Physical Interfaces & Carriers North America TC Chapter

Meeting Summary and Minutes

SEMI Standards NA Summer (June) Meetings 2025
Wednesday, June 4, 09:00 – 12:00 Noon Pacific
SEMI Global Headquarters, Milpitas, California, and via Official Virtual TC Chapter Meeting (OVTCCM)

TC Chapter Announcements

Next TC Chapter Meeting

SEMICON West 2025

Wednesday, October 8, 09:00 – 12:00 Noon Mountain

Phoenix Convention Center, Phoenix, Arizona/USA

Table 1 Meeting Attendees

Italics indicate virtual participants

Co-Chairs: Melvin Jung (Intel), Matt Fuller (Entegris)
SEMI Staff: Laura Nguyen

Company	*Last*	*First*	*Company*	*Last*	*First*
Acteon NEXT LLC	*Komatsu*	*Shoji*	*Intel*	*Radloff*	*Stefan*
Brooks Automation	*Babbs*	*Daniel*	*Intel*	*Slinker*	*Daniel*
Bruker	*Boyette*	*James*	*JEOL Ltd.*	*Asayama*	*Kyoichiro*
Daewon	*Jentgen*	*Jarrod*	*Lam Research*	*Gould*	*Richard*
Daewon	*Sanders*	*Trevor*	*LK Semiconductor Consulting Services*	*Kwakman*	*Laurens*
Entegris	*Fuller*	*Matthew*	Tokyo Electron Limited	Hama	Naoya
Entegris	*Wang*	*Huaping*	Tokyo Electron Limited	Mashiro	Supika
Hitachi-High Tech	*Onishi*	*Tsuyoshi*	*UA Associates*	*Hartsough*	*Larry*
Infineon	*Felux*	*Florian*			
Intel	*Jung*	*Melvin*	SEMI	Nguyen	Laura

Table 2 Leadership Changes

None

Table 3 Committee Structure Changes

None

Table 4 Ballot Results

Document #	*Document Title*	*TC Chapter Action*
7343	Reapproval of SEMI E177-0919E, Specification for Transmission Electron Microscope (TEM) Lamella Carriers Used in Electron Microscopy Workflows	**Passed**, as balloted.

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

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

Table 5 Ratification Ballot Results

None

NOTE 1: **Passed** Ratification ballots will be submitted to SEMI publication for final processing.

NOTE 2: **Failed** Ratification ballots were returned to the originating task forces for re-work and re-balloting or abandoning.

Table 6 Activities Approved by the GCS between meetings of the TC Chapter

None

Table 7 SNARF(s) Granted a One-Year Extension

None

Table 8 Authorized Ballots

Listing of documents authorized by the Originating TC Chapter for Letter Ballot.

#	*When*	*TF*	*Details*
7194	Cycle 7, or 8-2025	Film Frame FOUP (FFF) TF	New Standard: Specification for 300 mm Film Frame FOUP Load Port

Table 9 SNARF(s) Granted a One-Year Extension

None

Table 10 SNARF(s) Canceled

#	*TF*	*Title*
7195	SEMI E72 Revision TF	Revision to SEMI E72-1016, Specification and Guide for Equipment Footprint, Height, and Weight

Table 11 Standard(s) to receive Inactive Status

None

NOTE 1: *Inactive, adj.* — Status of a Standard or Safety Guideline that is not currently supported by the GTC. [*Regulations* ¶ 4.2.19]

Table 12 New Action Items

None

Table 13 Previous Meeting Action Items

Item #	*Assigned to*	*Details*
2017April#04	Laura Nguyen	To identify which documents under the global task force, belong to which committees. Ongoing. Unsure how this should be done.
2022Mar#01	Larry Hartsough	Larry to check Five-Year docs for “must”, “shall”, and other PM related items. Ongoing.
2022Mar#02	Laura Nguyen	Laura to check internally to share top formatting examples to TF leaders. Ongoing.
2022July#01	Larry Hartsough	Provide tutorial for Inactive Standards. Ongoing.
2022Nov#01	Larry Hartsough	Put together a slide on how to add other things to consider in the future (such as, how to resolve different types of conflict; ex: SEMI E131 and E15.1 conflict) Ongoing.

1 Welcome, Reminders, and Introductions

Matt Fuller (Entegris) called the meeting to order at 09:03. The meeting reminders on antitrust issues, intellectual property issues and holding meetings with international attendance were reviewed. Attendees introduced themselves.

Attachment: SEMI Standards Required Meetings Elements

2 Review of Previous Meeting Minutes

The TC Chapter reviewed the minutes of the previous meeting.

Motion:	To accept the previous meeting minutes as written.
By / 2nd:	By: Supika Mashiro / Tokyo Electron Ltd. Second: Shoji Komatsu / Acteon NEXT LLC
Discussion:	None.
Vote:	8-0 in favor. Motion passed.

Attachment: [2025Winter] PIC NA TC Chapter Meeting Minutes

3 Liaison Reports

3.1 *Physical Interfaces & Carriers Japan TC Chapter*

Laura Nguyen (SEMI HQ) reported for the Physical Interfaces & Carriers Japan TC Chapter. Of note:

Meeting Information

- Last meeting:
  - Friday, April 18, 2025
  - SEMI Japan Office + Official Virtual TC Chapter Meeting (Hybrid)
- Next Meeting:
  - Friday, September 26, 2025
  - Official Virtual TC Chapter Meeting / SEMI Japan Office (Hybrid)

Leadership Changes: None

Organization Chart (*refer to attachment)*

Ballot Results

Document #	*Document Title*	*TC Chapter Action*
7329	Line Item Revision to SEMI E181-0424 - Specification for Panel FOUP for Panel Level Packaging	**Passed**

Activities Approved via GCS between Meetings

Doc #	*Type*	*SC/TF/WG*	*Title / Details*
7332	SNARF	Next Gen Assembly / Test Material Handling TF	New Standard: Specification for Large JEDEC ™ Tray Stack Loadport - ***Approved by GCS on 07/02/2025*** ***(reported on previous NA winter meeting as well)***
7333	SNARF	Panel Level Packaging (PLP) Panel FOUP TF	Revision to add a new Subordinate Standard, SPECIFICATION FOR PANEL FOUP LOADPORT GROUND BASED VEHICLE DELIVERY EXCLUSION VOLUME to SEMI E182 SPECIFICATION FOR PANEL FOUP LOADPORT FOR PANEL LEVEL PACKAGING' - ***Approved by GCS on 07/02/2025*** ***(reported on previous NA winter meeting as well)***

Authorized Ballots

#	*When*	*SC/TF/WG*	*Details*
7333	Cycle 6 or 7, 2025	Panel Level Packaging Panel FOUP TF	Revision to add a new Subordinate Standard, SPECIFICATION FOR PANEL FOUP LOADPORT GROUND BASED VEHICLE DELIVERY EXCLUSION VOLUME to SEMI E182 SPECIFICATION FOR PANEL FOUP LOADPORT FOR PANEL LEVEL PACKAGING’
7172	Cycle 7 or 8, 2025	Next Gen Assembly / Test Material Handling TF	New Standard: Specification for Next Gen Assembly / Test Carrier

Open SNARFs

Doc #	*TF*	*Document Title/Details*	*Expiration Date*
7332	Next Gen Assembly / Test Material Handling Task Force	New Standard: Specification for Next Gen Assembly / Test Carrier	February 2028
7333	Panel Level Packaging (PLP) Panel FOUP TF	Line Item Revision to SEMI E182-0424 - Specification for Panel FOUP Loadport for Panel	February 2028

Five-Year Review: *None*

Task Force Highlights

Global PIC Standards Maintenance Task Force

- No activity

Japan Electron Microscopy Workflow liaison TF

- Details of LCC standard (Doc. 6592) is progressing in the discussion.
- EM Workflow TF schedules to hold the ballot submission in Q2 2025.

  → To submit Doc 6592 for Ballot cycle in June time frame.
- The Japan team has begun preparations for processing an actual prototype of LCC.
  - The LCC will be made of conductive plastic with an injection molding manufacturer in Kyoto.
  - The results of prototype will be shared in the EM Workflow Task Force.
- The discussion of LCSC (Lamella Carrier Shipping Container, Doc. 6832) have been starting.

Panel Level Packaging(PLP) Panel FOUP TF

- Revision of E181-0424(Panel FOUP)
  - Ballot 7329 of E181 passed the TC.
- New Subordinate Standard to E182 and E182 Line-Item Ballot
  - As per the request from NGAT-TF, we will create a new subordinate document that reduces the space at the bottom of the LP for AMRs, AGVs, etc. At the same time, we will revise E182 to specify these variations in the order information.
  - These two ballots will be voted on in Cycle 6.
- E182 Modifying subordinate documents
  - The four subordinate standards of E182 are scheduled to be revised in Cycle 8 or 9 to clarify typos and requirements.

Next Gen Assembly / Test Material Handling Task Force

- The TF highlight will be provided by Stefan Radloff (Intel).

Staff Contact: Takeaki Hirabara at thirabara@semi.org

Attachment: JA_PIC_Liaison_May2025_Ver2

3.2 *SEMI Staff Report*

SEMI Global 2025 Calendar of Events

- SEMICON India (Sept 1-3; New Delhi, India)
- SEMICON Taiwan (Sept 10-12; Taipei, Taiwan)
- SEMCON West (Oct 7-9; Phoenix, Arizona)
- SEMICON Europa (Nov 18-21; Munich, Germany)
- SEMICON Japan (December 17-19; Tokyo, Japan)

SEMICON West 2025-2030 ← **NEW!**

- **2025—October 7-9 | Phoenix Convention Center | Phoenix, AZ**
- 2026—October 13-15 | Moscone Center | San Francisco, CA
- **2027—October 12-14 | Phoenix Convention Center | Phoenix, AZ**
- 2028—October 10-12 | Moscone Center | San Francisco, CA
- **2029—October 9-11 | Phoenix Convention Center | Phoenix, AZ**
- 2030—October 29-31 | Moscone Center | San Francisco, CA

Upcoming NA Meetings 2025

- SEMICON West: Oct 6-9, 2025, at Phoenix Convention Center, Phoenix, Arizona/USA
- NA Standards Winter Meetings: Feb 23-26, 2026, at SEMI HQ, Milpitas, California/USA

2025 Critical Dates for SEMI Standards Ballots

- Cycle 5-2025: Ballot Submission Due: May 8/Voting Period: May 28 – June 27
- Cycle 6-2025: Ballot Submission Due: June 19/Voting Period: July 9 – Aug 8
- Cycle 7-2025: Ballot Submission Due: July 24/Voting Period: Aug 13 – Sep 12
- Cycle 8-2025: Ballot Submission Due: Sept 3/Voting Period: Sept 24 – Oct 24
- (Current) Cycle 9-2025: Ballot Submission Due: ~~Oct 1~~/Voting Period: ~~Oct 21 – Nov 20~~
- (Revised) Cycle 9-2025: Ballot Submission Due: Oct 14/Voting Period: Oct 29 – Nov 28

2026 Critical Dates for SEMI Standards Ballots *(Tentative)*

- Cycle 1-2026: Ballot Submission Due: Dec 16/Voting Period: Jan 7 – Feb 6
- Cycle 2-2026: Ballot Submission Due: Jan 23/Voting Period: Feb 11 – Mar 13
- Cycle 3-2026: Ballot Submission Due: Mar 5/Voting Period: Mar 18 – Apr 17
- Cycle 4-2026: Ballot Submission Due: Mar 30/Voting Period: Apr 14 – May 14
- Cycle 5-2026: Ballot Submission Due: May 8/Voting Period: May 27 – June 26

https://www.semi.org/en/collaborate/standards/ballots

Standards Publications Report

Cycle	*New*	*Revised*	*Reapproved*	*Withdrawn*
February 2025	1	9	0	0
March 2025	2	11	6	0
April 2025	1	2	2	0

Total in portfolio – 1,101 (includes 356 Inactive Standards)

New Standards

Cycle	*Designation*	*Title*	*Committee*	*Region*
February 2025	SEMI F122	Guide for Facilities Data Package for Manufacturing Equipment Installation and Building Information Modeling	Facilities	NA
March 2025	SEMI D88	Specification for Electrostatic Properties of FPD Photomasks and Blanks Package	FPD - Materials & Components	JA
March 2025	SEMI MS15	Guide to MEMS Manufacturing Readiness Levels	MEMS/NEMS	NA
April 2025	SEMI E193	Specification for 300 mm Film Frame FOUP (FFF)	Physical Interfaces & Carriers	NA

Style Manual / Formatting Reminders

- Style Manual: Revision 10 (draft proposal) being reviewed with the Regs SC., Mid-End June estimated publishing timeframe.
- Formatting Reminders: Referenced Standards and Documents section: Refer to Procedure Manual A3-5 for content requirements, Terminology section: Refer to Procedure Manual A3-6 through A3-9 for content requirements.
- Formatting Questions? Contact your local staff coordinator or standardspublishing@semi.org for assistance.

Regulations & Procedure Manual

- Regulations (Feb 20, 2024): https://www.semi.org/sites/semi.org/files/2024-02/Standards%20Regulations%20February%2020%202024.pdf
- Procedure Manual (Sept 27, 2024): https://www.semi.org/sites/semi.org/files/2024-09/Procedure%20Manual%20September%2027%2C%202024.pdf

Connect@SEMI Communities for all SEMI Standards Task Forces

- All program members may log in at: https://connect.semi.org (username and password is same as program membership log-in)
- Training materials are available at: https://www.semi.org/standards
  - Under Standards Developer Resources → Collaboration Tools (scroll to the bottom)

Five-Year Review

- None

Staff Contact: Laura Nguyen, Lnguyen@semi.org

Attachment: Staff Report June 2025 v4

4 Ballot Review

NOTE 3: 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 7343 — Reapproval of SEMI E177-0919E, Specification for Transmission Electron Microscope (TEM) Lamella Carriers Used in Electron Microscopy Workflows

- The ballot passed TC Chapter review as balloted. Refer to the attachment for ballot adjudication.

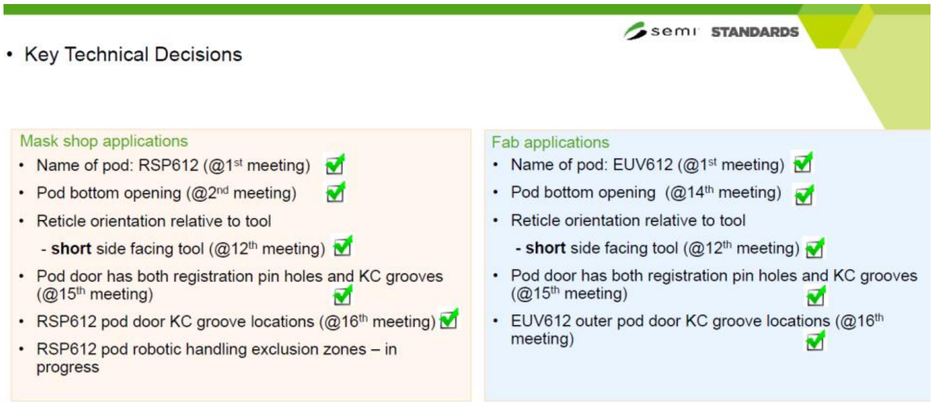
Attachment: 7343_ProceduralReview_v2

5 Subcommittee and Task Force Reports

5.1 *"6x12" Reticle Carrier & Load Port Task Force*

Huaping Wang (Entegris) reported for this Task Force on behalf of Huaping Wang (Entegris). Of note:

<u>Key Technical Decisions</u>



semi STANDARDS

- Key Technical Decisions

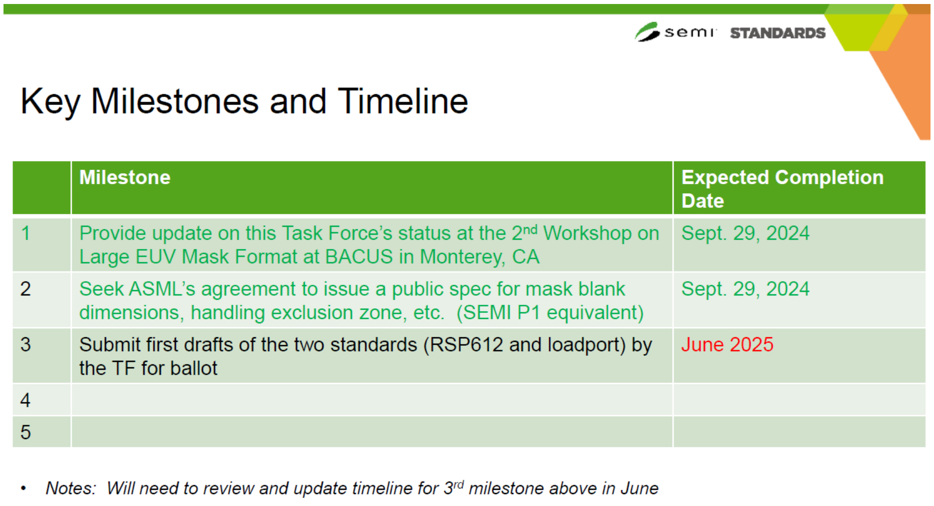
Mask shop applications

- Name of pod: RSP612 (@1st meeting) ✓
- Pod bottom opening (@2nd meeting) ✓
- Reticle orientation relative to tool
  - **short** side facing tool (@12th meeting) ✓
- Pod door has both registration pin holes and KC grooves (@15th meeting) ✓
- RSP612 pod door KC groove locations (@16th meeting) ✓
- RSP612 pod robotic handling exclusion zones – in progress

Fab applications

- Name of pod: EUV612 (@1st meeting) ✓
- Pod bottom opening (@14th meeting) ✓
- Reticle orientation relative to tool
  - **short** side facing tool (@12th meeting) ✓
- Pod door has both registration pin holes and KC grooves (@15th meeting) ✓
- EUV612 outer pod door KC groove locations (@16th meeting) ✓

<u>Key Milestones and Timeline</u>



semi STANDARDS

Key Milestones and Timeline

	Milestone	Expected Completion Date
1	Provide update on this Task Force's status at the 2nd Workshop on Large EUV Mask Format at BACUS in Monterey, CA	Sept. 29, 2024
2	Seek ASML's agreement to issue a public spec for mask blank dimensions, handling exclusion zone, etc. (SEMI P1 equivalent)	Sept. 29, 2024
3	Submit first drafts of the two standards (RSP612 and loadport) by the TF for ballot	June 2025
4		
5		

- *Notes: Will need to review and update timeline for 3rd milestone above in June*

<u>"6x12inch" Reticle Specs by ASML *{refer to attachment for details}*</u>

- Drew presented the A4 to the Task Force
- TF members requested the following items for clarification/modification

1. Page 3, Quality area 142mm x 274mm should be updated to 142mm x 282mm
2. Width illustration of reticle pattern side reticle handling area needs to be consistent near the RPAS windows, page 15 and page 18
3. Page 16, the sizes of the 2DBC remain unchanged from the 6"x6" mask
4. Page 19, the reticle handling areas on reticle back side is only 0.2mm wide, presenting a challenge for EUV pod design and reticle handling robotic design. Could the width be increased to ~2mm?
5. Page 22, could the middle wings of the pellicle frame be recessed in the middle to make room for adding reticle supports in the baseplate near these locations

Discussion

- ASML Specs Published: ASML has released reticle specifications publicly.
- Question Raised: Should SEMI create a standard based on these specs or reference them in related documents?
  - Out of scope for this task force
- Current Status:
  - Microlithography Committee lacks lithography experts and is not pursuing this.
  - No active SEMI standard for reticles exists yet.
- Risks: Without a SEMI standard, equipment suppliers may face challenges due to unclear interface requirements.
- Proposed Solutions:
  - Reference ASML dimensions in SEMI documents (e.g., related information section).
  - Possibly create an informational document summarizing critical dimensions for carriers and robots.
- Access to ASML Document: It is public and marked "Public" on every page, but communication on how to obtain it needs improvement.

Attachment: SEMI TF 612 meeting agenda and notes June 02 2025

5.2 *Electron Microscopy Workflow Task Force*

Laurens Kwakman (LK Semiconductor Consulting) reported for this Task Force. Of note *{See attachment for images}*:

Activity Update

- Since February 2025, the Taskforce has continued to advance the LCC specifications through focus team and taskforce meetings
  - 6 focus team meetings and 3 Taskforce meetings were organized in these last three months. In several iterations , the Taskforce has realized a final draft version of Doc 6592, version 2.0 that is a ballot ready version, but still awaiting Taskforce approval for submission.
  - Ballot cycle #6 is still in reach, but cycle 7 seems the most realistic option.
- Progress made in March – May 2025 period
  - In this period the taskforce has worked on missing and on questionable specifications:
    - LC containment review has resulted in new specs for LC pocket, groove and ridge dimensions
    - Critical orthogonality specifications have been added to the Standard.
  - Peter Wagner has updated Doc 6592 five times to incorporate various corrections and additions.
    - The latest version V2.0 has been released on May 30, 2025
- LCC specifications have been revisited. *'phase of consolidation…"{refer to attachment for images}*

Summary and Planning 2025 activities

- Aiming at a LCC Standards document ready for Ballot before end Q2 2025
  - We have completed the specifications review for the LCC.
  - Doc 6592 has been updated to V2.0, a final draft version proposed for ballot
    - Is now under review at TF level
    - Review feedback will be evaluated in Focus Team meeting of June 17, 2025
  - P. Wagner will issue the final draft for Ballot, June 27, 2025
  - approve ballot version at Taskforce level July 8, 2025
  - Submit Doc 6592 for Ballot cycle # 7 July 14, 2025

  - Continue work on Standard for LC shipping box LC shipping container SNARF and Doc 6832 — Q2-Q4, 2025
  - Start prototype testing of LCC and LCSC and translate learning into SEMI Standard revisions – if and where needed. — 2025 + Q1 2026

Attachment: SEMI EM TF -PIC Update 04 June 2025

5.3 *SEMI E72 Revision Task Force*

Supika Mashiro (TEL) reported for this Task Force. Of note:
TF roster and meeting attendance *{refer to attachment}*

Activities from NA Fall Standards meeting and today

- The TF has continued on disposition of Negatives/Comments received on the ballot (Doc.#7195) and reflected to the CoC Table.
- Currently most controversial point of discussion is around Negatives on Sub Fab/Main Fab footprint ratio requirement of E72. Recently, TF reached a resolution about the issue.
- TF has been working on Document #7298. It aims to address different type of Fab by separating specs for older/newer Fabs.

Next Actions

- Plan of TF meetings
- Bi-weekly meeting 16:00-17:00 Wednesday (PT) is planed until we finish with dispositioning Negatives / Comments and become ready for sending Document #7298 as a Letter Ballot.
- Next meeting is planned on June 11

Motion to Cancel previous SNARF

Motion:	Cancel SNARF Document #7195. Revision to SEMI E72-1016, Specification and Guide for Equipment Footprint, Height, and Weight
By / 2nd:	By: Supika Mashiro / Tokyo Electron Ltd. Second: Shoji Komatsu / Acteon NEXT LLC
Discussion:	None
Vote:	6-0 in favor. Motion passed.

Attachment: E72Revision TF Report to NAPIC TC_20250604

5.4 *Film Frame FOUP Task Force*

Stefan Radloff (Intel) reported for this Task Force verbally. Of note:

- FFF ballot recently published (SEMI E193)
- Current focus = FFF LP standard Doc 7194 to go with FFF standard
  - Document development phase
  - 85-90% done and will be ready to ballot soon

- Motion to authorize ballot:

Motion:	Authorize the Document for Letter Ballot 7194, New Standard: Specification for 300 mm Film Frame FOUP Load Port, in Cycle 7, or 8, 2025.
By / 2nd:	By: Stefan Radloff / Intel Second: Shoji Komatsu / Acteon NEXT LLC
Discussion:	None
Vote:	8-0 in favor. Motion passed.

5.5 *JA Next Gen Assembly / Test Material Handling Task Force*

Stefan Radloff (Intel) reported for this Task Force. Of note:

- TF meetings are scheduled biweekly: Tues PM US time / Wed AM Asia.
- Subteam (TCPI): Every other Thursday evening (US) / Friday morning (Japan).
- updated 3 SNARFs (requests for approval today)
- SNARF Updates:
  - Document 7172 (Large Traystack FOU):
    - Changed from final standard to preliminary standard.
  - Document 7333:
    - New subordinate standard (standalone).
  - E182 Updates:
    - Line item changes: New subordinate standard specifying exclusion zone for the load port.
- After discussion, it was determined that the 3 SNARFs must be processed under the SEMI Japan chapter, as this is not a global task force.
- Proposing a new generic handoff standard with the subordinate standard for TCP/IP.
- Goal: Future-proof by allowing additional communication protocols later.
- Procedural Note:
  - SEMI rules currently require the primary standard to be published before creating a subordinate standard.
  - A procedural workaround may avoid its development; otherwise, timeline could extend to 3 years.
- Current Progress: Meeting Tomorrow (US evening) for alignment on E182 updates.
- Status:
  - E182.3 (line item changes + subordinate ballot) is 99% complete.
  - If approved by SEMI Japan, will submit for Cycle 6 voting; if delayed, then later cycle.
- Large Traystack FOUP Document:
  - Development underway; includes new internal dimensions for E181/E181.1
  - Targeting Cycle 7 for preliminary standard with two options.

Attachment:

5.6 *Global PIC Maintenance Task Force (did not meet)*

Larry Hartsought (UA Associates) reported for this Task Force verbally. Of note:

- No report.

5.7 *Integrated Workflows in Failure Analysis TF (have not met)*

Florian Felux (Infineon) reported for this Task Force verbally. Of note:

- JSON SNARF has been approved via Information & Control GCS under the Process Control TF
  - 7357, New Standard: *Specification for Failure Analysis Reporting*
- Kick off meeting is being scheduled; more to come.
  - Call for action for companies to participate in TF (major players, automation suppliers, etc.)
- Discussion:
  - TF meetings to be global, and possibly have two sessions for EU/NA, NA/Asia.

6 Old Business

No old business.

7 New Business

7.1 *New Standard(s) to Standardize Assembly Test Payloads*

Shoji Komatsu (Acteon) brought this topic up to the Committee. Of note:

- We will start developing a standard for 310mm square panels.
- The "**310mm square panel FOUP TF**" is scheduled to start operations after TFOF approval at JA-PIC in September. TF leaders are Jeffrey Yang(ASE) and Shoji Komatsu(Acteon).
- Please join new TF if you are interested.
- Discussion:
    - Related to 600 mm panels? → not sure yet
    - No change to current LP interface
    - Related to 3D20 activities? → not sure yet

Attachment: SEMI_Developing SQ310mm standards for advanced packaging

8 Action Item Review

8.1 No New Action Items. Previous action items are noted in Table 12 in 'red' and for recent updates in 'blue'. There is no further business.

9 Next Meeting and Adjournment

9.1 The next in-person meeting is tentatively scheduled for the week of October 6-9, in conjunction with SEMICON West 2025 in Phoenix, Arizona. Please check the SEMICON West website for updates: https://www.semiconwest.org/special-features/standards.

Adjournment: 11:50.

Respectfully submitted by:

Laura Nguyen

Sr. Coordinator, International Standards

SEMI Global Headquarters

Phone: +1.408.943.7019

Email: lnguyen@semi.org

Minutes tentatively approved by:

Matthew Fuller (Entegris), Co-chair	<Date approved>
Melvin Jung (Intel), Co-chair	<Date approved>

Minutes officially approved by: **PIC NA OVTCCM on October 8, 2025.**

Table 14 Index of Available Attachments[#1]

Title	*Title*
Required Meeting Elements March 2024	SEMI TF 612 meeting agenda and notes June 02 2025
[2025Winter] PIC NA TC Chapter Meeting Minutes	SEMI EM TF -PIC Update 04 June 2025
JA_PIC_Liaison_May2025_Ver2	E72Revision TF Report to NAPIC TC_20250604
Staff Report June 2025 v4	SEMI_Developing SQ310mm standards for advanced packaging
7343_ProceduralReview	

#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 Laura Nguyen at the contact information above.