Information & Control NA TC Chapter

Meeting Summary and Minutes

NA Fall Meetings

Wednesday, November 9, 2022

9:00 AM – 3:00 PM Pacific Time

TC Chapter Announcements

Next TC Chapter Meeting

Wednesday, April 5, 2023

9:00 AM–3:00 PM (Pacific Time)

SEMI HQ, Milpitas

Table 1 Meeting Attendees

Italics indicate virtual participants

Co-Chairs: James Moyne (Applied Materials / University of Michigan), Brian Rubow (Cimetrix), Jack Ghiselli (Ghiselli Consulting)

SEMI Staff: Michelle Sun

Company	Last	First	Company	Last	First
Applied Materials, Inc.	*Moyne*	*James*	Intel Corp.	*Bond*	*Ryan*
Arlington Laboratory	*Judd*	*Daniel*	Intel Corporation	*Viswanath*	*Shuba*
Cimetrix Incorporated	Rubow	Brian	Omron Automation Americas	Deeb	Joseph
Cimetrix Incorporated	*Tracey*	*Tami*	Omron Electronics, Inc	Infelise	Nick
Ghiselli Consulting	Ghiselli	Jack	PEER Group Inc.	*Fuchigami*	*Albert*
Hitachi High-Tech Corporation	*Toyoshima*	*Yuko*	Samsung	*Park*	*Jae Yong*
Intel	*Simons*	*Dan*	SEMI	Sun	Michelle

Table 2 Leadership Changes

WG/TF/SC/TC Name	Previous Leader	New Leader
Equipment Data Publication (EDP) Task Force **[New]**		Shuba Viswanath (Intel)
Equipment Data Publication (EDP) Task Force **[New]**		Jae Yong Park (Samsung)

Table 3 Committee Structure Changes

Previous WG/TF/SC Name	New WG/TF/SC Name or Status Change
	Equipment Data Publication (EDP) Task Force **[New]**

Table 4 Ballot Results

Document #	Document Title	Committee Action
6946	Line Item Revision to SEMI E132-0922, Specification For Equipment Client Authentication and Authorization and SEMI E132.2-0422^E, Specification for Protocol Buffers for Equipment Client Authentication and Authorization (ECA)	
LI-1	Clarify definition and concepts	**Failed**
LI-2	Rework ACL passwords and security scenarios	**Failed**
LI-3	Rework EstablishSession and ChangeSessionEndpoint functionality	**Failed**
LI-4	Address issues discovered during EDA Software Vendor Test Session #1	**Failed**
LI-5	Clean up spelling errors and clarify how .proto files are used	**Failed**
6947	Line Item Revision to SEMI E179-0320, Specification for Protocol Buffers Common Components	
LI-1	Fix message definition to properly support Array of Array data types	**Passed**
LI-2	Clarify oneof keyword usage	**Passed**
LI-3	Address Style Manual issues and address spelling errors and reference errors	**Passed**
6859A	Revision to SEMI E116-0518, Specification for Equipment Performance Tracking (EPT) and E116.1-0707 (Reapproved 0518), Specification for SECS-II Protocol for Equipment Performance Tracking (EPT)	**Passed with editorial changes**
6572C	Revision to SEMI E30-0418: Specification for The Generic Model for Communications and Control of Manufacturing Equipment (GEM)	**Passed with editorial changes**
6932	Reapproval for SEMI E121-1017, Guide for Style and Usage of XML for Semiconductor Manufacturing Applications	**Passed**
6850	Reapproval of SEMI E109.1-1110, Specification for SECS-II Protocol for Reticle and Pod Management (RPMS)	**Passed**
6969	Reapproval of SEMI E123-0217, Specification for Handler Equipment Specific Equipment Model (HSEM)	**Passed with editorial changes**
6968	Reapproval of SEMI E122.1-0703 (Reapproved 1109), Specification for SECS-II Protocol for Tester Specific Equipment Model (TSEM)	**Passed**
6967	Reapproval of SEMI E122-0217, Specification for Tester Equipment Specific Equipment Model (TSEM)	**Passed**
6966	Reapproval of SEMI E109-1017, Specification for Reticle and Pod Management (RPMS)	**Passed**
6965	Reapproval of SEMI E88-0318, Specification for AMHS Storage SEM (Stocker SEM)	**Passed**
6964	Reapproval of SEMI E82-0318, Specification for Interbay/Intrabay AMHS SEM (IBSEM)	**Passed with editorial changes**
6963	Reapproval of SEMI E30.5-0217, Specification for Metrology Specific Equipment Model (MSEM)	**Passed**
6962	Reapproval of SEMI E30.1-0217, Specification for Inspection and Review Specific Equipment Model (ISEM)	**Passed**
6851	Reapproval of SEMI E123.1-0703 (Reapproved 1109), Specification for SECS-II Protocol for Handler Specific Equipment Model (HSEM)	**Passed**

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

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

Table 5 Activities Approved by the GCS between meetings of the TC Chapter

#	Type	SC/TF/WG	Details
6991	SNARF	GEM300	Line Item Revision to SEMI E4-0418, Specification for SEMI Equipment Communications Standard 1 Message Transfer (SECS-I)
6992	SNARF	GEM300	Line Item Revision to SEMI E157-0611 (Reapproved 0616), Specification for Module Process Tracking
6962	SNARF	GEM300	Reapproval of E30.1-0217, Specification for Inspection and Review Specific Equipment Model (ISEM)
6963	SNARF	GEM300	Reapproval of E30.5-0217, Specification for Metrology Specific Equipment Model (MSEM)
6964	SNARF	GEM300	Reapproval of E82-0318, Specification for Interbay/Intrabay AMHS SEM (IBSEM)
6965	SNARF	GEM300	Reapproval of E88-0318, Specification for AMHS Storage SEM (Stocker SEM)
6966	SNARF	GEM300	Reapproval of E109-1017, Specification for Reticle and Pod Management (RPMS)
6967	SNARF	GEM300	Reapproval of E122-0217, Specification for Tester Equipment Specific Equipment Model (TSEM)
6968	SNARF	GEM300	Reapproval of SEMI E122.1-0703 (Reapproved 1109), Specification for SECS-II Protocol for Tester Specific Equipment Model (TSEM)
6969	SNARF	GEM300	Reapproval of E123-0217, Specification for Handler Equipment Specific Equipment Model (HSEM)

Table 6 Authorized Activities

Listing of all revised or new SNARF(s) approved by the Originating TC Chapter.

#	Type	SC/TF/WG	Details
None			

#1 SNARFs and TFOFs are available for review on the SEMI Web site at:

http://downloads.semi.org/web/wstdsbal.nsf/TFOFSNARF

Table 7 Authorized Ballots

#	When	TF	Details
6991	Cycle 2-2023	GEM300	Line Item Revision to SEMI E4-0418, Specification for SEMI Equipment Communications Standard 1 Message Transfer (SECS-I)
6992	Cycle 2-2023	GEM300	Line Item Revision to SEMI E157-0611 (Reapproved 0616), Specification for Module Process Tracking
7004	Cycle 2-2023	GEM300	Reapproval of E130-0618, Specification for Prober Specific Equipment Model for 300 mm Environment (PSEM300)
6951	Cycle 2-2023	PCS	Reapproval of SEMI E126-0708, Specification for Equipment Quality Information Parameters (EQIP)
7001	Cycle 2-2023	DDA	Revision to SEMI E125-1022, Specification for Equipment Self Description (EqSD), and SEMI E125.2-1022, Specification for Protocol Buffers for Equipment Self Description (EqSD)
7002	Cycle 2-2023	DDA	Revision to SEMI E132-0922, Specification for Equipment Client Authentication and Authorization, and SEMI E132.2-0422E,Specification for Protocol Buffers for Equipment Client Authentication and Authorization (ECA)
7003	Cycle 2-2023	DDA	Revision to SEMI E134-1022, Specification for Protocol Buffers for Equipment Client Authentication and Authorization (ECA) and SEMI E134.2-1022, Specification for Protocol Buffers of Data Collection Management
6835	Cycle 2-2023	GEM300	Line Item Revision to SEMI E87-XXXX, Specification for Carrier Management (CMS) and SEMI E87.1-XXXX, Specification for SECS-II Protocol for Carrier Management (CMS)

Table 7 Authorized Ballots

#	When	TF	Details
6930	Cycle 2-2023	DDA	Revision to SEMI E164-0414 (Reapproved 0721): Specification for EDA Common Metadata
6923	Cycle 2-2023	ESEC	Line Item Revisions to SEMI E167-1213: Specification for Equipment Energy Saving Mode Communications (EESM), SEMI E167.1-1213: Specification for SECS-II Protocol for Equipment Energy Saving Mode Communications, and SEMI E175-1116: Specification for Subsystem Energy Saving Mode Communication (SESMC)

Table 8 SNARF(s) Granted a One-Year Extension

#	TF	Title	Expiration Date
None			

Table 9 SNARF(s) Abolished

#	TF	Title
6946	DDA	Line Item Revision to SEMI E132-0922, Specification For Equipment Client Authentication and Authorization and SEMI E132.2-0422E, Specification for Protocol Buffers for Equipment Client Authentication and Authorization (ECA)
6929	DDA	Line Item Revision to SEMI E134-XXYY, Specification for Data Collection Management and SEMI E134.2-WWZZ, Specification for Protocol Buffers of Data Collection Management
6945	DDA	Revision to SEMI E125-1022, Specification for Equipment Self Description (EqSD), and SEMI E125.2-1022, Specification for Protocol Buffers for Equipment Self Description (EqSD)

Table 10 Standard(s) to receive Inactive Status

Standard Designation	Title
None	

Table 11 New Action Items

Item #	Assigned to	Details
None		

Table 12 Previous Meeting Action Items

Item #	Assigned to	Details
1	Michelle Sun (SEMI)	Confirm Fall and Spring meeting dates - **CLOSED**
2	Thai Nguyen (SEMI)	Double instances of voter when manual add/self add, and cannot remove someone you've added manually - **OPEN**
3	Thai Nguyen (SEMI)	Request to IT: Move timer the screen so it doesn't jump during voting - **OPEN**
4	Michelle Sun (SEMI), James Moyne (AMAT/University of Michigan)	Create procedure for updating E54 series with biased terms. Lots of them have master/slave terms, making it difficult to do all at once. - **OPEN**

1 Welcome, Reminders, and Introductions

Jack Ghiselli (Ghiselli Consulting) called the meeting to order at 9:03. The meeting reminders on antitrust issues, intellectual property issues and holding meetings with international attendance were reviewed. Attendees introduced themselves.

Attachment: Required Meeting Elements Nov 2022

2 Review of Previous Meeting Minutes

The TC Chapter reviewed the minutes of the previous meeting.

Motion: Approve the minutes as written
By / 2nd: Brian Rubow (Cimetrix Incorporated) / Daniel Judd (Arlington Laboratory)
Discussion: None
Vote: 9-Y 0-N. Motion passed.

Attachment: TCMinutes_IC_Jul2022

3 Liaison Reports

3.1 *I&C Japan TC Chapter*

Michelle Sun (SEMI) reported for the I&C Japan TC Chapter. Of note:

- Last meeting
    - Friday, September 9, 2022, 9:30AM-12:00 noon [JST]
    - Official Virtual TC Chapter Meeting
- Next meeting
    - Friday, December 16, 2022, in conjunction with SEMICON Japan 2022
    - Tokyo Big Sight, Tokyo, Japan + OVTCCM (Hybrid)
- Organization Changes
    - GEM300 TF – Motoki Miyamoto (Yokogawa) **[New Leader]**
    - Backend Factory Integration TF **[Discharged]**

Attachment: JA_I&C_Liaison_20220922_v1.4

3.2 *I&C Taiwan TC Chapter*

Michelle Sun (SEMI) reported for the I&C Taiwan TC Chapter. Of note:

- Last meeting
    - June 10, 2022
    - Official Virtual TC Chapter Meeting
- Next meeting
    - November 30, 2022
    - Tokyo Big Sight, Tokyo, Japan + OVTCCM (Hybrid)
- Authorized Activities
    - 6938, New Standard: Guide for Equipment Edge Data Governance (EEDG)

Attachment: I&C Taiwan Laision report_Oct. 2022_v1

3.3 *I&C Korea TC Chapter*

Michelle Sun (SEMI) reported for the I&C China TC Chapter. Of note:

- Last meeting

- o   September 23, 2022
- o   Yangyang-gun, Gangwon-do, Korea
- Next meeting
  - o   February 2, 2023
  - o   Coex, Seoul, Korea
- Leadership Changes
  - o   Inhyeok Park (Linkgenesis) stepped down from DDA TF leader. Hyungsu Kim (Doople) remained as co-leader.
- Authorized Ballots
  - o   6832C, New Standard: Specification for Equipment Generic Counter Model (EGCM)

Attachment: Liaison report_InC_KR__Nov2022_v2

3.4 *SEMI Staff Report*

Michelle Sun (SEMI) gave the SEMI Staff Report. Of note:

SEMI Global 2022 & 2023 Calendar of Events
- SEMICON Europa
  - o   Nov 15-18
  - o   Munich, Germany
- SEMICON Japan
  - o   Dec 14-16
  - o   Tokyo, Japan
- SEMICON Korea
  - o   Feb 1-3, 2023
  - o   Seoul, Korea
- SEMICON China
  - o   Mar 22-24, 2023
  - o   Shanghai, China

NA Standards Spring Meetings
- April 3-6, 2023
- SEMI HQ, Milpitas, California/US

Critical Dates for SEMI Standards Ballots

2022	Ballot Submission Deadline	Voting Opens	Voting Closes
Cycle 8	October 4	October 18	November 17
Cycle 9	November 15	November 29	December 29

2023	Ballot Submission Deadline	Voting Opens	Voting Closes
Cycle 1	January 4	January 18	February 17
Cycle 2	February 1	February 15	March 17
Cycle 3	March 8	March 22	April 21
Cycle 4	April 19	May 3	June 2

SEMI Standards Publications
- Total SEMI Standards in portfolio: 1,069
- Includes 320 Inactive Standards
- New Standards

Cycle	Designation	Title	Committee	Region
September 2022	SEMI F120	Test Method for the Electrochemical Critical Pitting Voltage Testing of Stainless Steel Used in Corrosive Gas Systems	Gases	NA
September 2022	SEMI E120.2	Specification for Protocol Buffers for Common Equipment Model (CEM)	Information & Control	NA
October 2022	SEMI E125.2	Specification for Protocol Buffers for Equipment Self Description (EqSD)	Information & Control	NA
October 2022	SEMI E134.2	Specification for Protocol Buffers of Data Collection Management	Information & Control	NA
October 2022	SEMI E142.4	Specification for SECS II Protocol for Substrate Mapping Using Item Transfer	Information & Control	NA

Publications Backlog

Processing Queue: 37	YTD Published: 93
5/5/2022 A&R cycle: 8 6/30/2022 A&R cycle: 11 8/18/2022 A&R cycle: 9 10/12/2022 A&R cycle: 9	New Standards: 11 Revisions: 43 Reapprovals: 36 Withdrawals: 3

Contributing Factors
- Increased A&R cycles have resulted in a constant rate of documents for processing.
- Ballots are becoming more complex and require more time to process.
- As the Regulations, Procedure Manual, and Style Manual are updated, there is the potential for delays in processing documents (e.g., ensuring documents comply).

SNARF(s) Approved by GCS
- Line Item Revision to SEMI E4 0418, Specification for SEMI Equipment Communications Standard 1 Message Transfer (SECS-I)
- Revision to SEMI E157 0611, (Reapproved 0616) Specification for Module Process Tracking
- Reapprovals for SEMI E30.1, E30.5, E82, E88, E109, E123. E122.1, E123.1, E109.1

5-Year Reapproval

Display Name	Description	Date Available	Disposition
SEMI E109-1017	Specification for Reticle and Pod Management (RPMS)	10/6/2017	Balloted Cycle 7
SEMI E116-0518	Specification for Equipment Performance Tracking	5/17/2018	Balloted Cycle 7
SEMI E121-1017	Guide for Style and Usage of XML for Semiconductor Manufacturing Applications	10/6/2017	Balloted Cycle 7
SEMI E122-0217	Specification for Tester Equipment Specific Equipment Model (TSEM)	2/10/2017	Balloted Cycle 7

SEMI E123-0217	Specification for Handler Equipment Specific Equipment Model (HSEM)	2/10/2017	Balloted Cycle 7
SEMI E30.1-0217	Specification for Inspection and Review Specific Equipment Model (ISEM)	2/10/2017	Balloted Cycle 7
SEMI E30.5-0302 (Reapproved 0217)	Specification for Metrology Specific Equipment Model (MSEM)	2/24/2017	Balloted Cycle 7
SEMI E82-1106 (Reapproved 0318)	Specification for Interbay/Intrabay AMHS SEM (IBSEM)	3/23/2018	Balloted Cycle 7
SEMI E88-0307 (Reapproved 0318)	Specification for AMHS Storage SEM (Stocker SEM)	3/23/2018	Balloted Cycle 7
SEMI E151-1211 (Reapproved 0517)	Guide for Understanding Data Quality	5/26/2017	LI biased teminology update
SEMI E160-1211 (Reapproved 0317)	Specification for Communication of Data Quality	3/31/2017	LI biased teminology update
SEMI E54.10-0600 (Reapproved 1017)	Specification for Sensor/Actuator Network Specific Device Model for an In-Situ Particle Monitor Device	10/27/2017	LI biased teminology update; Cochair review
SEMI E54.20-0316	Specification for Sensor/Actuator Network Communications for EtherCAT	3/25/2016	LI revision
SEMI E4-0418	Specification for SEMI Equipment Communications Standard 1 Message Transfer (SECS-I)	4/13/2018	LI update by GEM300
SEMI E157-0611 (Reapproved 0616)	Specification for Module Process Tracking	6/30/2016	LI update by GEM300
SEMI E54.24-1116	Specification for Sensor/Actuator Network Specific Device Model of a Generic Equipment Networked Sensor (GENsen)	11/25/2016	Reapproval
SEMI E54-0316	Specification for Sensor/Actuator Network	3/25/2016	Reapproval
SEMI E167-1213	Specification for Equipment Energy Saving Mode Communications (EESM)	12/13/2013	Revision Planned
SEMI E175-1116	Specification for Subsystem Energy Saving Mode Communication (SESMC)	11/18/2016	Revision Planned
SEMI E126-0708 (Reapproved 0518)	Specification for Equipment Quality Information Parameters (EQIP)	5/25/2018	To be Reapproved in Future Cycle
SEMI E130-0618	Specification for Prober Specific Equipment Model for 300 mm Environment (PSEM300)		To be Reapproved in Future Cycle
SEMI E138-0217	Specification for XML Semiconductor Common Components	2/10/2017	Updated in 2019

Attachment: Staff Report Nov 2022 v6 - IC

4 Ballot Review

NOTE 1: TC Chapter adjudication on ballots reviewed is detailed in the Audits & Review (A&R) Subcommittee Forms for procedural review. The A&R forms are available as attachments to these minutes. The attachment number for each balloted document is provided under each ballot review section below.

4.1 Document 6946, Line Item Revision to SEMI E132-0922, Specification For Equipment Client Authentication and Authorization and SEMI E132.2-0422E, Specification for Protocol Buffers for Equipment Client Authentication and Authorization (ECA)

4.1.1 Line Item #1, Clarify definition and concepts

Motion: Other Technical Issue proposed by Brian Rubow is Related and Persuasive.

Reason: Passing the Line Item Ballot would prevent any standards work on SEMI E132/E132.2 until the ballot is published, and there is currently a long publishing delay. The Task Force has other major technical revisions to make in a new ballot.

By / 2nd: Albert Fuchigami (PEER Group Inc.) / Brian Rubow (Cimetrix Incorporated)

Discussion: None

Vote: 11-Y 0-N. Motion **passed**.

4.1.2 Line Item #2, Rework ACL passwords and security scenarios

Motion: Other Technical Issue proposed by Brian Rubow is Related and Persuasive.

Reason: Passing the Line Item Ballot would prevent any standards work on SEMI E132/E132.2 until the ballot is published, and there is currently a long publishing delay. The Task Force has other major technical revisions to make in a new ballot.

By / 2nd: Albert Fuchigami (PEER Group Inc.) / Brian Rubow (Cimetrix Incorporated)

Discussion: None

Vote: 11-Y 0-N. Motion **passed**.

4.1.3 Line Item #3, Rework EstablishSession and ChangeSessionEndpoint functionality

Motion: Other Technical Issue proposed by Brian Rubow is Related and Persuasive.

Reason: Passing the Line Item Ballot would prevent any standards work on SEMI E132/E132.2 until the ballot is published, and there is currently a long publishing delay. The Task Force has other major technical revisions to make in a new ballot.

By / 2nd: Albert Fuchigami (PEER Group Inc.) / Brian Rubow (Cimetrix Incorporated)

Discussion: None

Vote: 11-Y 0-N. Motion **passed**.

4.1.4 Line Item #4, Address issues discovered during EDA Software Vendor Test Session #1

Motion: Other Technical Issue proposed by Brian Rubow is Related and Persuasive.

Reason: Passing the Line Item Ballot would prevent any standards work on SEMI E132/E132.2 until the ballot is published, and there is currently a long publishing delay. The Task Force has other major technical revisions to make in a new ballot.

By / 2nd: Albert Fuchigami (PEER Group Inc.) / Brian Rubow (Cimetrix Incorporated)

Discussion: None

Vote: 11-Y 0-N. Motion **passed**.

4.1.5 Line Item #5, Clean up spelling errors and clarify how .proto files are used

Motion: Other Technical Issue proposed by Brian Rubow is Related and Persuasive.

Reason: Passing the Line Item Ballot would prevent any standards work on SEMI E132/E132.2 until the ballot is published, and there is currently a long publishing delay. The Task Force has other major technical revisions to make in a new ballot.

By / 2nd: Albert Fuchigami (PEER Group Inc.) / Brian Rubow (Cimetrix Incorporated)

Discussion: None

Vote: 11-Y 0-N. Motion **passed**.

Motion: Line item(s) 1, 2, 3, 4, 5 failed TC Chapter review and will be returned to the TF for rework.

By / 2nd: Albert Fuchigami (PEER Group Inc.) / Brian Rubow (Cimetrix Incorporated)

Discussion: None

Vote: 11-Y 0-N. Motion **passed**.

4.2 Document #6947, Line Item Revision to SEMI E179-0320, Specification for Protocol Buffers Common Components

4.2.1 Line Item #1: Fix message definition to properly support Array of Array data types

4.2.2 Clarify oneof keyword usage

4.2.3 Address Style Manual issues and address spelling errors and reference errors

Motion:	This is not a Safety Document, when all safety-related information is removed, the Document is still technically sound and complete. (Regulations ¶ 8.7.1)
By / 2nd:	Albert Fuchigami (PEER Group Inc.) / Brian Rubow (Cimetrix Incorporated)
Discussion:	None
Vote:	11-Y 0-N. Motion **passed**.

Motion:	Line item(s) 1, 2, 3 passed TC Chapter review as balloted and will be forwarded to the ISC A&R SC for procedural review.
By / 2nd:	Albert Fuchigami (PEER Group Inc.) / Brian Rubow (Cimetrix Incorporated)
Discussion:	None
Vote:	11-Y 0-N. Motion **passed**.

Attachment: AR - 6947

4.3 Document #6859A, Revision to SEMI E116-0518, Specification for Equipment Performance Tracking (EPT) and E116.1-0707 (Reapproved 0518), Specification for SECS-II Protocol for Equipment Performance Tracking (EPT)

Motion:	Negative by Peter Stammers (Edwards) is related and not persuasive.
Reason:	The terms "abort" and "disable" are in the SEMI Style Guide list of biased terms to avoid but are not in the list of Restricted Biased terms. They are not required to be replaced. The SEMI Procedure Manual states (bold added): 3.3.3 All sections of a Standard or Safety Guideline should avoid using biased terms (refer to Regulations ¶ 4.6). These terms should be replaced with approved, alternative, bias-free terms (refer to Style Manual Appendix 5) or rewritten to eliminate them whenever possible (refer to Style Manual Table 4, 4-7) In this case, replacement is not possible for "abort" and "disable". Biased terms that can be avoided are addressed in Editorial Changes #1 and #2.
By / 2nd:	Albert Fuchigami (PEER Group Inc.) / Nick Infelise (Omron Electronics, Inc)
Discussion:	None
Vote:	10-Y 0-N. Motion **passed**.

Motion:	Negative by Motoki Miyamoto (Yokogawa) is related and not persuasive.
Reason:	Motion can be resolved with Editorial Change #3
By / 2nd:	Brian Rubow (Cimetrix Incorporated) / Joseph Deeb (Omron Automation Americas)
Discussion:	None
Vote:	11-Y 0-N. Motion **passed**.

Motion:	To approve editorial changes #1-3
By / 2nd:	Brian Rubow (Cimetrix Incorporated) / Nick Infelise (Omron)
Discussion:	None
Vote:	11-Y 0-N. Motion **passed**.

Motion:	This is not a Safety Document, when all safety-related information is removed, the Document is still technically sound and complete. (Regulations ¶ 8.7.1)
By / 2nd:	Brian Rubow (Cimetrix Incorporated) / Joseph Deeb (Omron Automation Americas)
Discussion:	None

Vote: 10-Y 0-N. Motion **passed**.

Motion: This Document passed TC Chapter review with editorial changes and will be forwarded to the ISC A&R SC for procedural review.

By / 2nd: Brian Rubow (Cimetrix Incorporated) / Joseph Deeb (Omron Automation Americas)

Discussion: None

Vote: 11-Y 0-N. Motion **passed**.

Attachment: AR - 6859A rev2

4.4 Document #6572C, Revision to SEMI E30-0418: Specification for The Generic Model for Communications and Control of Manufacturing Equipment (GEM)

Motion: To approve editorial changes #1-6

By / 2nd: Brian Rubow (Cimetrix Incorporated) / James Moyne (Applied Materials)

Discussion: None

Vote: 11-Y 0-N. Motion **passed**.

Motion: This is not a Safety Document, when all safety-related information is removed, the Document is still technically sound and complete. (Regulations ¶ 8.7.1)

By / 2nd: Brian Rubow (Cimetrix Incorporated) / Nick Infelise (Omron)

Discussion: None

Vote: 10-Y 0-N. Motion **passed**.

Motion: This Document passed TC Chapter review with editorial changes and will be forwarded to the ISC A&R SC for procedural review.

By / 2nd: Brian Rubow (Cimetrix Incorporated) / Joseph Deeb (Omron Automation Americas)

Discussion: None

Vote: 11-Y 0-N. Motion **passed**.

Attachment: AR – 6572C

4.5 Document #6932, Reapproval for SEMI E121-1017, Guide for Style and Usage of XML for Semiconductor Manufacturing Applications

Motion: This is not a Safety Document, when all safety-related information is removed, the Document is still technically sound and complete. (Regulations ¶ 8.7.1)

By / 2nd: Albert Fuchigami (PEER Group Inc.) / Jack Ghiselli (Ghiselli Consulting)

Discussion: None

Vote: 9-Y 0-N. Motion **passed**.

Motion: This Document passed TC Chapter review as balloted and will be forwarded to the ISC A&R SC for procedural review.

By / 2nd: Albert Fuchigami (PEER Group Inc.) / Jack Ghiselli (Ghiselli Consulting)

Discussion: None

Vote: 10-Y 0-N. Motion **passed**.

Attachment: 6932

4.6 Document #6850, Reapproval of SEMI E109.1-1110, Specification for SECS-II Protocol for Reticle and Pod Management (RPMS)

Motion:	This is not a Safety Document, when all safety-related information is removed, the Document is still technically sound and complete. (Regulations ¶ 8.7.1)
By / 2nd:	Brian Rubow (Cimetrix) / Nick Infelise (Omron)
Discussion:	None
Vote:	11-Y 0-N. Motion **passed**.

Motion:	This Document passed TC Chapter review as balloted and will be forwarded to the ISC A&R SC for procedural review.
By / 2nd:	Brian Rubow (Cimetrix) / Joseph Deeb (Omron Automation Americas)
Discussion:	None
Vote:	12-Y 0-N. Motion **passed**.

Attachment: 6850

4.7 Document #6969, Reapproval of SEMI E123-0217, Specification for Handler Equipment Specific Equipment Model (HSEM)

Motion:	To approve editorial change(s).
By / 2nd:	Brian Rubow (Cimetrix) / Joseph Deeb (Omron Automation Americas)
Discussion:	None
Vote:	12-Y 0-N. Motion **passed**.

Motion:	This is not a Safety Document, when all safety-related information is removed, the Document is still technically sound and complete. (Regulations ¶ 8.7.1)
By / 2nd:	Brian Rubow (Cimetrix) / Joseph Deeb (Omron Automation Americas)
Discussion:	None
Vote:	11-Y 0-N. Motion **passed**.

Motion:	This Document passed TC Chapter review with editorial changes and will be forwarded to the ISC A&R SC for procedural review.
By / 2nd:	Brian Rubow (Cimetrix) / Joseph Deeb (Omron Automation Americas)
Discussion:	None
Vote:	12-Y 0-N. Motion **passed**.

Attachment: 6969

4.8 Document #6968, Reapproval of SEMI E122.1-0703 (Reapproved 1109), Specification for SECS-II Protocol for Tester Specific Equipment Model (TSEM)

Motion:	This is not a Safety Document, when all safety-related information is removed, the Document is still technically sound and complete. (Regulations ¶ 8.7.1)
By / 2nd:	Brian Rubow (Cimetrix) / Joseph Deeb (Omron Automation Americas)
Discussion:	None
Vote:	11-Y 0-N. Motion **passed**.

Motion: This Document passed TC Chapter review as balloted and will be forwarded to the ISC A&R SC for procedural review.

By / 2nd: Brian Rubow (Cimetrix) / Joseph Deeb (Omron Automation Americas)

Discussion: None

Vote: 12-Y 0-N. Motion **passed**.

Attachment: 6968

4.9 Document #6967, Reapproval of SEMI E122-0217, Specification for Tester Equipment Specific Equipment Model (TSEM)

Motion: This is not a Safety Document, when all safety-related information is removed, the Document is still technically sound and complete. (Regulations ¶ 8.7.1)

By / 2nd: Brian Rubow (Cimetrix) / Nick Infelise (Omron)

Discussion: None

Vote: 11-Y 0-N. Motion **passed**.

Motion: This Document passed TC Chapter review as balloted and will be forwarded to the ISC A&R SC for procedural review.

By / 2nd: Brian Rubow (Cimetrix) / Daniel Judd (Arlington Laboratory)

Discussion: None

Vote: 12-Y 0-N. Motion **passed**.

Attachment: 6967

4.10 Document #6966, Reapproval of SEMI E109-1017, Specification for Reticle and Pod Management (RPMS)

Motion: This is not a Safety Document, when all safety-related information is removed, the Document is still technically sound and complete. (Regulations ¶ 8.7.1)

By / 2nd: Brian Rubow (Cimetrix) / Joseph Deeb (Omron)

Discussion: None

Vote: 11-Y 0-N. Motion **passed**.

Motion: This Document passed TC Chapter review as balloted and will be forwarded to the ISC A&R SC for procedural review.

By / 2nd: Brian Rubow (Cimetrix) / Albert Fuchigami (PEER Group)

Discussion: None

Vote: 12-Y 0-N. Motion **passed**.

Attachment: 6966

4.11 Document #6965, Reapproval of SEMI E88-0318, Specification for AMHS Storage SEM (Stocker SEM)

Motion: This is not a Safety Document, when all safety-related information is removed, the Document is still technically sound and complete. (Regulations ¶ 8.7.1)

By / 2nd: Brian Rubow (Cimetrix) / Nick Infelise (Omron)

Discussion: None

Vote: 11-Y 0-N. Motion **passed**.

Motion:	This Document passed TC Chapter review as balloted and will be forwarded to the ISC A&R SC for procedural review.
By / 2nd:	Brian Rubow (Cimetrix) / Nick Infelise (Omron)
Discussion:	None
Vote:	12-Y 0-N. Motion **passed**.

Attachment: 6965

4.12 Document #6964, Reapproval of SEMI E82-0318, Specification for Interbay/Intrabay AMHS SEM (IBSEM)

Motion:	To approve editorial change(s).
By / 2nd:	Brian Rubow (Cimetrix) / Joseph Deeb (Omron Automation Americas)
Discussion:	None
Vote:	12-Y 0-N. Motion **passed**.

Motion:	This is not a Safety Document, when all safety-related information is removed, the Document is still technically sound and complete. (Regulations ¶ 8.7.1)
By / 2nd:	Brian Rubow (Cimetrix) / Joseph Deeb (Omron)
Discussion:	None
Vote:	11-Y 0-N. Motion **passed**.

Motion:	This Document passed TC Chapter review with editorial changes and will be forwarded to the ISC A&R SC for procedural review.
By / 2nd:	Brian Rubow (Cimetrix) / Nick Infelise (Omron)
Discussion:	None
Vote:	12-Y 0-N. Motion **passed**.

Attachment: 6964

4.13 Document #6963, Reapproval of SEMI E30.5-0217, Specification for Metrology Specific Equipment Model (MSEM)

Motion:	This is not a Safety Document, when all safety-related information is removed, the Document is still technically sound and complete. (Regulations ¶ 8.7.1)
By / 2nd:	Brian Rubow (Cimetrix) / Joseph Deeb (Omron)
Discussion:	None
Vote:	11-Y 0-N. Motion **passed**.

Motion:	This Document passed TC Chapter review as balloted and will be forwarded to the ISC A&R SC for procedural review.
By / 2nd:	Brian Rubow (Cimetrix) / Joseph Deeb (Omron)
Discussion:	None
Vote:	12-Y 0-N. Motion **passed**.

Attachment: 6963

4.14 Document #6962, Reapproval of SEMI E30.1-0217, Specification for Inspection and Review Specific Equipment Model (ISEM)

Motion:	This is not a Safety Document, when all safety-related information is removed, the Document is still technically sound and complete. (Regulations ¶ 8.7.1)
By / 2nd:	Brian Rubow (Cimetrix) / Nick Infelise (Omron)
Discussion:	None
Vote:	11-Y 0-N. Motion **passed**.

Motion:	This Document passed TC Chapter review as balloted and will be forwarded to the ISC A&R SC for procedural review.
By / 2nd:	Brian Rubow (Cimetrix) / Nick Infelise (Omron)
Discussion:	None
Vote:	12-Y 0-N. Motion **passed**.
Attachment:	6962

4.15 Document #6851, Reapproval of SEMI E123.1-0703 (Reapproved 1109), Specification for SECS-II Protocol for Handler Specific Equipment Model (HSEM)

Motion:	This is not a Safety Document, when all safety-related information is removed, the Document is still technically sound and complete. (Regulations ¶ 8.7.1)
By / 2nd:	Brian Rubow (Cimetrix) / Joseph Deeb (Omron)
Discussion:	None
Vote:	11-Y 0-N. Motion **passed**.

Motion:	This Document passed TC Chapter review as balloted and will be forwarded to the ISC A&R SC for procedural review.
By / 2nd:	Brian Rubow (Cimetrix) / Nick Infelise (Omron)
Discussion:	None
Vote:	12-Y 0-N. Motion **passed**.
Attachment:	6851

5 Subcommittee and Task Force Reports

5.1 *Computer & Device Security Task Force*

Ryan Bond (Intel) reported for the CDS Task Force. Of note:

- Ballot 6926 – Equipment Operator Access Management and Monitoring
    - o   Discussed current draft of requirements
    - o   Update will be posted to connect@SEMI site
- Reviewed liaison forms for I&CC
    - o   Type I & II will be submitted to enable sharing drafts with the proof-of-concept volunteers within iNEMI

Motion:	Approve the Liaison I & II Requests for iNEMI
By / 2nd:	By: Ryan Bond / Intel Corp.
	Second: Richard Howard / Cimetrix Incorporated
Discussion:	None

Vote: 11-Y 0-N. Motion **passed**.

Attachment: CDS TF Report 20221108, SEMI Type II Liaison Request – iNEMI, Type_I_Liaison_Request for iNEMI

5.2 *GUI Task Force*

Tami Tracey (Cimetrix) reported for the GUI Task Force. Of note:

-   Reviewed 6743A draft revision 1.8

-   Clarifications were requested by TF members

    o   6.2 Graphics conventions could be improved by a figure; clarify wording "lines may be congruent"

    o   7.3.4 For clarity, alter the Figure to represent a single view in one area, and clarify that "at least one area has multiple views"

    o   7.3.4.4.2, 7.3.4.5.2 Improve requirement statements by replacing "For example, if" with "Even if"

    o   7.3.4.5.3 Strike Recommended section because 7.2.4.4 is a Requirement for the same (intention is requirement not recommendation)

    o   7.6.3 Document should be more explicit that Dialog Boxes, as defined, are considered modal; that other non-modal notifications (pop-ups) are possible but do not fall under the definition of dialog box in the standard

    o   7.6.3.2.1 Clarify requirements of Dialog Boxes with respect to selection and purpose, because several possible purposes exist which may result in more Exceptions.

-   Proposal for "modes" (Task mode, Edit mode, Wizard mode) made by Tami and Frank

    o   Included potential definition of "wizard" to differentiate it from the existing definition of "dialog box"

-   Discussion – does the standard really need to include definitions of "modes"?

    o   This proposal grew out of a desire to explain that navigation shall be allowed when there is an "incomplete user task"

    o   User tasks need not be implemented as "dialog boxes"

    o   Currently the standard includes requirements for Dialog Box content and behavior

    o   The standard does not yet include any requirements for other ways to represent user tasks.

-   Straw Poll

    o   Shall the co-leaders move forward with introducing "modes" and definition of "wizard" into the document?   Yes – 1; No – 4

-   Next Task Force Meetings

    o   INTERIM - Tuesday 21 February 2023, 8am-10am Pacific Time

    o   Online in RingCentral

    o   Date & Time availability to be confirmed with SEMI Staff

    o   Invite additional comments, feedback, questions

-   SEMI NA Spring 2023 – Tuesday 6 April 2023, 8am-10am Pacific Time

    o   Invite "final" comments, feedback, questions

      o   Prepare document for Cycle 5 submission

Attachment: GUI TF Report - 2022-11-08

5.3 *GEM300 Task Force*

Brian Rubow (Cimetrix) reported for the GEM300 Task Force. Of note:

- Reviewed 6743A draft revision 1.8

- Clarifications were requested by TF members

    o   6.2 Graphics conventions could be improved by a figure; clarify wording "lines may be congruent"

    o   7.3.4 For clarity, alter the Figure to represent a single view in one area, and clarify that "at least one area has multiple views"

    o   7.3.4.4.2, 7.3.4.5.2 Improve requirement statements by replacing "For example, if" with "Even if"

    o   7.3.4.5.3 Strike Recommended section because 7.2.4.4 is a Requirement for the same (intention is requirement not recommendation)

    o   7.6.3 Document should be more explicit that Dialog Boxes, as defined, are considered modal; that other non-modal notifications (pop-ups) are possible but do not fall under the definition of dialog box in the standard

    o   7.6.3.2.1 Clarify requirements of Dialog Boxes with respect to selection and purpose, because several possible purposes exist which may result in more Exceptions.

- Proposal for "modes" (Task mode, Edit mode, Wizard mode) made by Tami and Frank

    o   Included potential definition of "wizard" to differentiate it from the existing definition of "dialog box"

- Discussion – does the standard really need to include definitions of "modes"?

    o   This proposal grew out of a desire to explain that navigation shall be allowed when there is an "incomplete user task"

    o   User tasks need not be implemented as "dialog boxes"

    o   Currently the standard includes requirements for Dialog Box content and behavior

    o   The standard does not yet include any requirements for other ways to represent user tasks.

- Straw Poll

    o   Shall the co-leaders move forward with introducing "modes" and definition of "wizard" into the document?   Yes – 1; No – 4

- Next Task Force Meetings

    o   INTERIM - Tuesday 21 February 2023, 8am-10am Pacific Time

    o   Online in RingCentral

    o   Date & Time availability to be confirmed with SEMI Staff

    o   Invite additional comments, feedback, questions

- SEMI NA Spring 2023 – Tuesday 6 April 2023, 8am-10am Pacific Time

    o   Invite "final" comments, feedback, questions

    o   Prepare document for Cycle 5 submission

Attachment: SEMI NA-ICC-GEM300-TF Report Fall 2022

5.4 *DDA Task Force*

Albert Fuchigami (PEER Group) reported for the DDA Task Force. Of note:

- DDA Ballot #6946 received negatives related to process issues

    o Issue – Word Tracking doesn't show proposed updates per expected formatting

        ▪ When using Word Tracking to show proposed changes (rather than manually formatting the text), changes may not be formatted as expected (Differences in how Microsoft Word software installation is configured, some inserted text shows as red font, moved text shows as green/double-underlined)

    o Issue – Word files were sent out in the ballot package

        ▪ 4 documents in the ballot package were sent as Word documents by mistake. Should have been converted to PDF. SEMI Staff uploaded a new package to the voting system with PDFs.

        ▪ Voters concerned about full Word documents in the voting system (which has a wider audience than DDA TF membership). Word documents are the 'source code' of SEMI Standards.

        ▪ This should not happen moving forward.

    o Issue – 'Too many changes' for Line Item Ballot

        ▪ The volume of changes doesn't dictate it has to be a Revision Ballot.

        ▪ Used Line Item Ballots to focus voting on the revisions intended by the Task Force. If voting members find issues in other parts of the Standard that need revision, they are treated as new revision activity to be addressed in a future ballot (Per Procedure Manual 3.5.4.2).

        ▪ This is particularly important because we had Revision Ballots go through several voting cycles dealing with negatives on items that existed in the original Standard for years. Each failed ballot adds 3-5 months.

        ▪ Of course, any technical issues with the proposed changes need to be addressed.

        ▪ Ask voters to respect the spirit of these Revision Ballot, and work with us to not unnecessarily fail them.
        Several conversations with TF Members, chip makers and equipment suppliers about how long it takes SEMI Standards to be updated and the pace of EDA Freeze 3 development.

- Meeting Results (Technical Summary)

    o Proposing new Client / Consumer terminology

    o Based on who initiates the connection

        ▪ Client – application process that initiates the connection to the Equipment Server. Does management functionality, query metadata. Can get notification messages. Get operational messages and SessionPing if no Consumer associated with the session.

        ▪ Consumer – application process where the Equipment Server initiates the connection to it. Can get notification messages. Gets operational and SessionPing messages from Equipment Server.

    o Define Client and Consumers use case scenarios:

        ▪ No one gets operational messages
        (Client is used only for management functionality)

        ▪ Same entity (Client) gets operational messages

- Separate entity (Consumer) gets operational messages.
  (Equipment Server initiates communication with Consumer)
  - o Update SEMI E132, E134 and E125 in future ballot to align with new definitions
    - SEMI E164 - What are the issues that need to be addressed as part of Freeze 3?
    - SEMI E164 has lots of requirements (384) – when OEM say do-not-comply, hard to tell if it's important (Don't care if requirements are related to SEMI E148 that the equipment doesn't   support.
      Do care if it's a general metadata requirement.)
    - How to handle content standards that get updated after SEMI E164 is frozen?
      - Example – SEMI E87-0619 added Carrier Ready to Unload (CaRTUP) functionality   -   new   variables.
        Didn't exist when SEMI E164-0414 was developed.
      - Fabs want consistent metadata definitions for equipment that support CaRTUP functionality.
    - Low adoption because not part of EDA Freeze definition – Fabs have to add it to purchase specs.
  - o SEMI E164 – Comments in Complementary Files
    - Although JSON5 supports comments, also defines items that gRPC/Protocol Buffers don't support.
    - Look at using JSON with Comments (can use Microsoft Visual Studio Code – free editor, multi-platform)
  - o EDA Software Vendor Test Session #2
    - Focus on SEMI E134 and E125 inter-operability functionality
    - Target SEMICON West 2023, with test scenarios prepared for April 2023

Attachment: DDA TF Report - November 2022 Meeting_Rev 1.1

5.5 *ABFI Task Force*

Brian Rubow (Cimetrix) reported for the ABFI Task Force. Of note:

- 6924 for Test
  - o We need to decide if this proposed standard will be applicable to the Test world, or state up front that it's not (Under limitations or scope).
  - o Although at a high level the topics work, there's specific scenarios within Test that need to be clarified. (sockets can be considered as a durable, but need to be inspected rather than just based on a certain duration/usage. Don't always have an ID)
  - o Another possibility is to look at a new subordinate standard that describes how to use the new standard in the Test World (similar to how there's standards that say how to use GEM for prober)
  - o Are there specific usage scenarios that the Host has for Test consumables/durables that aren't compatible with this ballot? - If we say this ballot doesn't apply to Test, do we need a separate standard for managing consumables and durables in the Test Environment.
  - o Should we distinguish between durables that are easy to replace (like CMP Pads, tips on a robot end-effector) vs durables on the equipment itself that are not easily servicable? (like Bearings on the robot, a floating stage that needs to be re-calibrated/replaced after a certain number of actions/months or when it moves out of tolerated ranges?)

Attachment: ABFI TF Meeting_11072022_v2

6 New Business

6.1 Equipment Data Publication (EDP) Task Force

Shuba Viswanath (Intel) addressed the committee on this topic.

Motion:	Approve the TFOF: Equipment Data Publication (EDP) Task Force
By / 2nd:	Jack Ghiselli (Ghiselli Consulting) / Albert Fuchigami (PEER Group Inc.)
Discussion:	None
Vote:	10-Y 0-N. Motion **passed**.

Attachment: EDP TFOF WW45

7 Next Meeting and Adjournment

The next meeting is scheduled for Wednesday, April 5, 2023 at Milpitas, CA. See http://www.semi.org/standards-events for the current list of events.

Monday, April 3, 2023

- 9:00-10:00 – NA I&C Leadership Meeting

- 10:00-12:00 – GEM300 Task Force

- 13:00-15:00 – ABFI Task Force

- 15:00-17:00 – EDP Task Force

Tuesday, April 4, 2023

- 8:00-10:00 – GUI Task Force
- 10:00-11:00 – ESEC Task Force
- 11:00-12:00 – PCS Task Force
- 13:00-16:00 – DDA Task Force
- 16:00-17:30 – CDS Task Force

Wednesday, April 5, 2023

- 9:00-15:00 – I&C NA TC Chapter Meeting

Adjournment: 4:55.

Respectfully submitted by:

Michelle Sun
Coordinator
SEMI North America

Phone: 408.943.7982

Email: msun@semi.org

Minutes tentatively approved by:

Jack Ghiselli (Ghiselli Consulting), Co-chair	1/18/2023
Brian Rubow (Cimetrix), Co-chair	1/19/2023

Table 13 Index of Available Attachments[#1]

Title	Title
Required Meeting Elements Nov 2022	6963
TCMinutes_IC_Jul2022	6964
JA_I&C_Liaison_20220922_v1.4	6965
I&C Taiwan Laision report_Oct. 2022_v1	6966
Liaison report_InC_KR__Nov2022_v2	6967
Staff Report Nov 2022 v6 - IC	6968
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AR – 6572C	CDS TF Report 20221108
6947	SEMI NA-ICC-GEM300-TF Report Fall 2022
6850	GUI TF Report - 2022-11-08
6851	ABFI TF Meeting_11072022_v2
6932	EDP TFOF WW45
6962	DDA TF Report - November 2022 Meeting_Rev 1.1
Type_I_Liaison_Request for iNEMI	SEMI Type II Liaison Request - iNEMI

#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.