779	Revision to SEMI E169-0414, Guide for Equipment Information System Security	EISS TF
5730	Line Item Revision to SEMI E170-0714, Specification for Production Recipe Cache (PRC)	GEM300 TF
5731	Revision to add a New Subordinate Standard: Specification for SECS-II Protocol for Production Recipe Cache to SEMI E170-0714, Specification for Production Recipe Cache (PRC)	GEM300 TF
5735	Line Item Revision to SEMI E171-0914, Specification for Predictive Carrier Logistics (PCL)	PCL TF
5778	Revision to add a New Subordinate Standard for Specification for SECS-II Protocol for SEMI E171-0914: Specification for Predictive Carrier Logistics (PCL)	PCL TF

- Upcoming ballots to be reviewed at SEMICON Japan 2014 (Cycle 7, 2014)

<i>Document #</i>	<i>Description</i>	<i>SC / TF / WG</i>
5779	Revision to SEMI E169-0414, Guide for Equipment Information System Security	EISS TF
5730	Line Item Revision to SEMI E170-0714, Specification for Production Recipe Cache (PRC)	GEM300 TF
5731	Revision to add a New Subordinate Standard: Specification for SECS-II Protocol for Production Recipe Cache to SEMI E170-0714, Specification for Production Recipe Cache (PRC)	GEM300 TF
5735	Line Item Revision to SEMI E171-0914, Specification for Predictive Carrier Logistics (PCL)	PCL TF
5778	Revision to add a New Subordinate Standard for Specification for SECS-II Protocol for SEMI E171-0914: Specification for Predictive Carrier Logistics (PCL)	PCL TF

- Equipment Information System Security (EISS) TF
 - SNARF #5779 (E169 revision) was approved at Japan Fall 2014 Meetings and the ballot was submitted for Cycle 7-2014.
- Fiducial Mark Interoperability TF
 - Discussed pre-ballot document related to Fiducial Mark introduction, and submitted TF member feedback to appropriate TF
 - Pre-Ballot document #5752: Revision of SEMI T7-0303 (Reapproved 0709), Specification for Back Surface Marking of Double-Side Polished Wafers with a Two-Dimensional Matrix Code Symbol
 - TF to discuss traceability letter ballot #5752 results instead of NA 5 Year Review TF under Traceability NA TC Chapter.
 - Adjudication of letter ballot #5752 was transferred from Traceability NA TC Chapter to Japan TC Chapter.
 - To discuss following items related to Information & Control
 - Fiducial Mark Reading Condition Report
- GEM300 TF
 - #5538A: New Standard: Specification for Production Recipe Cache (PRC)
 - Published as SEMI E170-0714.
 - #5730: Line Item Revision to SEMI E170-0714, Specification for Production Recipe Cache (PRC)



- SNARF was approved at Japan Fall 2014 Meetings and the ballot is now on Cycle 7-2014.
 - #5731: Revision to add a New Subordinate Standard for Specification for SECS-II Protocol for Production Recipe Cache to SEMI E170-0714, Specification for Production Recipe Cache (PRC)
 - SNARF was approved at Japan Fall 2014 Meetings and submitted for Cycle 7-2014.
 - #5600: Line-item revision to SEMI E5, SEMI E40 and E40.1, removal of inconsistencies
 - Withdrawal of #5600 was approved at Japan Fall 2014 Meetings.
 - #5601: Specification for Wafer Object Model (WOMS)
 - Introduce Wafer Object and its behavior.
 - Ballot 5601 was adjudicated and failed at Japan Fall 2014 Meetings.
- 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 submission to be decided.
- Predictive Carrier Logistics (PCL) TF
 - #5486A: New Standard: Specification for Predictive Carrier Logistics (PCL)
 - Published as SEMI E171-0914
 - #5735: Line Item Revision to SEMI E171-0914, Specification for Predictive Carrier Logistics (PCL)
 - SNARF was approved at Japan Fall 2014 Meetings and balloted for Cycle 7-2014.
 - #5778: Revision to add a New Subordinate Standard for Specification for SECS-II Protocol for SEMI E171-0914, Specification for Predictive Carrier Logistics (PCL)
 - SNARF was approved at Japan Fall 2014 Meetings and balloted for Cycle 7-2014.
- Sensor Bus TF
 - No activity
- 5 Year Review (under Japan I&C TC Chapter)
 - SEMI E99-1104 (Reapproved 0710), The Carrier ID Reader/Writer Functional Standard: Specification of Concepts, Behavior, and Services and SEMI E99.1-1104 (Reapproved 0710), Specification for SECS-I and SECS-II Protocol for Carrier ID Reader/Writer Functional Standard
 - Japan TC Chapter recognize revision activity is needed based on a brief review.
 - Revision SNARF to be proposed at the Japan Winter Meeting 2014. (Volunteers are needed)
 - SEMI E107-1102 (Reapproved 0710), Specification of Electric Failure Link Data Format for Yield Management System
 - Japan TC Chapter recognize revision activity is needed based on a brief review.
 - To make INACTIVE if Japan TC Chapter is unable to find volunteers for this activity.
- Next meeting: December 5 for the Japan Winter 2014 Meetings (Tokyo Big Sight Conference Tower, Tokyo, Japan)
- Japan I&CC Meeting Schedule
 - Spring – April 2015 | Summer – June 2015 | Fall – September 2015
- Staff Contact: Chie Yanagisawa (cyanagisawa@semi.org)

Action Item: 2014Nov #01, Mitsuhiro Matsuda to provide updated Japan I&C liaison report that will include information on E99/carrier ID activity.

Attachment: 04, Japan I&C Liaison Report



3.3 Korea Information & Control Committee

Won Tae Kim presented the Korea I&C liaison report. The key items were as follows:

- Next meeting:
 - February 5 in conjunction with SEMICON Korea 2015 (Coex, Seoul)
- GEM300 TF
 - 4946 (E87 revision, add carrier ready to unload prediction feature) - *pending*
 - Revised the scope to delete “Provisional” removal line item as follow the SEMI Regulation.
 - The activity holds off until the E87.1 revision completed.
 - 5738 (E87.1 revision) - *pending*
 - Removal of “Provisional”
 - Removal of SML Notation and all references to SML
 - 5320 (E116 and E116.1 revisions)
 - Committee will share the future plan of the activity after the February 2015 meeting.
- DDA TF
 - EDA standards are translated and published on August 11
- Staff Contact: Natalie Shim (eshim@semi.org)

Attachment: 05, Korea I&C Liaison Report

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

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

- Next meeting:
 - SEMICON Europa 2015 (Dresden, Germany)
- Two documents to go inactive
 - SEMI E54.14-0309, Specification for Sensor/Actuator Network Communications for PROFINET
 - SEMI E54.8-0309, Specification for Sensor/Actuator Network Communications for PROFIBUS-DP
- Staff Contact: Andrea Busch (abusch@semi.org)

Attachment: 06, Europe I&C Liaison Report

3.5 Taiwan Information & Control Committee

No activities to report.

4 E30/SML Copyright Update

Paul Trio read the following statement from SEMI Legal Counsel:

SEMI's investigation, conducted in conjunction with counsel, into PEER Group's claimed copyright in SML and SML Notation is ongoing. Counsel for SEMI and PEER have exchanged correspondence, and currently are evaluating the parties' positions. All committee activity related to SML and SML notation is being postponed in light of this ongoing investigation.



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 6, 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 6, 2014 Ballots

Document #	Document Title	Committee Action
5274C	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	Failed , to be reballoted
5508	Line Revisions to SEMI E90-0312, Specification for Substrate Tracking; SEMI E90.1-0312, Specification for SECS-II Protocol Substrate Tracking; and SEMI E5-0813, SEMI Equipment Communications Standard 2 Message Content (SECS-II). Add Batch Object SEMI E90 & E90.1 and a New Material Format in SEMI E5	
Line Item 1	New Material Format to Allow Batches	Failed , to be reworked
Line Item 2	New Batch Object and Batch State Model	Failed , to be discontinued
5618	New Standard: Specification for Preservation of Recipe Integrity (PRI)	Failed , to be reballoted
5619A	New Standard: Specification for SECS Equipment Data Dictionary (SEDD)	Passed as balloted
5620A	New Standard: Specification for SECS-II Message Notation (SMN)	Passed with editorial changes

- Attachment:**
- 07, Ballot Review for Doc. 5274C
 - 08, Ballot Review for Doc. 5508
 - 09, Ballot Review for Doc. 5618
 - 10, Ballot Review for Doc. 5619A
 - 11, Ballot Review for Doc. 5620A

6 Task Force Reports

6.1 Diagnostic Data Acquisition (DDA) Task Force

Gino Crispieri reported for the DDA Task Force. The key items were as follows:

- Attendance: 11 in person, 0 remote
- Documents in Development
 - 5677 (E164 revision, EDA common metadata)
- Revised SNARF
 - SNARF #5762 revised from E132 revision (*Specification for Equipment Client Authentication and Authorization*) to SEMI E132.1, *Specification for Soap Binding for Equipment Client Authentication and Authorization (ECA)*. Adding EDA freeze versions to E132.1 {see section 9.2.1 of these minutes}
- Ballot Plans (for Cycle 2, 2015):
 - 5677 (E164 revision, EDA Common Metadata) and 5762 {see section 9.2.1 of these minutes}



- New Issues
 - New list of errata submitted by Lance Rist for SEMI E164
 - Task force plans to prepare SNARFs for changes to multiple standards for the purpose of starting work towards the completion for a future freeze version
- Next Meetings
 - Task force meetings are planned between now and Spring SEMI standards meetings to discuss SEMI E164 ballot submission and SEMI E132.1 proposal and identifying future SNARF work.
- DDA TF Google Site
 - <https://sites.google.com/a/semi.org/ddatf/>
 - Available materials: minutes, ballot drafts, issues tracking spreadsheets, other working materials

Attachment: 12, Diagnostic Data Acquisition Task Force Report

6.2 Energy Saving Equipment Communication Task Force

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

- Attendance: 11 in person, 1 remote
- New TF Business
 - Phase II - Development of new standard for Energy Savings Communication between Equipment and Subsystems (SNARF #5821)
 - Task force reviewed the draft document contents and will continue doing so at the scheduled TF meetings
- Ballot Plans (for Cycle 2, 2015)
 - 5821 (New Standard: *Specification for Energy Savings Mode Communication between Semiconductor Equipment and Sub-Systems*)

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: 13 in person, 1 remote
- New SNARF *{see section 9.2.2 of these minutes}*
 - (#5824) Revision to Specification for SECS Equipment Data Dictionary (SEDD) [formerly SEMI Draft Document 5619A]
- Ballot Plans (Cycle 2, 2015):
 - 5618A (preservation of recipe integrity) and 5824 *{see section 9.2.2 of these minutes}*

Attachment: 14, GEM300 Task Force Report

6.4 Process Control System (PCS) Task Force

James Moyne reported for the PCS Task Force. The key items were as follows:

- No TF meeting held during the NA Standards Fall 2014 Meetings
- Ballot Plans (Cycle 2, 2015)
 - 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]. Update to better align with XML guidelines)



6.5 Sensor Bus Task Force

Jack Ghiselli reported for the Sensor Bus Task Force. The key items were as follows:

- Attendance: 6 (including 3 remote)
- Ballot Plans (for Cycle 1 or 2, 2015):
 - 5274D (New E54 Subordinate Standard: Specification for Sensor/Actuator Network Specific Device Model of a Generic Equipment Add-On Sensor [ADDON])

Attachment: 15, Sensor Bus Task Force Report

7 Proposed Meeting Schedule for the NA Standards Spring 2015 Meetings

North America Standards Spring 2015 Meetings
 March 30 – April 2, 2015
 SEMI Headquarters
 3081 Zanker Road
 San Jose, California 95134
 U.S.A.

The tentative schedule is provided below:

- Monday, March 30
 - Japan Predictive Carrier Logistics [PCL] TF (11:00 AM to 12:00 Noon, US Pacific Time)
 - I&C Leadership (12:00 Noon to 1:00 PM)
 - Diagnostic Data Acquisition [DDA] TF (1:00 PM to 3:00 PM)
- Tuesday, March 31
 - Energy Saving Equipment Communication [ESEC] TF (8:00 AM to 10:00 AM)
 - GEM300 TF (10:00 AM to 5:00 PM)
 - 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, April 1
 - 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>
2014Jul #01	Paul Trio	Confirm with SEMI legal whether a list of 17 SEMI Standards that could be impacted by the SML copyright claim can be included in the NA I&C West 2014 meeting minutes.	No. Closed.
2014Jul #02	Paul Trio	Send invitations to Japan PCL TF meeting during the NA Fall 2014 to determine level of interest.	Closed.
2014Jul #03	Paul Trio	Confirm whether E30.5 reapproval ballot will be impacted by SML claim.	Completed. Closed
2014Apr #03	NA I&C Chairs	Discuss with Gases Committee better alignment of Intercommittee Ballots	Closed



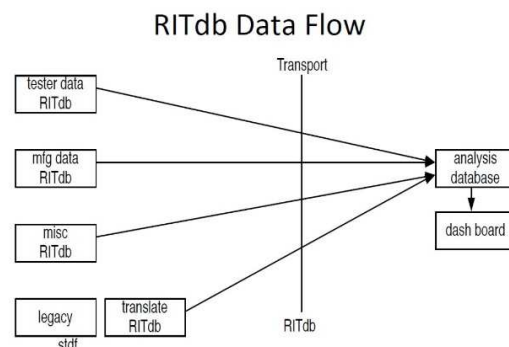
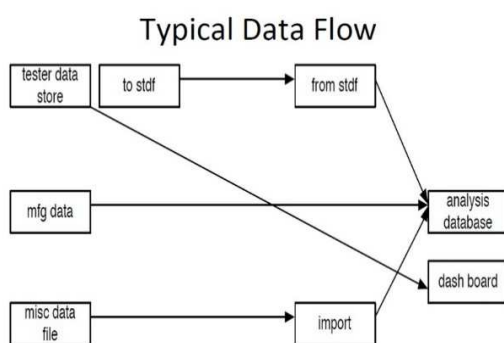
2013Jul #05	Paul Trio	Consult with the ISC Regulations Subcommittee on what should be done to SEMI E30 in light of the existing SML copyright issue.	Open
2012Oct #02	Paul Trio	Draft SNARF and ballot proposal for E30 revision (reorganization of introductory sections) and send to GEM300 TF leaders for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

9 New Business

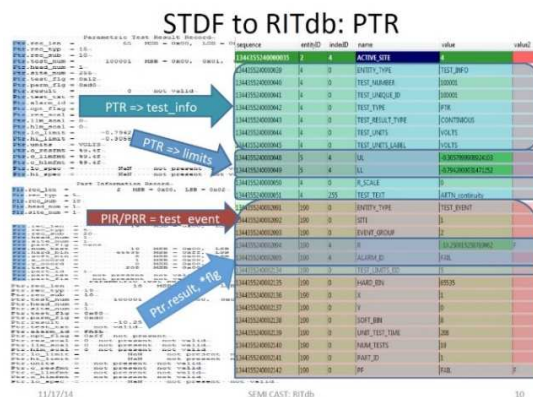
9.1 SEMI Collaborative Alliance for Semiconductor Test (CAST) Update

Mark Roos presented current activities within the SEMI CAST Special Interest Group (SIG) that would be of interest to the Information & Control Committee. His presentation focused on the Rich Interactive Test Database (RITdb) Working Group activities. The key items were as follows:

- CAST Standard Test Data Format (STDF) Working Group
 - Representatives from users and suppliers
 - Objectives
 - Take control of STDF v4
 - Added scan and memory test records
 - Move to a next generation format
 - More flexibility
 - Adaptive Test
- STDF NextGen Objectives
 - Provide standard data sharing environment for all types of Semiconductor Test Data
 - Simple standards-based data capture, transport and relationship model
 - Model intended to support:
 - Near real-time monitoring of status and performance
 - Data analysis that requires accurate, consistent data from multiple related sources

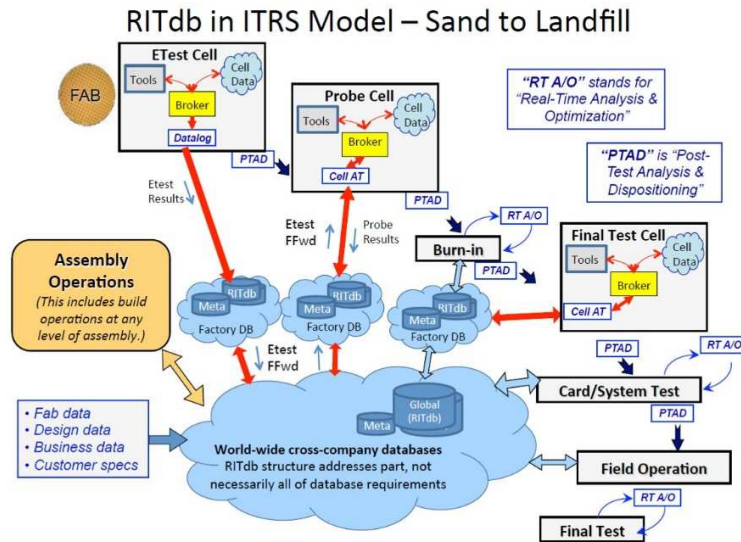


- Requirements on a data format
 - Open, royalty free format
 - Clear, concise and complete core specification
 - Definition of format (schema)
 - Defined conformance checking
 - Definition of key content elements
 - Transparent extendibility
 - Supporting forward- and backward-compatibility
 - Defined maintenance cycles
 - Multi-way communication
 - “dock / un-dock” chunks to a file as fit a given manufacturing flow
 - Harvesting existing formats, where they exist (e.g., E142)
- No SQL in a SQL database
 - Key value store optimized for test data
 - Single table with 6 columns
 - Sequence Monotonic UTC based uSecs
 - EntityID Entity/Record Identifier
 - IndexID Array support
 - Name Attribute/Field name
 - Value
 - Value2 Additional value attribute
 - SQLite single, op sys independent file



- Test data is not the only data
 - Extend for collecting tester information
- Benefits
 - Based on widely available database
 - Extensible to all semiconductor data
 - Supports streaming analysis
 - Enables plug and play from multiple vendors
 - Replaces STDF and enables Adaptive Test
 - Allows content based searching

- RITdb is a way to transport, but how do we share?
 - Adaptive Test requires sharing data
 - But sharing has issues (e.g., identity/integrity of data, security)
 - Referred to as “Provenance”
 - RITdb solves these with a bonded metadata file



- Current Status
 - Mapping from STDF v4 to RITdb defined
 - Translator available
 - Overall schema defined
 - Initial specification started
 - Many file translations have been tested
 - Actual Projects
 - Translators
 - Equipment logging
 - Outlier detection
- What is next
 - Formalize specification for RITdb (1/15)
 - Proposal for container standard
 - Other possibilities
 - eTest record and field standardization
 - Wafer map inclusion
- More Info
 - SEMI website CAST working group
 - To join STDF Working Group: akhoche@k-consultinx.com
 - For this and other presentations or the translator: sjouri@ti.com, mroos@roos.com
 - LinkedIn Group: CAST-Collaborative-Alliance-Semiconductor-Test

Attachment: 16, SEMI CAST RITdb Activity



9.2 New TFOFs & SNARFs

9.2.1 Revised SNARF #5762 – Revision to SEMI E132.1, Specification for Soap Binding for Equipment Client Authentication and Authorization (ECA). Adding EDA freeze versions to E132.1

- SNARF revised from E132 revision (*Specification for Equipment Client Authentication and Authorization*) to E132.1 revision.
- Rationale:
 - *Problem #1* – An EDA interface Implementation is a specific set of the EDA standard document versions that work together. These were initially defined and declared by SEMATECH. SEMI has supported these “EDA Freeze Versions” by distributing each set of EDA complementary files and various materials in a single ZIP file. E132 web service InterfaceDiscovery publishes a set of EDA web services as a Session Group, which is equivalent to an EDA Freeze Version; even though the EDA Freeze Version concept is not defined within the EDA standards.
 - *Problem #2* – The Session Group has a “name” attribute. The name of this group is not strictly specified even when it corresponds to a specific EDA Freeze Version; therefore a client cannot determine which EDA Freeze Version an interface implements.
- Scope:
 - Define EDA Freeze Versions 1 and 2 in the E132.1 standard.
 - Specify the value for the Session Group’s name attribute when an EDA Freeze Version is implemented.

Motion: Approve revised SNARF #5762 for E132.1 revision (adding EDA freeze versions to E132.1).

By / 2nd: Gino Crispieri (consultant) / Brian Rubow (Cimetrix)

Discussion: None.

Vote: 9-0 in favor. Motion passed.

Attachment: 17, Revised DDA TF SNARF #5762

9.2.2 New SNARF for Revision to Specification for SECS Equipment Data Dictionary (SEDD) [formerly SEMI Draft Document 5619A]

SEMI Staff Note: SEMI Draft Document 5619A (New Standard: Specification for SECS Equipment Data Dictionary (SEDD)) passed technical committee review on November 5, 2014. Pending successful procedural review, Document 5619A will be published as a SEMI Standard. This SNARF proposes additional refinements to the SEDD Standard.

- **Charter:** During ballot review of SEMI Document #5619A at the Fall 2014 Standards Meetings, some potential enhancements and additions to the document were identified and discussed. This document will propose those enhancements.

In addition, other potential enhancements had been identified by the GEM 300 TF in the past. These will also be considered for inclusion in this proposal.

All these potential enhancements are listed in the Scope section.

- **Scope:** This activity will result in changes to the specification resulting from the approval of SEMI Document #5619A. Those changes are based on potential revisions to the SEDD Specification identified previously by the GEM 300 TF and those raised by voters during balloting of 5619A



The list of potential revisions follows. The GEM 300 Task Force will determine which of these is included in the final ballot.

- Modification of the wording in the text, including requirements to add clarity without changing the intention of that text. Some of those areas include:
 - Further explanation of why the SEDD allows multiple UNITS to be defined for RVPs and data variables.
 - Reword Table 8 title to make clear “additional equipment data types”
 - Table 8 header item DataVariable to DataValue
- In RQ-00012 and related text, clarify that SEDD is a data set that is to be delivered as an XML file.
 - Consider including the name of the file inside the file itself (or information sufficient to derive the name).
- Addition of a section in the SEDD that describes the default/pre-defined collection event report definitions.
 - These collection event report definitions sometimes serve as guidance to the user of suggested data to be collected for each collection event.
- Modification or removal of SEDD Schema restrictions (e.g., xs:unique and xs:keyref constructs) that cause warnings in some XML validation tools.
 - For example, xs:keyref construct for RVP Format field and xs:unique construct for data variable identifiers.
- Selection of the best term to use among equivalent terms, including StatusValue|StatusVariable, DataValue|DataVariable, VID|DVNAME; and consistent use of the selected terms.
- Discussion of a possible exception where the available DVs for a collection event might change due to user configuration.
 - Address the situation where a DV may be valid on a collection event, but only part of the time.
 - For example, a DV that is reported upon carrier arrival, but is valid only if it arrives at a load port, but not if it arrived at a FIMS port (on a tool with both kinds).
- Addition of a section in the SEDD that documents the available commands that can be accepted by the production equipment (including remote commands).
- Addition of a section in the SEDD that documents the SECS messages supported by the production equipment. This includes the structure of the messages so that it will document which of the possible alternate message structures is supported.
- Include documentation of the supported standards compliance tables showing what features are supported by the equipment.
- Documentation of equipment structure sufficiently to provide the value used to populate the Source fields defined in the SEDD.
- Change of the max length of Source to be > 80 characters (for example 1024) to support Source fields based on equipment structure similar to EDA metadata
- Addition of capability of using a defined VariableFormat within the definition of another VariableFormat to allow for reuse of a single definition of a VariableFormat
 - For example, there may be a variable that contains a state with a format StateEnum, and another variable with a list of states (perhaps states of each load port) with a format of StateEnumList. Currently, the enumeration for the state must be defined twice.
- Address the potential situation where a variable might need a different format if the units are changed and, for example, a different scale is needed
- Leverage the 5620 SMN schema and remove the excerpts from that schema from the 5619A specification.



Motion: Approve new SNARF for Revision to Specification for SECS Equipment Data Dictionary (SEDD) [*formerly SEMI Draft Document 5619A*]
By / 2nd: Lance Rist (RistTex) / Brian Rubow (Cimetrix)
Discussion: None
Vote: 10-0 in favor. Motion passed.

Attachment: 18, New SNARF for SEDD Revision

9.3 *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.

Motion: Approve all SNARFs, TFOFs, and letter ballots (as presented in tables 4 and 5 above).
By / 2nd: Jack Ghiselli (Ghiselli Consulting) / Mitsuhiro Matsuda (Hitachi-Kokusai)
Discussion: Mitsuhiro Matsuda opposed authorization for ballot submission of Sensor Bus TF document 5274D. Matsuda-san pointed out that he submitted negatives, but did not receive any responses from the authors/TF leaders.
Vote: 11-1 in favor. Motion passed.

Action Item: 2014Nov #02, NA I&C Co-chairs to work with Sensor Bus TF leaders in addressing negatives submitted in 5274 ballots.

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 November 5 in conjunction with the NA Standards Fall 2014 Meetings. Adjournment was at 12:20 PM.



Respectfully submitted by:

Paul Trio
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Minutes approved by:

Jack Ghiselli (Ghiselli Consulting), Co-chair	March 2, 2015
Lance Rist (RistTex), Co-chair	
Brian Rubow (Cimetrix), Co-chair	March 3, 2015

Table 8 Index of Available Attachments #1

#	<i>Title</i>	#	<i>Title</i>
1	SEMI Standards Required Meeting Elements	10	Ballot Review for Doc. 5619A
2	NA I&CC West 2014 (July 9) meeting minutes	11	Ballot Review for Doc. 5620A
3	SEMI Standards Staff Report	12	Diagnostic Data Acquisition Task Force Report
4	Japan I&C Liaison Report	13	Energy Saving Equipment Task Force Report
5	Korea I&C Liaison Report	14	GEM300 Task Force Report
6	Europe I&C Liaison Report	15	Sensor Bus Task Force Report
7	Ballot Review for Doc. 5274C	16	SEMI CAST RITdb Activity
8	Ballot Review for Doc. 5508	17	Revised DDA TF SNARF #5762
9	Ballot Review for Doc. 5618	18	New SNARF for SEDD Revision

#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 Paul Trio at the contact information above.