Traceability North America TC Chapter

Meeting Summary and Minutes

Spring 2019 Meeting
April 4, 2018 12:30 – 13:30
Milpitas, California

TC Chapter Announcements
Next TC Chapter Meeting
July 11, 2019 at 8:30 – 10:00
Moscone Center, San Francisco, CA

Table 1 Meeting Attendees
 Italics indicate virtual participants

Co-Chairs: Yaw Obeng (NIST)

SEMI Staff: Inna Skvortsova

<table>
<thead>
<tr>
<th>Company</th>
<th>Last</th>
<th>First</th>
<th>Company</th>
<th>Last</th>
<th>First</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIST</td>
<td>Obeng</td>
<td>Yaw</td>
<td>JEOL Ltd</td>
<td>Kyoichiro</td>
<td>Asayama</td>
</tr>
<tr>
<td>PEER</td>
<td>Fuchigami</td>
<td>Albert</td>
<td>SUMCO</td>
<td>Nakai</td>
<td>Tetsoua</td>
</tr>
<tr>
<td>PDF Solutions</td>
<td>Huntley</td>
<td>David</td>
<td>Cimetrix</td>
<td>Rubow</td>
<td>Brian</td>
</tr>
<tr>
<td>Samsung</td>
<td>Bruce</td>
<td>Eric</td>
<td>SEMI</td>
<td>Skvortsova</td>
<td>Inna</td>
</tr>
<tr>
<td>Global Foundries</td>
<td>Hanan</td>
<td>Jeff</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multibeam Corp</td>
<td>Prescor</td>
<td>Ted</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multibeam Corp</td>
<td>VanArt</td>
<td>Roger</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2 Leadership Changes

<table>
<thead>
<tr>
<th>WG/TF/SC/TC Name</th>
<th>Previous Leader</th>
<th>New Leader</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA Traceability TC</td>
<td>Win Baylies (BayTech-Resor)</td>
<td>None / open</td>
</tr>
<tr>
<td>5-Year Review Task Force</td>
<td>Win Baylies (BayTech-Resor)</td>
<td>None / open</td>
</tr>
</tbody>
</table>

Table 3 Committee Structure Changes

<table>
<thead>
<tr>
<th>Previous WG/TF/SC Name</th>
<th>New WG/TF/SC Name or Status Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>
### Table 4 Ballot Results

<table>
<thead>
<tr>
<th>Document #</th>
<th>Document Title</th>
<th>Committee Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#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

<table>
<thead>
<tr>
<th>#</th>
<th>Type</th>
<th>SC/TF/WG</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 6 Authorized Activities

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

<table>
<thead>
<tr>
<th>#</th>
<th>Type</th>
<th>SC/TF/WG</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>TBD</td>
<td>SNARF</td>
<td>SDT TF</td>
<td>New Standard (designation TBD): Specification for Counterfeit Prevention for the Electronics Manufacturing Supply Chain SNARF distributed for 2-week review and approved at TC meeting</td>
</tr>
</tbody>
</table>

#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

<table>
<thead>
<tr>
<th>#</th>
<th>When</th>
<th>TF</th>
<th>Details</th>
</tr>
</thead>
</table>

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

<table>
<thead>
<tr>
<th>#</th>
<th>TF</th>
<th>Title</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 9 SNARF(s) Abolished

<table>
<thead>
<tr>
<th>#</th>
<th>TF</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 10 Standard(s) to receive Inactive Status

<table>
<thead>
<tr>
<th>Standard Designation</th>
<th>Title</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 11 New Action Items

<table>
<thead>
<tr>
<th>Item #</th>
<th>Assigned to</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 Apr 2019</td>
<td>Inna S</td>
<td>Provide list of Inactive standards within Traceability portfolio for co-Chairs evaluation. If possible identify original authors of these standards.</td>
</tr>
<tr>
<td>#2 Apr 2019</td>
<td>Inna S</td>
<td>Attach to meeting minutes White Paper of Supply Chain Integrity. DONE</td>
</tr>
</tbody>
</table>
Table 12 Previous Meeting Action Items

<table>
<thead>
<tr>
<th>Item #</th>
<th>Assigned to</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 Welcome, Reminders, and Introductions
Yaw Obeng (NIST) called the meeting to order at 12:09 PM. 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 Elements.ppt

2 Review of Previous Meeting Minutes
2.1 The TC Chapter reviewed and approved the minutes of the previous SEMICON West 2018 Standards meeting.

Motion: To approve minutes as written
By / 2nd: Dave Huntley (PDF Solutions) / Yaw Obeng (NIST)
Discussion: None
Vote: 4/0. Motion passed.

Attachment 02: NA Traceability TC Meeting Minutes (Nov 2018).pdf

3 SEMI Standards Staff Report
3.1 Inna Skvortsova (SEMI) gave the SEMI Staff Report. Of note:

SEMI Global 2019 Calendar of Events
- SEMICON Southeast Asia (May 7-9, Kuala Lumpur, Malaysia)
- SEMICON West (July 9-11, San Francisco, California)
- SEMICON Europa (November 12-15, Munich, Germany)
- SEMICON Japan (December 11-13, Tokyo, Japan)

Upcoming North America Meetings
- SEMICON West 2019 Meetings (July 8-11, 2019, San Francisco, California)
  - Standards Meetings will NOT be at the Marriott but will be at MOSCONE South Hall this year.
  - Meeting room details will be available on the web
- NA Standards Fall 2019 Meetings (November 4-7, 2019, SEMI HQ, Milpitas, California)
- NA Standards Spring 2020 Meetings (March 30 – April 2, 2020, SEMI HQ, Milpitas, California)

Letter Ballot Critical Dates for NA Standards meetings
- Cycle 3-19: due March 12 / Voting Period: March 26-April 25
- Cycle 4-19: due April 16 / Voting Period: April 30 - May 30
- Cycle 5-19: due May 10 / Voting Period: May 24 – June 24
- Cycle 6-19: due July 19 / Voting Period: July 31 – August 30
Cycle 7-19: due August 22 / Voting Period: September 4 - October 4
Cycle 9-19: due Nov 14/ Voting Period: Nov 26 – Dec 26


- SEMI Standards Publications

<table>
<thead>
<tr>
<th>Cycle</th>
<th>New</th>
<th>Revised</th>
<th>Reapproved</th>
<th>Withdrawn</th>
</tr>
</thead>
<tbody>
<tr>
<td>November 2018</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>December 2018</td>
<td>0</td>
<td>7</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>January 2019</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>February 2019</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>

Total SEMI Standards in portfolio: 1000. Includes 268 Inactive Standards

<table>
<thead>
<tr>
<th>Cycle</th>
<th>Designation</th>
<th>Title</th>
<th>Committee</th>
<th>Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>November 2018</td>
<td>SEMI C97</td>
<td>Specification for Determination of Particle Levels of Gases Delivered as Pipeline Gas or by Pressurized Gas Cylinder</td>
<td>Gases</td>
<td>NA</td>
</tr>
<tr>
<td>January 2019</td>
<td>SEMI M88</td>
<td>Practice for Sample Preparation Methods for Measuring Minority Carrier Diffusion Length in Silicon Wafers by Surface Photovoltage Methods</td>
<td>Silicon Wafer</td>
<td>JA</td>
</tr>
<tr>
<td>January 2019</td>
<td>SEMI T23</td>
<td>Specification for Single Device Traceability for the Supply Chain</td>
<td>Traceability</td>
<td>NA</td>
</tr>
<tr>
<td>February 2019</td>
<td>SEMI PV89</td>
<td>Test Method for Current-Voltage Measurement in Indoor Lighting for Dye-Sensitized Solar Cell and Organic Photovoltaic</td>
<td>Photovoltaic</td>
<td>TW</td>
</tr>
</tbody>
</table>

- Connected@SEMI Community
  - Web link - https://connect.semi.org
- Login using Standards account (username and password)
  - Program Member
    - Join any task forces
    - Post discussion thread
  - TF Leader/Community Admin
    - Add member
    - Upload meeting minutes
    - Communicate TF members
    - Contact your staff if a TF Site is desired
  - Details: [www.semi.org/standards](http://www.semi.org/standards) → Committee Info → Collaboration Community

- New Forms, Regulations & Procedure Manual
  - Regulations (Feb 28, 2019)
    - Latest version clarifies procedures applicable for Copyrighted Items and trademarks
  - Procedure Manual (Feb 28, 2019)
  - SNARF (Feb 2019)
  - [www.semi.org/standards](http://www.semi.org/standards)
    - Bottom left, under **Resources**!

- Style Manual Update (New version 6 issued March 25, 2019)
  - Additions and revisions to harmonize with updated Regulations and Procedure Manual
  - Updates
    - Company or Organization Trademarks (Table 1, #1-24)
    - Active vs. Passive Voice (Table 4, #4-4)
    - Word Usage (Table 4, #4-5)
    - New Safety Guideline Conformance Notice (Table 8, #8-1)


- **SNARF(s) and TFOF Approved by GCS in between TC Chapter Meetings**
  - None

- **SNARF 3 year status TC Chapter may grant a one-year extension:**
  - None

- **Nonconforming Titles**
  - None

**NOTE:** Refer to Procedure Manual (PM) Appendix Table A4-1 and A4-2

- **Documents due for 5 Year Review**
<table>
<thead>
<tr>
<th>Name</th>
<th>Due for Review</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEMI T4-0301 (Reapproved 1213)</td>
<td>12/13/2018</td>
<td>Specification for 150 mm and 200 mm Pod Identification Dimensions. Ballot passed.</td>
</tr>
<tr>
<td>SEMI T11-0703 (Reapproved 1014)</td>
<td>10/30/2019</td>
<td>Specification for Marking of Hard Surface Reticle Substrates</td>
</tr>
<tr>
<td>SEMI T5-1214</td>
<td>12/5/2019</td>
<td>Specification for Alphanumeric Marking of Round Compound Semiconductor Wafers</td>
</tr>
</tbody>
</table>

Attachment 03: SEMI Standards Staff Report Traceability TC April 2019.ppt

4 Liaison Reports
4.1 Traceability Japan TC Chapter
No report from Traceability Japan TC Chapter.

- For additional information, please contact SEMI Japan staff:
  - Chie Yanagisawa cyanagisawa@semi.org

5 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.

- NONE during Spring 2019 Traceability TC Meeting.

6 Subcommittee and Task Force Reports
6.1 Single Device Traceability (SDT) Task Force Report
Dave Huntley (PDF Solutions) reported for the SDT Task Force. Of note:

- Leadership Change – None
- Ballot Adjudication – None
- New SNARF(s)
  - New Standard: Specification for Counterfeit Prevention for the Electronics Manufacturing Supply Chain
  - To incorporate technical feedback received during balloting doc #6450
- Upcoming Ballot(s)
  - #6471 Line Item Revision to SEMI T23-0119 `– Specification for Single Device Traceability for the Supply Chain
    - To incorporate technical feedback received during balloting doc #6450 (published as T23-0119)
  - Building Awareness of the SDT Standards
    - Completed educational workshops & poster at SEMICON Japan 2018, SEMICON Korea 2019
  - Look at developing Traceability Standards datasheet for SEMICON West 2019

By / 2nd: Dave Huntely (PDF Solutions) / Albert Fuchigami (PEER Group)
Discussion: None.
Vote: 4/0. Motion passed.

Motion: Move to approve submission of Ballot #6471 for line item revision to SEMI T23-0119 in Cycle 5-2019

By / 2nd: Dave Huntely (PDF Solutions) / Albert Fuchigami (PEER Group)
Discussion: None.
Vote: 5/0. Motion passed.

Attachment 04: SDT Task Force report April. 2019
Attachment 05: White Paper—Electronics Supply Chain Integrity Enabled by Blockchain

Action Item: (Inna) Provide list of Inactive standards within Traceability portfolio for co-Chairs evaluation. If possible identify original authors of these standards.

6.2 Equipment and Materials Traceability (EMT) Task Force Report

Eric Bruce (Samsung) reported for the EMT Task Force. Of note:

- Leadership Change / Ballot Adjudication / New SNARF(s)
  - None
- Upcoming ballots
    - Authorization for ballot submission at NA Fall 2019 TC Meeting for Cycle 2-2020
- Ongoing work on draft Ballots — focusing on #6448 first
  - Consensus defined to select 2D Data Matrix framework as label format
  - Look at IDM requirements as a starting point
  - Migration pass for adoption of proposed standard(s) compared to ‘grandfathered’ requirements
- Planning technical feedback sessions at SCIS SEMICON West July 2019
- Building Awareness of the ETM Standards in development
  - Completed educational workshops & poster at SEMICON Japan 2018, SEMICON Korea 2019
  - Samsung case studies at SEMI Texas Spring Forum 2019
- Look at developing Traceability Standards datasheet for SEMICON West 2019

Attachment 06: EMT TF Report April 2019.PPT
6.3 Traceability Five Year Review Task Force Report

- No report presented at TC. Upcoming activities of note:
  - SEMI T11-0703, Specification for Marking of Hard Surface Reticle Substrates
    - Review planned at SEMICON West 2019

7 Old Business

7.1 Standards due for Five-Year Review.

Inna Skvortsova addressed the TC Chapter on this topic. Of note:

<table>
<thead>
<tr>
<th>Name</th>
<th>Due for Review</th>
<th>Title</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEMI T11-0703</td>
<td>10/30/2019</td>
<td>Specification for Marking of Hard Surface Reticle Substrates</td>
<td>To be reviewed at SEMICON West 2019</td>
</tr>
<tr>
<td>(Reapproved 1014)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEMI T5-1214</td>
<td>12/5/2019</td>
<td>Specification for Alphanumeric Marking of Round Compound Semiconductor Wafers</td>
<td>To be reviewed at SEMICON West 2019</td>
</tr>
</tbody>
</table>

7.2 SNARFs Approaching 3-Year Review

The TC Chapter reviewed SNARFs approaching 3-year project period.

- No SNARFs received extended period.

8 New Business

8.1 New TFOFs Approval

- None

8.2 New SNARFs Approval

- New SNARFs were authorized as part of Task Force business/report.
  - Please refer to Section 6. Subcommittee and Task Force Reports of the meeting minutes.

8.3 New Ballots Authorization:

- New SNARFs were authorized as part of Task Force business/report.
  - Please refer to Section 6. Subcommittee and Task Force Reports of the meeting minutes.

9 Action Items Review

9.1 Previous Meeting(s) Action Items

Inna Skvortsova (SEMI) reviewed open action items. These can be found in the Previous Meeting(s) Action Items table at the beginning of these minutes.

9.2 New Action Items

Inna Skvortsova (SEMI) reviewed the new action items. These can be found in the New Action Items table at the beginning of these minutes.
10 Next Meeting and Adjournment
The next meeting is tentatively scheduled for July 11, 2019 in conjunction with SEMICON West at San Francisco CA.
See http://www.semi.org/en/events for the current list of meeting schedules.

Having no further business, a motion was made to adjourn. Adjournment was at 1:16PM.

Respectfully submitted by:
Inna Skvortsova
Sr. Standards Coordinator
SEMI North America
Phone: 408-9436996
Email: iskvortsova@semi.org

Minutes tentatively approved by:

| Yaw Obeng (NIST) | 6/27/2019 |

Table 13 Index of Available Attachments#1

<table>
<thead>
<tr>
<th>Title</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attachment 02: NA Traceability TC Meeting Minutes (Nov 2018)</td>
<td>Attachment 05: WP-Electronics Supply Chain Integrity Enabled by Blockchain-Tehranipoor</td>
</tr>
</tbody>
</table>

#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 Inna Skvortsova at the contact information above.