

## North America Metrics TC Chapter Meeting Summary and Minutes

N.A. Standards Fall 2012 Meetings  
Wednesday October 31, 2012; 15:00 – 18:00 PST  
SEMI Headquarters in San Jose, CA

### Next N.A. TC Chapter Meeting

The next meeting of the North America (N.A.) Chapter of the Metrics Global Technical Committee (TC Chapter) is scheduled during the N.A. Standards Spring 2013 Meetings on April 3, 2013 at SEMI Headquarters in San Jose, California. The meeting details and the latest schedule will be updated at: <http://www.semi.org/en/node/43791>.

### Table 1 Meeting Attendees

**Cochairs:** David L. Bouldin (Fab Consulting), Mark Frankfurth (Cymer)

**SEMI Staff:** Michael Tran

<i>Company</i>	<i>Last</i>	<i>First</i>	<i>Company</i>	<i>Last</i>	<i>First</i>
Cymer	Frankfurth	Mark	<i>Fab Consulting</i>	<i>Bouldin</i>	<i>David</i>
<i>Electronics Workshop</i>	<i>Steinman</i>	<i>Arnold</i>	ISMI/SEMATECH	Ferrell	Jackie
<i>KLA-Tencor</i>	<i>Busing</i>	<i>David</i>	Tokyo Electron	Mashiro	Supika
Industry Consultant	Rist	Lance	Nikon Precision	Venkat	Malthi
<i>Intel</i>	<i>Cohran</i>	<i>Mark</i>	SEMI Japan	Tejima	Naoko
<i>Intel</i>	<i>Meyer</i>	<i>Steve</i>	SEMI N.A.	Tran	Michael

**Note:** *Italics indicates virtual participants.*

### Table 2 Leadership Changes

<i>Group</i>	<i>Previous Leader</i>	<i>New Leader</i>
Equipment Training & Documentation TF		Malthi Venkat (Nikon Precision)
Equipment RAMP Metrics TF	Michael Werre (Intel)	Steven Meyer (Intel)
N.A. International Environmental Contamination Control TF	(Disbanded)	

### 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 rework and rebaloting.

<i>Document #</i>	<i>Document Title</i>	<i>Committee Action</i>
5470	Reapproval of SEMI E124-1107, <i>Guide for Definition and Calculation of Overall Factory Efficiency (OFE) and Other Associated Factory-Level Productivity Metrics</i>	Superclean. <b>Passed</b> as balloted.
5471	Reapproval of SEMI E89-0707, <i>Guide for Measurement System Analysis (MSA)</i>	Superclean. <b>Passed</b> as balloted.

### Table 4 Authorized Activities

<i>#</i>	<i>Type</i>	<i>SC/TF/WG</i>	<i>Details</i>
5472	Revised SNARF	ESD/ESC TF	Revision to SEMI E43-1108, <i>Recommended Practice for Electrostatic Measurements on Objects and Surfaces</i> with title change to: <i>Guide for Electrostatic Measurements on Objects and Surfaces</i>

**Table 4 Authorized Activities**

#	Type	SC/TF/WG	Details
5525	SNARF	Equipment Training & Documentation TF	Reapproval of SEMI E150-1107, <i>Guide for Equipment Training Best Practices</i>
5526	SNARF	Equipment Training & Documentation TF	Line Item Revisions to SEMI E165-0712, <i>Guide for a Comprehensive Equipment Training System When Dedicated Training Equipment is Not Available</i>
---	Revised TFOF	Product & Equipment Time Metrics TF	The Product and Equipment Time Metrics (PETM) TF revised its name to: Wait Time Waste Metrics and Methods TF (WTW TF)

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

**Table 5 Authorized Ballots**

#	When	SC/TF/WG	Details
5472	Cycle 2-2013	ESD/ESC TF	Revision to SEMI E43-1108, <i>Recommended Practice for Electrostatic Measurements on Objects and Surfaces</i> with title change to: <i>Guide for Electrostatic Measurements on Objects and Surfaces</i>
5525	Cycle 1-2013	Equipment Training & Documentation TF	Reapproval of SEMI E150-1107, <i>Guide for Equipment Training Best Practices</i>
5526	Cycle 1-2013	Equipment Training & Documentation TF	Line Item Revisions to SEMI E165-0712, <i>Guide for a Comprehensive Equipment Training System When Dedicated Training Equipment is Not Available</i>

**Table 6 New Action Items**

Item #	Assigned to	Details
2012Oct#01	Michael Tran	Follow up with the Japan Metrics TC Chapter cochairs/leaders if they want to support SEMI E45, E46, E108, and E146.
2012Oct#02	Michael Tran	Show Jackie Ferrell (ISMI/SEMATECH) how to use web meeting and the teleconference services for the Wait Time Waste TF meetings.
2012Oct#03	Jackie Ferrell	Send the N.A. Metrics TC Chapter some examples of ballots with requirements IDs from the Information & Control Global Technical Committee.

**Table 7 Previous Meeting Actions Items**

Item #	Assigned to	Details	Status
2012Jul#01	Michael Tran	Upload the Wait Time Waste presentation to the SEMI Google site.	CLOSED
2012Jul#02	Jackie Ferrell	Submit a TFOF revising the name of the PETM TF to the Wait Time Waste Metrics and Methods (WTW) TF.	CLOSED
2012Apr#02	Mark Cohran	Look into SEMI E150 for 5-year review.	CLOSED

**1 Welcome, Reminders, and Introductions**

1.1 Mark Frankfurth (Cymer) called the meeting to order at 3:04 PM PST. The meeting reminders on antitrust issues, intellectual property issues, and holding meetings with international attendance were reviewed. Attendees introduced themselves.

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

## 2 Review of Previous Meeting Minutes

2.1 To approve the previous meeting minutes.

**Motion:** To approve the previous meeting minutes (SEMICON West 2012) as written.

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

**Discussion:** None.

**Vote:** 3-0 in favor. Motion passed.

**Attachment:** 02, Metrics Committee Meeting Minutes (West 2012)

## 3 Liaison Reports

### 3.1 Europe Equipment Automation Technical Committee

3.1.1 Michael Tran (SEMI N.A.) reported for the Europe Equipment Automation Technical Committee, which includes the Metrics Technical Committee. The key items were as follows:

- Lothar Pfitzner (FhG IISB) is the Metrics cochair of the committee.
- Metrics Task Forces
  - The International Environmental Contamination Control TF was disbanded.
    - There were no TF leaders and no members attended the TF meeting.
  - The Integrated Measurement TF was disbanded.
  - The following SEMI Standards were allowed to become Inactive due to no TF reviewing them:
    - SEMI E45, *Test Method for the Determination of Inorganic Contamination from Minienvironments Using Vapor Phase Decomposition-Total Reflection X-Ray Spectroscopy (VPD-TXRF), VPD-Atomic Absorption Spectroscopy (VPD-AAS), or VPD/Inductively Coupled Plasma-Mass Spectrometry (VPD/ICP-MS)*
    - SEMI E46, *Test Method for the Determination of Organic Contamination from Minienvironments Using Ion Mobility Spectrometry (IMS)*
    - SEMI E108, *Test Method for the Assessment of Outgassing Organic Contamination from Minienvironments Using Gas Chromatography/Mass Spectroscopy*
    - SEMI E146, *Test Method for the Determination of Particulate Contamination from Minienvironments used for Storage and Transport of Silicon Wafers*
- SEMI Europe contact, Yann Guillou, [yguillou@semi.org](mailto:yguillou@semi.org)

**Discussion:** An email received from Alfred Honold, Equipment Automation Committee cochair asking if the N.A. Metrics Committee would support the following documents: SEMI E45, E46, E108, and E146. The committee will defer to the Japan Metrics committee. The N.A. Metrics Committee will not be supporting the documents and will disband the N.A. International Environmental Contamination Control TF as there is no need for the TF (see §7.1 of these minutes).

- Attachment:** 03, Europe Equipment Automation Report (Fall 2012)
- Attachment:** 04, Email from Alfred Honold, cochair of the Equipment Automation Technical Committee
- Action Item:** 2012Oct#01, Michael Tran to follow up with the Japan Metrics Committee cochairs/leaders if they want to support SEMI E45, E46, E108, and E146.

### 3.2 Japan Metrics Technical Committee

3.2.1 Naoko Tejima (SEMI Japan) reported for the Japan Metrics Technical Committee. The key items were as follows:

- Committee Cochair
  - Toshio Murakami (Murakami Corporation)
  - Second chair to be announced
- Meeting Information
  - Last meeting
    - April 11, 2012 at SEMI Japan in Tokyo, Japan
      - September 20, 2012 at SEMI Japan in Tokyo, Japan was cancelled due to low attendance
  - Next meeting
    - No meeting planned for SEMICON Japan 2012
- Cycle Time Metrics (CTM) Task Force
  - The CTM TF last met with the Product and Equipment Time Metrics (PETM) TF in a joint meeting at SEMICON West 2012.
  - The Standards Technical Educational Program (STEP) was canceled due to very low registration.
  - The presentation prepared for the STEP was shared in the joint PETM/CTM TF meeting.
  - ISMI published the Wait Time Waste guideline on September 19, 2012.
  - No progress for the CTM TF due to resource constraint since last December.
- SEMI Japan contact, Hirofumi Kanno, hkanno@semi.org

**Attachment:** 05, Japan Metrics Committee Liaison Report (Fall 2012)

### 3.3 Technical Editors Board

3.3.1 David Bouldin (Fab Consulting) reported for the Technical Editors Board. The board has not met actively and there is parallel work revising the *Style Manual*, *Regulations*, and *Procedure Guide*. The latest version of the *Style Manual* should be out in a few months.

### 3.4 Technical Architects Board

3.4.1 David Bouldin (Fab Consulting) reported for the Technical Architects Board. There are no current activities that he is aware of.

### 3.5 Electrostatic Discharge Association (ESDA) Liaison Report

3.5.1 Arnold Steinman (Electronics Workshop) reported for the ESDA. The key items were as follows:

- ESDA and JEDEC released an updated Human Body Model (HBM) document available at [www.esda.org](http://www.esda.org).
  - The Charged Device Model (CDM) document is almost completed.
- ESD Standards meeting will be February 8-10 in Las Vegas, NV. Check the ESDA Web site for more information at [www.esda.org](http://www.esda.org).

**Attachment:** 06, ESDA Liaison Report (Fall 2012)

### 3.6 SEMI N.A. Staff Report

3.6.1 Michael Tran (SEMI N.A.) gave the SEMI N.A. Staff Report. The key items were as follows:

- Upcoming SEMI Standards Major Events
  - SEMICON Japan in conjunction with PV Japan
    - December 5-7, 2012, in Chiba, Japan
  - SEMICON Korea in conjunction with LED Korea
    - January 30-February 1, 2013 in Seoul, Korea
  - SEMICON China in conjunction with FPD china and SOLARCON China
    - March 19-21, 2013 in Shanghai, China
  - N.A. Standards Spring 2013 Meetings
    - April 1-4, 2013 in San Jose, California, U.S.A.
- Cycle 1 and 2-2013 Critical Dates for SEMI Standards Ballots
  - Cycle 1, 2013
    - Ballot Submission Date: January 3, 2013
    - Voting Period Starts: January 16, 2013
    - Voting Period Ends: February 15, 2013
  - Cycle 2, 2013
    - Ballot Submission Date: February 4, 2013
    - Voting Period Starts: February 18, 2013
    - Voting Period Ends: March 20, 2013
- Upcoming North America Standards Meetings
  - N.A. Standards Spring 2013 Meetings, April 1–4, 2013 at SEMI Headquarters in San Jose, CA
  - SEMI is inviting local companies to host some meetings so the N.A. Standards Spring 2013 Meetings can maintain a one-week format.
- SEMI Standards Publications
  - Standards published from July 2012 to September 2012:
    - New Standards: 16
    - Revised Standards: 40
    - Reapproved Standards: 18
    - Withdrawn Standards: 2
  - There are a total of 860 SEMI Standards in portfolio and that includes 92 Inactive standards.

- New Standards Ballot and Memberships Systems
  - Key changes
    - User interface
    - Log-in
      - One-time log-in per session to vote on ballots
      - Same log-in for SEMI Members
  - Functionality
    - Retrieve and edit submitted votes for current cycle
    - Text field and attachment option for each ballot or line item
  - Integration
    - Linked to new membership application / profile management
    - Access to other SEMI products & services
  - Target deployment: Cycle 1, 2013
- SEMI N.A. contact: Michael Tran, [mtran@semi.org](mailto:mtran@semi.org)

**Attachment:** 07, SEMI North America Standards Staff Report (Fall 2012)

#### 4 Ballot Review

NOTE 1: TC Chapter adjudication on the ballots is detailed in the ISC 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 ballot document is provided under each ballot review section below.

4.1 The following documents were reviewed by the committee:

<i>Document #</i>	<i>Document Title</i>	<i>Committee Action</i>
5470	Reapproval of SEMI E124-1107, <i>Guide for Definition and Calculation of Overall Factory Efficiency (OFE) and Other Associated Factory-Level Productivity Metrics</i>	Superclean. <b>Passed</b> as balloted.
5471	Reapproval of SEMI E89-0707, <i>Guide for Measurement System Analysis (MSA)</i>	Superclean. <b>Passed</b> as balloted.

**Motion:** The documents #5470 **passed** committee review as balloted and will be forwarded to the A&R for procedural review.

**By / 2<sup>nd</sup>:** Jackie Ferrell (ISMI/SEMATECH) / Supika Mashiro (Tokyo Electron)

**Discussion:** None.

**Vote:** 4-0 in favor. Motion passed.

**Motion:** The documents #5471 **passed** committee review as balloted and will be forwarded to the A&R for procedural review.

**By / 2<sup>nd</sup>:** Jackie Ferrell (ISMI/SEMATECH) / Mark Frankfurth (Cymer)

**Discussion:** None.

**Vote:** 4-0 in favor. Motion passed.

**Attachment:** 08, Procedural Review for Document #5470

**Attachment:** 09, Procedural Review for Document #5471

## 5 Subcommittee and Task Force Reports

### 5.1 Equipment RAMP Metrics Task Force

5.1.1 David Busing (KLA-Tencor) reported for the Equipment RAMP Metrics Task Force. The draft for Document 5341, *Revision to SEMI E79-1106, Specification for Definition and Measurement of Equipment Productivity* is making good progress. The draft for Document #5340, *Revision to SEMI E10-0312, Specification for Definition and Measurement of Equipment Reliability, Availability, and Maintainability (RAM) and Utilization* is on hold pending Document #5341.

5.1.2 Michael Werre (Intel) stepped down as the TF coleader and Steven Meyer (Intel) was approved as the new TF coleader by the TF and TC Chapter. Steven had a presentation regarding Operation Availability and the “erosion” of effective tool set availability. The TF will pursue the topic as a potential Related Information for a document. Also, the TF recommends liaison work with the PETM TF.

**Attachment:** 10, Equipment RAMP Metrics Task Force Report (Fall 2012)

### 5.2 Equipment Training and Documentation Task Force

5.2.1 Mark Cohran (Intel) and Malthi Venkat (Nikon) reported for the TF. Malthi Venkat from Nikon Precision was approved as the TF coleader by the TF and TC Chapter.

5.2.2 The TF submitted SNARFs #5525 and #5526 for the TC Chapter’s approval. The TF also submitted ballot authorizations of Document #5525 and #5526 in Cycle 1 or 2-2013 for the TC Chapter’s approval. See §7.3 and 7.4 of these minutes for details.

**Attachment:** 11, Equipment Training and Documentation Task Force Report (Fall 2012)

### 5.3 Electromagnetic Compatibility (EMC) Task Force

5.3.1 Mark Frankfurth (Cymer) reported for the EMC Task Force. Vladimir Kraz (BestESD) is traveling and attended the TF meeting virtually. The Document #3847D, *Revision to SEMI E33-94, Specification for Semiconductor Manufacturing Facility Electromagnetic Compatibility* with title change to: *Guide for Semiconductor Manufacturing Equipment Electromagnetic Compatibility (EMC)* passed ISC A&R SC review and will be published soon. Vladimir will propose a SNARF for a Facility EMC Guide at the N.A. Standards Spring 2013 Meetings. The TF discussed the need to increase interest and participation in the TF and EMC topics. The TF will investigate alternate test methods for possible Related Information development.

**Attachment:** 12, EMC Task Force Report (Fall 2012)

### 5.4 Electrostatic Discharge / Electrostatic Charge (ESD/ESC) Task Force

5.4.1 Arnold Steinman (Electronics Workshop) reported for the ESD/ESC Task Force. The TF will continue its activities from SEMICON West 2012 to review Document #5472, *Revision to SEMI E43-1108, Recommended Practice for Electrostatic Measurements on Objects and Surfaces* with title change to: *Guide for Electrostatic Measurements on Objects and Surfaces*. The TF submitted SNARF and ballot authorization for Document #5472 (see §7.3 and 7.4).

**Attachment:** 13, ESD/ESC Task Force Report (Fall 2012)

### 5.5 Product and Equipment Time Metrics (PETM) Task Force

5.5.1 Jackie Ferrell (ISMI/SEMATECH) reported for the Product and Equipment Time Metrics (PETM) Task Force. The guidelines for wait time waste metrics and methods are in the validation phase at ISMI. Once the validation phase is completed, a SNARF for a new Wait Time Waste document will be proposed at the N.A. Standards Spring 2013 Meetings.

5.5.2 The TF is looking for a coleader, preferably someone from the supplier side. If interested, contact Jackie.

5.5.3 The TF discussed how ballots from the Information & Control Global Technical Committee contain highlighted requirements IDs. Perhaps the TF should write standards that way.

5.5.4 A productivity workshop to include WTW and Energy Savings Equipment Mode Communications is to be held at SEMICON Japan 2012 (Wed. Dec. 5, 9:30 – noon). No Cycle Time Metrics TF or Japan Metrics TC Chapter meeting planned for SEMICON Japan 2012.

**Action Item:** 2012Oct#02, Michael Tran to show Jackie Ferrell (ISMI/SEMATECH) how to use web meeting and the teleconference services for the Wait Time Waste TF meetings

**Action Item:** 2012Oct#03, Jackie Ferrell to send the N.A. Metrics TC Chapter some examples of ballots with highlighted requirements IDs from the Information & Control Global Technical Committee

**Attachment:** 14, Product and Equipment Time Metrics Task Force Report (Fall 2012)

## 6 Old Business

### 6.1 5-Year Review Update

6.1.1 The TC Chapter looked at documents needed for five-year review:

<i>Document #</i>	<i>Document Title</i>	<i>Status</i>
SEMI E43-1108	<i>Recommended Practice for Electrostatic Measurements on Objects and Surfaces</i>	Arnold Steinman/TF reviewing.
SEMI E79-1106	<i>Specification for Definition And Measurement Of Equipment Productivity</i>	David Busing/TF reviewing.
SEMI E89-0707	<i>Guide for Measurement System Capability Analysis (MSA)</i>	Reapproval Ballot #5471 approved today.
SEMI E108-0307	<i>Test Method for the Assessment of Outgassing Organic Contamination from Minienvironments Using Gas Chromatography Mass Spectroscopy</i>	Europe to let go Inactive.
SEMI E124-1107	<i>Guide for Definition and Calculation of Overall Factory Efficiency (OFE) and Other Associated Factory-Level Productivity Metrics</i>	Reapproval Ballot #5470 approved today.
SEMI E149-0708	<i>Guide for Equipment Supplier-Provided Documentation for the Acquisition and Use of Manufacturing Equipment</i>	Not due until next year. No review yet.
SEMI E150-1107	<i>Guide for Equipment Training Best Practices</i>	Reapproval ballot issue approved today.



## 7 New Business

### 7.1 Disbandment of the N.A. International Environmental Contamination Control Task Force

**Motion:** To disband the N.A. International Environmental Contamination Control Task Force  
**By / 2<sup>nd</sup>:** Jackie Ferrell (ISMI/SEMATECH) / Mark Frankfurth (Cymer)  
**Discussion:** None  
**Vote:** 3-0 in favor. Motion passed.

### 7.2 New Task Force Leaders

**Motion:** To approve Steven Meyer (Intel) as a coleader of the Equipment RAMP Metrics Task Force  
**By / 2<sup>nd</sup>:** Mark Frankfurth (Cymer) / Jackie Ferrell (ISMI/SEMATECH)  
**Discussion:** None  
**Vote:** 5-0 in favor. Motion passed.

**Motion:** To approve Malthi Venkat (Nikon) as a coleader of the Equipment Training and Documentation Task Force  
**By / 2<sup>nd</sup>:** Jackie Ferrell (ISMI/SEMATECH) / Mark Frankfurth (Cymer)  
**Discussion:** None  
**Vote:** 4-0 in favor. Motion passed.

### 7.3 New Activities

7.3.1 The following SNARFs and TFOF were submitted to the TC Chapter for approval:

#	Type	SC/TF/WG	Details
5472	Revised SNARF	ESD/ESC TF	Revision to SEMI E43-1108, <i>Recommended Practice for Electrostatic Measurements on Objects and Surfaces</i> with title change to: <i>Guide for Electrostatic Measurements on Objects and Surfaces</i>
5525	SNARF	Equipment Training & Documentation TF	Reapproval of SEMI E150-1107, <i>Guide for Equipment Training Best Practices</i>
5526	SNARF	Equipment Training & Documentation TF	Line Item Revisions to SEMI E165-0712, <i>Guide for a Comprehensive Equipment Training System When Dedicated Training Equipment is Not Available</i>
---	Revised TFOF	Product & Equipment Time Metrics TF	The Product and Equipment Time Metrics (PETM) TF revised its name to: Wait Time Waste Metrics and Methods TF (WTW TF)

**Motion:** To approve the revised SNARF #5472  
**By / 2<sup>nd</sup>:** Arnold Steinman (Electronics Workshop) / Jackie Ferrell (ISMI/SEMATECH)  
**Discussion:** None  
**Vote:** 4-0 in favor. Motion passed.

**Motion:** To approve SNARF #5525  
**By / 2<sup>nd</sup>:** Lance Rist (Industry Consultant) / Jackie Ferrell (ISMI/SEMATECH)  
**Discussion:** None  
**Vote:** 4-0 in favor. Motion passed.

**Motion:** To approve the revised SNARF #5526  
**By / 2<sup>nd</sup>:** Jackie Ferrell (ISMI/SEMATECH) / Mark Frankfurth (Cymer)

**Discussion:** None  
**Vote:** 4-0 in favor. Motion passed.

**Motion:** To approve the revised TFOF  
**By / 2<sup>nd</sup>:** Arnold Steinman (Electronics Workshop) / Jackie Ferrell (ISMI/SEMATECH)  
**Discussion:** None  
**Vote:** 5-0 in favor. Motion passed.

#### 7.4 New Ballots Submission

7.4.1 The following documents were submitted for letter ballot to the committee for approval:

#	When	SC/TF/WG	Details
5472	Cycle 2-2013	ESD/ESC TF	Revision to SEMI E43-1108, <i>Recommended Practice for Electrostatic Measurements on Objects and Surfaces</i> with title change to: <i>Guide for Electrostatic Measurements on Objects and Surfaces</i>
5525	Cycle 1-2013	Equipment Training & Documentation TF	Reapproval of SEMI E150-1107, <i>Guide for Equipment Training Best Practices</i>
5526	Cycle 1-2013	Equipment Training & Documentation TF	Line Item Revisions to SEMI E165-0712, <i>Guide for a Comprehensive Equipment Training System When Dedicated Training Equipment is Not Available</i>

**Motion:** To approve letter ballot submission of Document #5472 for Cycle 2-2013.  
**By / 2<sup>nd</sup>:** Arnold Steinman (Electronics Workshop) / Mark Frankfurth (Cymer)  
**Discussion:** None.  
**Vote:** 4-0 in favor. Motion passed.

**Motion:** To approve letter ballot submission of Document #5525 for Cycle 1-2013.  
**By / 2<sup>nd</sup>:** Lance Rist (Industry Consultant) / Jackie Ferrell (ISMI/SEMATECH)  
**Discussion:** None  
**Vote:** 4-0 in favor. Motion passed.

**Motion:** To approve letter ballot submission of Document #5526 for Cycle 1-2013.  
**By / 2<sup>nd</sup>:** Jackie Ferrell (ISMI/SEMATECH) / Mark Frankfurth (Cymer)  
**Discussion:** None  
**Vote:** 4-0 in favor. Motion passed.

## 8 Action Item Review

### 8.1 Open Action Items

8.1.1 Michael Tran (SEMI N.A.) reviewed the open action items. These can be found in the Open Action Items table at the beginning of these minutes.

### 8.2 New Action Items

8.2.1 Michael Tran (SEMI N.A.) reviewed the new action items. These can be found in the New Action Items table at the beginning of these minutes.

## 9 Next Meeting and Adjournment

9.1 The next meeting of the North America TC Chapter of the Metrics Global Technical Committee is scheduled during the N.A. Standards Spring 2013 Meetings on April 3, 2013 at SEMI Headquarters in San Jose, California.

### Monday, April 1\*

- EMC TF (3:00 PM – 5:00 PM)

### Tuesday, April 2\*

- Equipment Training and Documentation TF (9:00 AM - 12:00 PM Noon)
- ESD/ESC TF (3:00 PM – 5:00 PM)
- Wait Time Waste (WTW) TF (3:00 PM – 5:00 PM)

### Wednesday, April 3\*

- Equipment RAMP Metrics TF (9:00 AM – 12:00 PM Noon)
- Metrics TC Chapter (3:00 PM – 6:00 PM)

\*All times are in PST. Times and dates are subject to change without notice. The meeting details and the latest schedule will be updated at: <http://www.semi.org/en/node/43791>.

9.2 Having no further business, a motion was made to adjourn the N.A. Metrics TC Chapter meeting on October 31, 2012 in conjunction with the N.A. Standards Fall 2012 Meetings at SEMI Headquarters in San Jose, California. Adjournment was at 5:10 PM.

Respectfully submitted by:

Michael Tran  
Senior Standards Engineer  
SEMI North America  
Phone: 1-408-943-7019  
Email: mtran@semi.org

Minutes approved by:

David Bouldin (Fab Consulting), Cochair	January 3, 2013
Mark Frankfurth (Cymer), Cochair	

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

#	Title	#	Title
01	SEMI Standards Required Meeting Elements	08	Procedural Review for Document #5470
02	Metrics Committee Meeting Minutes (West 2012)	09	Procedural Review for Document #5471
03	Europe Equipment Automation Report (Fall 2012)	10	Equipment RAMP Metrics Task Force Report (Fall 2012)
04	Email from Alfred Honold, cochair of the Equipment Automation Committee	11	Equipment Training and Documentation TF Report (Fall 2012)
05	Japan Metrics Committee Liaison Report (Fall 2012)	12	EMC Task Force Report (Fall 2012)
06	ESDA Liaison Report (Fall 2012)	13	ESD/ESC Task Force Report (Fall 2012)
07	SEMI North America Standards Staff Report (Fall 2012)	14	Product and Equipment Time Metrics Task Force Report (Fall 2012)

#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 Michael Tran at the contact information above.