NA Silicon Wafer TC Chapter Meeting Minutes

NA Spring Standards Meeting 2015
Tuesday, 31st March, 2015, 2:00 PM - 5:00 PM
KLA-Tencor, Milpitas, CA

Next Committee Meeting
Tuesday, July 14, 2015, San Francisco, CA in conjunction with SEMICON West Standards Meetings. Check www.semi.org/standards for the latest update.

Attendees:

SEMI Staff
Kevin Nguyen – SEMI HQ

Co-chair – Dinesh Gupta (STA)

Table 1 – Meeting Attendees

Last Name	*First Name*	*Company*
Goldstein	Mike	Intel
Haller	Kurt	KLA-Tencor
Hartsough	Larry	UA Associates
Lee	Kay	G450C
Mashiro	Supika	Tokyo Electron
Nakai	Tetsuya	SUMCO
Sinha	Jaydeep	KLA-Tencor
Wagner	Peter	Consultant

Table 2 – Task Force Changes
None

Table 3 – Ballot Summary
None

Table 4 – Authorized Ballots

#	*When*	*SC/TF/WG*	*Details*
5313C	Cycle 4-15	Int'l Test Methods TF	Revision of SEMI MF1535-0707 With Title Change To: Test Method for Carrier Recombination Lifetime in Electronic-Grade Silicon Wafers by Non-Contact Measurement of Photoconductivity Decay by Microwave Reflectance
5655	Cycle 4-15	Int'l 450 mm Wafer TF	Line Item Revision to SEMI M1-0215, Specifications for Polished Single Crystal Silicon Wafers
5705	Cycle 4-15	Int'l AWG TF	Revision of SEMI M67-1109 With Title Change To: Test Method for Determining Wafer Near-Edge Geometry from a Measured Thickness Data Array Using the ESFQR, ESFQD, and ESBIR Metrics
5706	Cycle 4-15	Int'l AWG TF	Revision of SEMI M70-1109 With Title Change To: Test Method for Determining Wafer-Near-Edge Geometry Using Partial Wafer Site Flatness
5744	Cycle 4-15	Int'l AWG TF	Line Item Revision to SEMI M49-1014, Guide for Specifying Geometry Measurement Systems for Silicon Wafers for the 130 nm to 16 nm Technology Generations
5746	Cycle 4-15	Int'l ASI TF	Line Item Revision of SEMI ME1392-1109, Guide for Angle Resolved Optical Scatter Measurements on Specular or Diffuse Surfaces

#	When	SC/TF/WG	Details
5805	Cycle 5-15	Int'l ASI TF	Revision of SEMI M50-0310, Test Method for Determining Capture Rate and False Count Rate for Surface Scanning Inspection Systems by the Overlay Method
5806	Cycle 4-15	Int'l AWG TF	Revision of SEMI M68-0315 With Title Change To: Test Method for Determining Wafer Near-Edge Geometry from a Measured Height Thickness Data Array Using a Curvature Metric, ZDD
5807	Cycle 4-15	Int'l AWG TF	Revision to SEMI M77 -1110 With Title Change To: Test Method for Determining Wafer Near-Edge Geometry Using Roll-Off Amount, ROA
5845	Cycle 5-15	Int'l Test Methods TF	Reapproval of SEMI M16-1110 - Specification for Polycrystalline Silicon
5846	Cycle 5-15	Int'l Test Methods TF	Reapproval of SEMI M17-1110 - Guide for a Universal Wafer Grid
5847	Cycle 5-15	Int'l Test Methods TF	Reapproval of SEMI M66-1110 Test Method to Extract Effective Work Function in Oxide and High-K Gate Stacks Using the MIS Flat Band Voltage-Insulator Thickness Technique
5848	Cycle 5-15	Int'l Test Methods TF	Reapproval of SEMI MF1153-1110 - Test Method for Characterization of Metal-Oxide Silicon (MOS) Structures by Capacitance-Voltage Measurements
5849	Cycle 5-15	Int'l Test Methods TF	Line Item Revision of SEMI MF1389-1110 - Test Methods for Photoluminescence Analysis of Single Crystal Silicon for III-V Impurities
5850	Cycle 5-15	Int'l Test Methods TF	Reapproval of SEMI MF1529-1110 - Test Method for Sheet Resistance Uniformity Evaluation by In-Line Four-Point Probe with the Dual-Configuration Procedure
5851	Cycle 5-15	Int'l Test Methods TF	Reapproval of SEMI MF1618-1110 - Practice for Determination of Uniformity of Thin Films on Silicon Wafers
5852	Cycle 5-15	Int'l Test Methods TF	Reapproval of SEMI MF1725-1110 - Practice for Analysis of Crystallographic Perfection of Silicon Ingots
5853	Cycle 5-15	Int'l Test Methods TF	Reapproval of SEMI MF1726-1110 - Practice for Analysis of Crystallographic Perfection of Silicon Wafers
5854	Cycle 5-15	Int'l Test Methods TF	Reapproval of SEMI MF1727-1110 - Practice for Detection of Oxidation Induced Defects in Polished Silicon Wafers
5855	Cycle 5-15	Int'l Test Methods TF	Reapproval of SEMI MF1771-1110 Test Method for Evaluating Gate Oxide Integrity by Voltage Ramp Technique
5856	Cycle 5-15	Int'l Test Methods TF	Reapproval of SEMI MF1809-1110 - Guide for Selection and Use of Etching Solutions to Delineate Structural Defects in Silicon
5857	Cycle 5-15	Int'l Test Methods TF	Withrawal of SEMI MF2166-1110 - Practices for Monitoring Non-Contact Dielectric Characterization Systems Through Use of Special Reference Wafers
5858	Cycle 5-15	Int'l Test Methods TF	Reapproval of SEMI MF1810-1110 - Test Method for Counting Preferentially Etched or Decorated Surface Defects in Silicon Wafers

Table 5 – Authorized Activities

#	Type	SC/TF/WG	Details
5540	SNARF	Int'l AWG TF	Line Item Revision to SEMI M1-1013, Specification for Polished Single Crystal Silicon Wafers (Addition to Appendices 1 and 3: Illustration of Flatness and Shape Metrics for Silicon Wafers) - SNARF was abandoned.
5745	SNARF	Int'l AWG TF	New Standard: Guide for Wafer Dimensional Metrology Based on Areal Image Acquisition Technology - SNARF was abandoned.

#	Type	SC/TF/WG	Details
5805	SNARF	Int'l ASI TF	SNARF was revised from Line Item to Major Revision of SEMI M50-0310, Test Method for Determining Capture Rate and False Count Rate for Surface Scanning Inspection Systems by the Overlay Method (Pending TC member review for 2 week and subsequent approval of GCS)
5845	SNARF	Int'l Test Methods TF	Reapproval of SEMI M16-1110 - Specification for Polycrystalline Silicon
5846	SNARF	Int'l Test Methods TF	Reapproval of SEMI M17-1110 - Guide for a Universal Wafer Grid
5847	SNARF	Int'l Test Methods TF	Reapproval of SEMI M66-1110 Test Method to Extract Effective Work Function in Oxide and High-K Gate Stacks Using the MIS Flat Band Voltage-Insulator Thickness Technique
5848	SNARF	Int'l Test Methods TF	Reapproval of SEMI MF1153-1110 - Test Method for Characterization of Metal-Oxide Silicon (MOS) Structures by Capacitance-Voltage Measurements
5849	SNARF	Int'l Test Methods TF	Line Item Revision of SEMI MF1389-1110 - Test Methods for Photoluminescence Analysis of Single Crystal Silicon for III-V Impurities
5850	SNARF	Int'l Test Methods TF	Reapproval of SEMI MF1529-1110 - Test Method for Sheet Resistance Uniformity Evaluation by In-Line Four-Point Probe with the Dual-Configuration Procedure
5851	SNARF	Int'l Test Methods TF	Reapproval of SEMI MF1618-1110 - Practice for Determination of Uniformity of Thin Films on Silicon Wafers
5852	SNARF	Int'l Test Methods TF	Reapproval of SEMI MF1725-1110 - Practice for Analysis of Crystallographic Perfection of Silicon Ingots
5853	SNARF	Int'l Test Methods TF	Reapproval of SEMI MF1726-1110 - Practice for Analysis of Crystallographic Perfection of Silicon Wafers
5854	SNARF	Int'l Test Methods TF	Reapproval of SEMI MF1727-1110 - Practice for Detection of Oxidation Induced Defects in Polished Silicon Wafers
5855	SNARF	Int'l Test Methods TF	Reapproval of SEMI MF1771-1110 Test Method for Evaluating Gate Oxide Integrity by Voltage Ramp Technique
5856	SNARF	Int'l Test Methods TF	Reapproval of SEMI MF1809-1110 - Guide for Selection and Use of Etching Solutions to Delineate Structural Defects in Silicon
5857	SNARF	Int'l Test Methods TF	Withrawal of SEMI MF2166-1110 - Practices for Monitoring Non-Contact Dielectric Characterization Systems Through Use of Special Reference Wafers
5858	SNARF	Int'l Test Methods TF	Reapproval of SEMI MF1810-1110 - Test Method for Counting Preferentially Etched or Decorated Surface Defects in Silicon Wafers
5859	SNARF	Int'l ASI TF	Line Item Revision of SEMI MF1811-0310, Guide for Estimating the Power Spectral Density Function and Related Finish Parameters from Surface Profile Data

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

Table 6 – Previous Meeting Actions Items

None

Table 7 – New Actions Items

Item #	Assigned to	Details
0315-1	Tetsuya Nakai (SUMCO)	To take over the abandoned SNARF 5540 (Line Item Rev. to M1) and submit a New SNARF to add Illustration of Flatness and Shape Metrics in SEMI M1 as related information

1. Call to Order

Dinesh Gupta called the meeting to order and welcomed everyone who attended. A round of self introduction was made. All SEMI standards meetings are subjected to SEMI Anti-Trust Reminder and Guidelines concerning Patentable Technology. SEMI Regulations now require all attendees to be members of SEMI standards. Membership enrollment is at www.semi.org/standardsmembership. Agenda was reviewed and proceed.

2. Review of Schedule for the Next Meeting (SEMICON West Standards Meeting, July 13-14, 2015)

The next meeting is scheduled at the SEMICON West Standards Meeting, July 13-14, 2015 in San Francisco, CA. Check www.semi.org/standards on the calendar of entry for the latest schedule and meeting location. See attachment for tentative schedule.

Attachment – 1, SchSiWfr0715 rev1

3. Review and Approval of the Minutes from NA Fall Standards meetings, Nov 4, 2014 in Santa Clara, CA

The meeting minutes were reviewed. Kurt mentioned that he thought ballot 5746, Revision to ME1392, was issued in cycle 1 or 2, for review at this meeting, but it did not happened.

Motion: Accept the minutes of the previous meeting.
By / 2nd: Michael Goldstein (Intel)/Jaydeep Sinha (KLA-Tencor)
Discussion: None
Vote: 8/0 in favor. Motion passed

Attachment – 2, Minutes NA SiWfr 20141104

4. Liaison Reports

4.1. Europe Committee

Kevin Nguyen reported there was no meeting since October 2014. The old report was given from the previous meeting in November 2014. See attached.

Attachment – 3, 141023_Europe_SW_LiaisonReport

4.2. Japan Committee

Nakai-san reported. Highlights.

- Last Meeting
  - December 3, 2014 in conjunction with SEMICON Japan 2014, at Tokyo Big Sight, Tokyo, Japan
  - March 6, 2015 during Japan Spring Meetings 2015 at SEMI Japan, Tokyo, Japan
- Next Meeting
  - June 12, 2015 during Japan Summer Meetings 2015 at SEMI Japan, Tokyo, Japan
- Proposal to minor change to current Charter
  - Modification was made and sent to the GCS a few weeks earlier via email. Nakai asked the GCS to provide feedback. See below for the proposal.

  - Charter - To develop international standards fulfilling the requirements for commercial silicon wafers. Silicon Wafer Committee standardization includes:
    - Specifications and guides for silicon wafers
    - Test methods for silicon wafer quality and geometry
    - Shipping box related matter
    - Wafer ID related matter
    - ~~Business~~ Related matter to support smooth communication between silicon supplier and customer

  ~~Materials Division - To develop international standards for materials comprising electronic devices. It~~

~~provides an open forum for the interchange of information and data about technical issues and trends which lead to standards dealing with mechanical, electrical, crystallographic, surface, and other properties.~~

- Transfer JEITA/JEIDA Standards to SEMI
  - JEITA and SEMI is working on the contract about copyright. Some of the standards are being transferred. See below.
    - EM-3503 → 5737: Revision of SEMI MF1391-1107, Test Method for Substitutional Atomic Carbon Content of Silicon by Infrared Absorption (drafting)
    - EM-3506 → will be worked after JEIDA-53 transferred (SEMIMF1535)
    - EM-3508 → 5770: New Standard,Test Method for Bulk Micro Defect Density and Denuded Zone Width in Annealed Silicon Wafers (drafting)
    - EM-3509 → 5774: New Standard: Sample Preparation Method for Minority Carrier Diffusion Length Measurement in Silicon Wafers by Surface Photovoltage Method (Activity starts soon)
    - EM-3511 → 5772: Revision of MF391-0310: Test Methods for Minority Carrier Diffusion Length in Extrinsic Semiconductors by Measurement of Steady-state Surface photovoltage (Activity starts soon)
    - EM-3503 → 5737: Revision of SEMI MF1391-1107, Test Method for Substitutional Atomic Carbon Content of Silicon by Infrared Absorption (drafting)
    - EM-3506 → will be worked after JEIDA-53 transferred (SEMIMF1535)
    - EM-3508 → 5770: New Standard, Test Method for Bulk Micro Defect Density and Denuded Zone Width in Annealed Silicon Wafers (drafting)
    - EM-3509 → 5774: New Standard: Sample Preparation Method for Minority Carrier Diffusion Length Measurement in Silicon Wafers by Surface Photovoltage Method (Activity starts soon)
    - EM-3511 → 5772: Revision of MF391-0310: Test Methods for Minority Carrier Diffusion Length in Extrinsic Semiconductors by Measurement of Steady-state Surface photovoltage (Activity starts soon)
  - Both Peter and Dinesh said some of the test methods above already standardized and published in SEMI. So, it is not necessary to transfer to SEMI. Nakai asked Dinesh to list them out and communicate with the Japan Test Methods TF.
  - New Japan staff - Junko Collins (jcollins@semi.org)

Attachment – 4, 1503_JA_SiW_LiaisonR_for_NASpring_R0.1c

5. Regulations Change Report

Kevin reported some major changes in the published March 2015 edition of the Regulations especially on Ratification ballot. The committee now has the option of addressing the reject with technical changes and issue for ratification ballot. If the results of the ratification ballot came back with a condition of >= 30% Approval Rate and <10% reject (Regs 10.5.2), the ratification ballot will be sent to A&R for review for publication. No further committee adjudication is required. See slide 6 of the file attached.

Attachment – 5, Regs_SC_to_NARSC2015_0329_rev1.0

6. Staff Report

Report was given by Kevin. Highlights:

- SEMICON West Visitor Registration
  - Complimentary Expo Only badge is opened from April 1-May 8
  - Register Today!
    - http://www.semiconwest.org/Participate/RegisterNow
- There are now 9 ballots cycle for 2015
  - http://www.semi.org/en/Standards/P_000788
- SEMI Standards Publications
  - Total SEMI Standards in portfolio: 928
- New Requirements/Process Reminders for TC Chapter Meetings from December 2014 Regulations

- Standards Document Development Project Period
  - Project period shall not exceed 3 years (Regs 8.3.2)
  - 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.
- 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.
- New SNARF & TFOF Form

Attachment – 6, SEMI Staff Report (Spring 2015) rev2

6.0 Ballot Review

6.1 There was no ballot to review.

7.0 Task Force Reports

7.1 Int'l 450 mm Wafer TF/Mike Goldstein (Intel)

Mike Goldstein reported.

- Doc. 5743, Line Item Revision to SEMI M1-0215, Specifications for Polished Single Crystal Silicon Wafers (Revise SEMI M1 to remove category 1.15 wafers of 300 mm diameter)
  - Passed at SEMICON Japan, but eventually returned to committee due to an upheld appeal
- Doc. 5655, Line Item Revision to SEMI M1-0215, Specifications for Polished Single Crystal Silicon Wafers (Revise SEMI M1 to add notchless 450 mm diameter wafers with an edge exclusion of 1.5 mm.)
  - Will be issued in cycle 4-15 for review in San Francisco.
- Discussed document 5794, New Standard: Specification of Developmental 450mm Diameter Polished Single Crystal Notchless Silicon Wafers With Back Surface Fiducial Marks. The draft will be presented at SEMICON West 2015.

Attachment – 7, NA 2015 SEMI spring meeting 450mm_Prime wafers Agenda

7.2 Int'l Advanced Wafer Geometry TF/ Jaydeep Sinha (KLA-Tencor)

- Minutes were presented by Jaydeep.
  - Jaydeep mentioned Pradeep Vukkadala from KT provided a summary of some of the new Wafer Geometry related presentations at SPIE. There was a full session at SPIE on Wafer Geometry and details of these papers can be accessed from SPIE.
  - Ballot developments
    - Doc5540 - Line Item Rev. to M1 - illustration of Geometry Parameters
      - Jaydeep stated some of the terms such as TP, FP and MP are not defined in the document. However, Peter Wagner said the document initially has these terms, but were later removed per suggestion from the TF members last year. He was disappointed that the TF kept changing their requests.
      - Dinesh suggested Peter to honor the request by adding the terms above and proceed for ballot, but Peter responded if these terms are added, other terms will also need to be defined.
      - Supika recommended the content of doc. 5540 be placed in the back of the document as Related Information (RI) since RI is not an official

part of the document. By doing so, these terms will not have to be defined. As the discussion ensued, Peter would like to abandon this effort.

Motion: To abandon SNARF 5540
By / 2nd: Peter Wagner/Kurt Haller
Discussion: A lot of work has been put into this effort. To move forward with the discussion, Nakai-san offered to take Peter's work and generate a new SNARF to carry on with a condition that Peter will share his work. As the discussion progressed, Peter agreed to let Nakai-san to use his document. And Nakai will issue SNARF and ballot in the future.
Vote: 3-1 in favor. Motion passed

Motion: To take over the abandoned SNARF 5540 and proceed as related information in SEMI M1
By / 2nd: Tetsuya Nakai/Jaydeep Sinha
Discussion: None.
Vote: 5-0 in favor. Motion passed

- Doc. 5744, Line Item Revision to M49 (exclusion window) was presented

  Motion: To send for cycle 4/5 ballot for review at SEMICON West
  By / 2nd: Jaydeep Sinha/Mike Goldstein
  Discussion: None
  Vote: 6-0 in favor. Motion passed

- Doc. 5705, Revision of SEMI M67-1109 With Title Change To: Test Method for Determining Wafer Near-Edge Geometry from a Measured Thickness Data Array Using the ESFQR, ESFQD, and ESBIR Metrics, was presented.

  Motion: To send for cycle 4 ballot for review at SEMICON West
  By / 2nd: Jaydeep Sinha/Mike Goldstein
  Discussion: None
  Vote: 6-0 in favor. Motion passed

- Doc. 5706, Revision of SEMI M70-1109 With Title Change To: Test Method for Determining Wafer-Near-Edge Geometry Using Partial Wafer Site Flatness, was presented.

  Motion: To send for cycle 4 ballot for review at SEMICON West
  By / 2nd: Jaydeep Sinha/Mike Goldstein
  Discussion: None
  Vote: 6-0 in favor. Motion passed

- Doc. 5806, Revision of SEMI M68-0315 With Title Change To: Test Method for Determining Wafer Near-Edge Geometry from a Measured Height Thickness Data Array Using a Curvature Metric, ZDD, was present.

  Motion: To send for cycle 4 ballot for review at SEMICON West
  By / 2nd: Jaydeep Sinha/Mike Goldstein
  Discussion: None
  Vote: 6-0 in favor. Motion passed

- Doc. 5807, Revision to SEMI M77 -1110 With Title Change To: Test Method for Determining Wafer Near-Edge Geometry Using Roll-Off Amount, ROA was presented.

Motion: To send for cycle 4 ballot for review at SEMICON West
By / 2nd: Jaydeep Sinha/Mike Goldstein
Discussion: None
Vote: 6-0 in favor. Motion passed

- Old business
  - Doc. 5745, New Standard: Guide for Wafer Dimensional Metrology Based on Areal Image Acquisition Technology
    - Jaydeep reported that John wants to pull back on his effort due to no support.

    Motion: To abandon doc. 5745
    By / 2nd: Kurt Haller/Jaydeep Sinha
    Discussion: None
    Vote: 5-1 in favor. Motion passed

Attachment – 8, AWG Attachments

7.3 Int'l Automated Advanced Surface Inspection TF/Kurt Haller (KLA-Tencor)

- Kurt reported that he was under impression that doc. 5746, Line Item SEMI ME1392-1109, Guide for Angle Resolved Optical Scatter Measurements on Specular or Diffuse Surface, was balloted in cycle 1 or 2 of 2015, but it did not happened. He wanted to make sure this item captured in the meeting minutes.

  Motion: To send doc. 5746 for cycle 4-15 for review at SEMICON West
  By / 2nd: Kurt Haller/Mike Goldstein
  Discussion: None
  Vote: 5-0 in favor. Motion passed

- Doc. 5805, Line Item Revision of SEMI M50-0310, Test Method for Determining Capture Rate and False Count Rate for Surface Scanning Inspection Systems by the Overlay Method, has substantive change. Per new SEMI Regulations, a change made to Purpose or Scope is considered major revision. Thus, the SNARF needs to be revised from line item to major revision. Doc. 5805 is reported to be in the ballotable form, but the required 2 weeks member review and GCS approval are necessary since the SNARF was revised. Thus, it will be issued in cycle 5-15 after these steps are taken.

  Motion: To approve revised SNARF for M50 from line item to major revision
  By / 2nd: Kurt Haller/Mike Goldstein
  Discussion: Kevin will send revised SNARF for members to review for two weeks and ask the GCS approval to issue for ballot in cycle 5-15 for review at West.
  Vote: 5-0 in favor. Motion passed

- Doc. 5804, Line Item Revision of SEMI M53-0310 - Practice for Calibrating Scanning Surface Inspection Systems Using Certified Depositions of Monodispere Reference Spheres on Unpatterned Semiconductor Wafer Surfaces, was reported. It was determined that an additional round of circulation among members is needed before the ballot can be issued.

- SEMI MF1811-0310, Guide for Estimating the Power Spectral Density Function and Related Finish Parameters from Surface Profile Data, is due for 5 year review. The line item SNARF was presented.

  Motion: To approve line item SNARF for MF1811
  By / 2nd: Kurt Haller/Peter Wagner
  Discussion: None
  Vote: 6-0 in favor. Motion passed

Attachment – 9, AASI_TF_SEMI_NAStdsMeetings_30_Mar_2015_Meeting minutes

7.4 Int'l SOI TF/Bich-Yen Nguyen (SOITEC USA)

- Dinesh Gupta reported for Bich-Yen Nguyen. The TF is looking at high resistivity for SOI for revision of M71. It was reported that Philippe Absil, Director at IMEC, will be invited for speaking at SEMICON West 2015 to speak on feasibility study for SOI. No confirmation yet, but a backup is a Photonic expert from Intel-Santa Clara if IMEC will not be present.

Attachment – 10, SOI TF Agenda_Mar 30, 2015

7.5 Int'l Annealed Wafer TF/Dinesh Gupta (STA)

- Dinesh Gupta reported SEMI M57-0414, Specifications for Silicon Annealed Wafers, is recently published in April 2014. No future revision is anticipated. The TF is on the standby mode until further notice. This TF can be removed from the next meeting agenda.

7.6 Int'l Epitaxial Wafer TF/ Dinesh Gupta (STA)

- Dinesh reported doc. 5742, Line Item Revision to SEMI M62-0514, Specifications for Silicon Epitaxial Wafers (Re: 16 nm technology node) was published. The next revision will be adding the 11 nm technology node.

Attachment – 11, Min AW-EPI Mtg 0315

7.7 Int'l Test Methods TF/Dinesh Gupta (STA)

- Dinesh reported Doc 5313C (Rev to MF1535) is ready to go to ballot in 2015 Cycle 4 (for adjudication @ SEMICON West, July 2015).

  Motion: To authorize doc. 5313C for cycle 4 for review at SEMICON West 2015
  By / 2nd: Jaydeep Sinha/Kurt Haller
  Discussion: None
  Vote: 3/0 in favor. Motion passed

- Documents for 5-year review
  - Capitalize Test Method, Practice or Guide throughout the document (Strictly editorial)
    M66, MF1153, MF1771, MF1389, MF1529, MF1618, MF1725, MF1726, MF1727, MF1809 and MF1810
  - Submit to reapproval "as is": M16, M17
  - Submit for withdrawal: MF2166

  Motion: To issue 5 year ballots above for cycle 5 for review at SEMICON West 2015
  By / 2nd: Jaydeep Sinha/Kurt Haller
  Discussion: None
  Vote: 5/0 in favor. Motion passed

Attachment – 12, Min Test Methods Mtg 0315

7.8 Int'l Polished Wafer TF/TBD

- This TF was met jointly with the int'l 450 mm Wafer TF. Refer to section 7.1 above for details.

7.9 Int'l Terminology TF/TBD

- No meeting, no report.

8.0 Old Business

None

9.0 New Business

9.1 T7 Discussion

Nakai-san presented proposal for additional changes for SEMI T7 revision and M1 revision. It was

recommended if T7 ballot is sent, Global Silicon Wafer committee members should also receive intercommittee ballot.

Attachment – 13, Revision of T7_150331

9.2 Transfer of JEITA documents
Nakai-san presented the progress of JEITA documents transfer. See slides 25 and 26 in attachment in section 4.2 above.

9.3 Eliminating NA Fall meeting and merging TFs possibility
Dinesh Gupta and Jaydeep Sinha mentioned there are too many meetings during Oct-December time frame. There is SEMICON Europa meeting (October), NA Fall meeting (November), and SEMICON Japan meeting (December). Having multiple meetings can be a challenge when travel restriction is imposed. The NA TC Chapter should consider removing the Fall meeting since there are other venues in October and December. More discussion and decision should be made at SEMICON West since there will be more in attendees for greater consensus.

In addition, there are several task forces that should be merged. For example, SOI TF is not active and can be grouped with AWG TF. Furthermore, Polished Wafer and 450 mm Wafer TFs should be consolidated. This idea will be revisited at SEMICON West.

9.4 5 Year Review
Kevin Nguyen mentioned as the new SEMI Regulations now imposed that all standards activities should be completed within 3 years. Kevin reported doc. 5070 Revision to SEMI M76-0710, Specification for Developmental 450 mm Diameter Polished Single Crystal Silicon Wafers, was initiated in 2010, passing the 3 years period. Michael Goldstein asked to have this activity open since the TF is still working on it.

9.5 Committee Charter and Scope review
Silicon Wafer Global TC charter modification was proposed. Materials division is no longer available, so it should be removed from the charter. See section 4.2 above for the proposal. Nakai asked the GCS members to provide feedback.

10.0 Action Item Reviews

Kevin Nguyen reviewed no old action items. There was one new action item at this meeting noted in **table 7**.

11.0 Adjourn

The meeting was adjourned at 5:00 PM.

These minutes are respectfully submitted by:

Kevin Nguyen,
SEMI Int'l Standards Operation Manager
Phone: 408-943-7997
Email: knguyen@semi.org

Minutes approved by:
Dinesh Gupta (STA) – Co-chair Date:

Table 8 – Index of Attachment Summary

#	*Title*	#	*Title*
1	SchSiWfr0715 rev1	8	AWG Attachments
2	Minutes NA SiWfr 20141104	9	AASI_TF_SEMI_NAStdsMeetings_30_Mar_2015_Meeting minutes

#	Title	#	Title
3	141023_Europe_SW_LiaisonReport	10	SOI TF Agenda_Mar 30, 2015
4	1503_JA_SiW_LiaisonR_for_NASpring_R0.1c	11	Min AW-EPI Mtg 0315
5	Regs_SC_to_NARSC2015_0329_rev1.0	12	Min Test Methods Mtg 0315
6	SEMI Staff Report (Spring 2015) rev2	13	Revision of T7_150331
7	NA 2015 SEMI spring meeting 450mm_Prime wafers Agenda		

#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 Kevin Nguyen at the contact information above