Traceability North America TC Chapter

Meeting Summary and Minutes

SEMICON West 2017

July 10, 2017 11:00 – 12:00 noon

Marriott Marquis Hotel, San Francisco, California

TC Chapter Announcements

Next TC Chapter Meeting

July 10, 2018 11:00 – 12:00 noon
Marriott Marquis Hotel, San Francisco, California

Table 1 Meeting Attendees

Italics indicate virtual participants

Co-Chairs: Yaw Obeng (NIST); Win Baylies (BayTech Resor)
SEMI Staff: Inna Skvortsova

Company	*Last*	*First*	*Company*	*Last*	*First*
NIST	Obeng	Yaw	SEMI	Skvortsova	Inna
NIST	Allen	Richard	SEMI	Amano	James
NIST	Orji	George	SEMI	Nguyen	Laura
AMAT/University of Michigan	Moyne	James	SEMI	Yanagisawa	Chie

Table 2 Leadership Changes

WG/TF/SC/TC Name	*Previous Leader*	*New Leader*
T5 Revision Task Force	None	Thomas Seldrum (Dow Corning) Arnd Weber (SiCrystal AG)

Table 3 Committee Structure Changes

Previous WG/TF/SC Name	*New WG/TF/SC Name or Status Change*
None	T5 (Alphanumeric Marking of Round Compound Semiconductor Wafers) Revision Task Force **(new)**

Table 4 Ballot Results

Document #	*Document Title*	*Committee Action*
6061	Reapproval of SEMI M12-0706 (Reapproved 1011): Specification for Serial Alphanumeric Marking of the Front Surface of Wafers	**Passed**
6062	Reapproval of SEMI M13-0706 (Reapproved 1011): Specification for Alphanumeric Marking of Silicon Wafers	**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
n/a	TFOF	n/a	T5 Revision Task Force
6117	SNARF	T5 Revision TF	Line Item Revision to SEMI T5-1214, *Specification for Alphanumeric Marking of Round Compound Semiconductor Wafers* **Approved by GCS 12/02/2016**

Table 6 Authorized Activities

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

#	Type	SC/TF/WG	Details
6245	SNARF	5Yr Review	Reapproval of SEMI T15-0812, *General Specification of Jig ID: Concept*
6246	SNARF	5Yr Review	Reapproval of SEMI T17-0706 (Reapproved 0812), *Specification of Substrate Traceability*
6247	SNARF	5Yr Review	Reapproval of SEMI T18-1106 (Reapproved 0812), *Specification of Parts and Components Traceability*
6244	SNARF	5Yr Review	Reapproval of SEMI T10-0701 (Reapproved 0912*) Test Method for the Assessment of 2D Data Matrix Direct Mark Quality*

#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
6245	SNARF	5Yr Review	Reapproval of SEMI T15-0812, *General Specification of Jig ID: Concept*
6246	SNARF	5Yr Review	Reapproval of SEMI T17-0706 (Reapproved 0812), *Specification of Substrate Traceability*
6247	SNARF	5Yr Review	Reapproval of SEMI T18-1106 (Reapproved 0812), *Specification of Parts and Components Traceability*
6244	SNARF	5Yr Review	Reapproval of SEMI T10-0701 (Reapproved 0912*) Test Method for the Assessment of 2D Data Matrix Direct Mark Quality*

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

#	TF	Title	Expiration Date
None			

Table 9 SNARF(s) Abolished

#	TF	Title
5921	5Yr Review	Reapproval of SEMI T19-0311: Specification for Device Marking **Activity now is owned by Japan Chapter of Traceability TC and registered under different SNARF#5971.**

Table 10 Standard(s) to receive Inactive Status

Standard Designation	Title
None	

Table 11 New Action Items

Item #	*Assigned to*	*Details*
2017July#01	(Inna S., Chie Y.)	To share *NIST Cybersecurity Framework* v1.1 presentation with Japan Chapter for review and feedback.

Table 12 Previous Meeting Action Items

Item #	*Assigned to*	*Details*
2015Jul#01	Win Baylies	Organize a Standards Workshop on *Security Requirement in ITRS 2.0* and how the SEMI Standards Program can support the ITRS 2.0. **In-progress.**
2015Jul#02	James Amano	Explore how the SEMI Standards Program can support the ITRS (now IRDS) 2.0. **In-progress**
2016Jul#01	Inna Skvortsova	Issue reapproval ballots for SEMI M12 and M13 in Cycle 7 or 8 2016. **DONE**

1 Welcome, Reminders, and Introductions

Yaw Obeng (NIST) called the meeting to order at 11:09AM. 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.ppt**

2 Review of Previous Meeting Minutes

The TC Chapter reviewed and approved the minutes of the previous meeting.

SEMI staff, Inna Skvortsova, co-chaired the TC meeting due to low attendance to facilitate the motion.

Motion:	To approve the previous meeting minutes from SEMICON West 2016 TC Meeting
By / 2nd:	Yaw Obeng (NIST)/ James Moyne (AMAT)
Discussion:	None
Vote:	2-0. All in favor. Motion passed.

Attachment 02: **NA Traceability TC Meeting Minutes (July 2016).pdf**

3 Liaison Reports

3.1 Traceability Japan TC Chapter Report

Chie Yanagisawa reported for the Traceability Japan TC Chapter. Of note:

- Leadership
  - Committee Co-chairs: Yoichi Iga (Toshiba); Hirokazu Tsunobuchi (Keyence)
- Meeting Information
  - Last meeting – Japan Standards Winter 2016 Meetings
    - December 16, 2016 in conjunction with SEMICON Japan 2016
    - Tokyo Big Sight Conference Tower, Tokyo, Japan
  - Next meeting
    - December 15, 2017 in conjunction with SEMICON Japan 2017
    - Tokyo Big Sight Conference Tower, Tokyo, Japan

- Document Review Summary at Japan Standards Winter 2016 Meetings in conjunction with SEMICON Japan 2016
    - 5971, Reapproval of SEMI T19-0311, *Specification for Device Marking*
        - Passed as balloted /Superclean
        - #5971 passed A&R and waiting for the proof
- Approved SNARF at Japan Standards Winter 2016 Meetings in conjunction with SEMICON Japan 2016
    - 6203, Reapproval of SEMI T22-0212: *Specification for Traceability by Self Authentication Service Body and Authentication Service Body*
        - 5 Year Review TF
- Upcoming Ballot 2017
    - 6203, Reapproval of SEMI T22-0212: *Specification for Traceability by Self Authentication Service Body and Authentication Service Body*
- Task Force Updates
    - 5 years review Task Force
        - Leader
            - Hirokazu Tsunobuchi (KEYENCE)
        - Current activity
            - #5971 Ballot: Reapproval of SEMI T19-0311 "Specification for Device Marking"
                - Passed as balloted at the Traceability Japan TC Chapter meeting on Dec. 16, 2016 in conjunction with SEMICON Japan 2016
                - Passed A&R in Jan-Feb 2017
                - Waiting for proof
            - #6203 SNARF for Reapproval of SEMI T22-0212 "Specification for Traceability by Self Authentication Service Body and Authentication Service Body"
                - Approved at the Traceability Japan TC Chapter meeting on Dec. 16, 2016 in conjunction with SEMICON Japan 2016
                - To be submitted for late cycle in 2017
    - Fiducial Mark Interoperability TF
        - The latest TF meeting on Nov. 18, 2015
        - Disbandment of this TF
            - TF leaders decided to propose disbanding this TF to each technical committee
            - If this proposal is agreed by all Japan TC Chapters of Assembly & Packaging, I&C, PIC, Silicon Wafers and Traceability, then the TF will be discharged.
                - The Silicon Wafers agreed on March 9, Assembly & Packaging agreed on March 13, PI&C agreed on April 19 and the I&C agreed on April 21.
                - To be proposed at the next Japan TC Chapter meeting of Traceability.
        - Backend alignment issues with introducing fiducial mark wafer
            - Would be discussed in Assembly & Packaging Japan TC Chapter after its disbandment.
- For more information, please contact Chie Yanagisawa at SEMI Japan cyanagisawa@semi.org

Attachment 03: Japan Traceability TC Report (July 2017).ppt

3.2 SEMI Staff Report

James Amano (SEMI) gave the SEMI Staff Report. Of note:

SEMI Global 2017 Calendar of Events

- SEMICON West (July 11-13, 2017, San Francisco, California)
- SEMICON Taiwan (September 13-15, 2017, Taipei, Taiwan)
- PV Taiwan (September 18-20, 2017,Taipei, Taiwan)
- SEMICON Europa (November 14-17, 2017, Munich, Germany)
- SEMICON Japan (December 13-15, 2017, Big Sight Tokyo, Japan)

Upcoming North America Meetings 2017

- NA Standards Fall 2017 Meetings (November 6-9, 2017, SEMI HQ, Milpitas, California)
- NA Standards Spring 2017 Meeting (April 2-5, 2018 <tentative dates> SEMI HQ, Milpitas, California)
- SEMICON West 2018 Meetings (July 10-12, 2018 San Francisco, California)

Letter Ballot Critical Dates for NA Standards Spring 2017 meetings

- Cycle 6-17: due Jul 21 / Voting Period: Aug 1 – Aug 31
- Cycle 7-17: due Aug 18 / Voting Period: Sep 1 – Oct 2
- Cycle 8-17: due Oct 13 / Voting Period: Oct 27 – Nov 27
- Cycle 9-17: due Nov 16 / Voting Period: Nov 29 – Dec 29

http://www.semi.org/en/Standards/Ballots

- *SEMI Standards Publications*

Cycle	New	Revised	Reapproved	Withdrawn
March 2017	0	16	11	0
April 2017	0	6	0	0
May 2017	0	4	6	0
June 2017	2	4	0	0

Total SEMI Standards in portfolio: 974. Includes 191 Inactive Standards

- GTC Charter & Scope Review
  - Problem Statement
    - Majority of GTCs do not have unified scope
    - Most have charter but not scope
    - Only a few GTC include scope in its charter
  - As any task force that is parented by a TC Chapter(s) of the GTC are required to be within the charter and scope of its parent GTC (See Regulations ¶5.7.3.2), every GTC must have a set of published charter and scope.
  - Current charter & scope of GTC
    - http://downloads.semi.org/web/wstdsbal.nsf/StdCharters
  - Traceability Global TC

- *Current Charter*
    - Capture user requirements and develop standards to enable full traceability of materials and other factory resources in semiconductor manufacturing. This will include marking and identification techniques, encode/decode methods, inter-company exchange of information, and characteristics of marking/reading sub-systems needed by the industry, from semiconductor, flat panel display, and other materials manufacturing through final product assembly and test.
- *Current Scope*
    - Standards of traceability including and not limited to:
      Encode/decode hardware and software
      Common symbologies
      Active/passive transponders
      Inter-company exchange of information (incl. Front-end to back-end exchange)
      Definitions of common manufacturing items on traceability
- *No action needed from the TC.*

- Requirements/Process Reminders for TC Chapter Meetings
    - Standards Document Development Project Period
        - Project period shall not exceed 3 years (Regs 8.3.2)
            - SNARF approval to TC Chapter approval
        - If document development activity is found to be continuing, but cannot completed with the project period, TC Chapter may grant one-year extension at a time, as many times as necessary.
        - The TC Chapter should review the expiration dates for all applicable SNARFs at each TC Chapter meeting. (PM Note 10)
    - SNARF Review Period
        - A submitted SNARF for a new, or for a major revision to an existing, Standard or Safety Guideline is made available to all members of a TC Chapter's parent global technical committee for two weeks for their review and comment. (Regs 8.2.1)
            - If the SNARF is submitted at a TC Chapter meeting, the committee can review and approve, but the SNARF will need to be distributed for two weeks and then approved via GCS.
    - Procedures for Correcting Nonconforming Titles of Published Standards Document (PM Appx. 4)
        - Some Standards qualify for a special procedure where a line item change can be used to correct the titles. Otherwise, the corrective action will likely require a major revision.
        - Use of PIP form is allowed to correct title if all of the following conditions are met:
            - Standards having only one Subtype
            - Changes either Specifications to Specification or Test Methods to Test Method
            - No concomitant text change is required
            - Approved by at least one co-chair of the TC Chapter
        - Example:
            - SEMI F69-1213, Test Methods for Transport and Shock Testing of Gas Delivery Systems

- *SNARF(s) and TFOF Approved by GCS in between TC Chapter Meetings*

- **SNARF 6117** for **Line Item Revision to SEMI T5-1214**, Specification for Alphanumeric Marking of Round Compound Semiconductor Wafers
- New TFOF for **T5 Revision**
- Approved by GCS 12/02/2016

- *SNARF 3 year status TC Chapter may grant a one-year extension*
  - SNARF for Reapproval of SEMI T19-0311: Specification for Device Marking
    - SNARF # 5921
    - Approved 07/13/2015, due for extension 07/13/2018

- Nonconforming Titles
  - *None*

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

- Documents due for 5 Year Review

Name	Due	Title
SEMI T15-0812	8/16/2017	General Specification of Jig ID: Concept
SEMI T17-0706 (Reapproved 0812)	8/16/2017	Specification of Substrate Traceability
SEMI T18-1106 (Reapproved 0812)	8/16/2017	Specification of Parts and Components Traceability
SEMI T10-0701 (Reapproved 0912)	9/28/2017	Test Method for the Assessment of 2D Data Matrix Direct Mark Quality

Attachment 04: SEMI Staff Report Traceability TC (July 2017).ppt

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 Ballot #6061

The TC Chapter reviewed the Document #6061, Reapproval of SEMI M12-0706 (Reapproved 1011), *Specification for Serial Alphanumeric Marking of the Front Surface of Wafers*

The ballot **passed** TC review and will be submitted to the ISC A&R for procedural review. Details can be found in the attached Procedural Review file.

Motion:	Document # 6061 is not a Safety Document, when all safety-related information is removed, Document is still technically sound and complete.
By / 2nd:	Yaw Obeng (NIST) / James Moyne (AMAT/University of Michigan)
Discussion:	None.
Vote:	4-0. Motion passed.

Motion:	Forward Document # 6061 to the ISC A&R for procedural review as written.
By / 2nd:	Yaw Obeng (NIST) / James Moyne (AMAT/University of Michigan)
Discussion:	None.
Vote:	4-0. Motion passed.

Attachment 05: 6061_Procedural Review

4.2 Ballot # 6062

The TC Chapter reviewed the Document #6062, Reapproval of SEMI M13-0706 (Reapproved 1011): *Specification for Alphanumeric Marking of Silicon Wafers*

The ballot **passed** TC review and will be submitted to the ISC A&R for procedural review. Details can be found in the attached Procedural Review file.

Motion: Document # 6062 is not a Safety Document, when all safety-related information is removed, Document is still technically sound and complete.

By / 2nd: Yaw Obeng (NIST) / James Moyne (AMAT/University of Michigan)

Discussion: None.

Vote: 4-0. Motion passed.

Motion: Forward Document # 6062 to the ISC A&R for procedural review as written.

By / 2nd: Yaw Obeng (NIST) / James Moyne (AMAT/University of Michigan)

Discussion: None.

Attachment 06: 6062_Procedural Review

5 Subcommittee and Task Force Reports

5.1 5 Year Review Traceability TF

No report provided by TF leaders. NA Traceability co-Chair. Yaw Obeng, conducted the TF meeting.

- NA Traceability co-Chair, Yaw Obeng, commented that Task Force leaders not responsive.
- Task Force needs active leadership to carry out review and maintenance of Traceability documents.

5.2 T5 Revision Task Force

- New Task Force formed between NA Traceability Technical Committee meetings with GCS approval.
- TF did not meet during SEMICON West 2017.
- Working on developing Line Item Revision to SEMI T5-1214, Specification for Alphanumeric Marking of Round Compound Semiconductor Wafers
    - Intercommittee ballot to Compound Semiconductor Materials

6 Old Business

6.1 Standards due for Five-Year Review.

James Amano (SEMI) addressed the TC Chapter on this topic. Of note:

TC Chapter reviewed and authorized new activities (SNARFs) to work on reapprovals of documents due for 5 Year review:

- SEMI T10-0701
- SEMI T15-0812
- SEMI T17-0706
- SEMI T18-1106

Motion:	To approve SNARF for Reapproval of SEMI T10, T15, T17, T18 and send out for ballots in Cycle 7-2017 to be adjudicated at SEMICON Japan 2017
By / 2nd:	Yaw Obeng (NIST) / James Moyne (AMAT/University of Michigan)
Discussion:	SEMI Staff to notify Japan Chapter of Traceability TC and GCS regarding the change of adjudicating region/locale
Vote:	3/0. Motion passed

6.2 SNARFs Approaching 3-Year Review

The TC Chapter reviewed the SNARF#5921 for Reapproval of SEMI T19-0311: *Specification for Device Marking*,

The TC Chapter noted that SANRF#5921 should be discontinued. This activity is now carried out by Japan Chapter of Traceability TC under the SNARF#5971.

7 New Business

7.1 NIST Cybersecurity Framework Update, including brief overview of Intel's implementation (Pilot program), is presented by Yaw Obeng (NIST)

- Detailed presentation is attached for SEMI Standards members review
- Yaw Obeng is looking for the feedback from Global Traceability Technical Committee. In particular:
    - Is the SEMI community interested in the NIST Cybersecurity Framework?
    - Can the NIST Framework be implemented within the SEMI-T20-series standards?
        - If Yes, What modification will be needed?
        - If No, Do we need a set of standards?
- For feedback please contact yaw.obeng@nist.gov

Attachments 07: NIST Cybersecurity Framework Update

Action Item: (Inna S., Chie Y.) To share *NIST Cybersecurity Framework* v1.1 presentation with Japan Chapter for review and feedback.

*7.2 IRDS - Metrology IFT Group Update***,** presented by George Orji (NIST).

- Focus on Metrology Needs and Challenges, driven by complex 3D devices, increased number of materials, and scaling (More Moore)
- Detailed presentation is attached for SEMI Standards members review
- For additional information please contact George Orji at george.orji@nist.gov

Attachments 08: IRDS_Overview_SEMI Traceability TC_NIST

8 Next Meeting and Adjournment

The next meeting is scheduled for July 10, 2018 at Marriott Marquis in San Francisco, CA in conjunction with SEMION West 2018 NA Standards Meetings. See http://www.semi.org/standards-events for the current list of events.

Having no further business, a motion was made to adjourn. Adjournment was at 12:11 PM.

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), Co-chair	08/24/2017
Win Baylies (BayTech Resor), Co-chair	TBD

Table 13 Index of Available Attachments[#1]

Title	*Title*
Attachment 01: SEMI Standards Required Elements.ppt	Attachment 05: 6061_Procedural Review
Attachment 02: NA Traceability TC Meeting Minutes (July 2016).pdf	Attachment 06: 6062_Procedural Review
Attachment 03: Japan Traceability Liaison Report (July 2017).pdf	Attachment 07: NIST Cybersecurity Framework Update.ppt
Attachment 04: SEMI Standards Staff Report July 2017.ppt	Attachment 08: IRDS_Overview_SEMI Traceability TC_NIST.ppt

#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.