Physical Interfaces & Carriers North America TC Chapter

Meeting Summary and Minutes

SEMI Standards NA Fall Meetings 2024
Wednesday, November 6, 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

SEMI Standards NA Winter Meetings 2025
Wednesday, February 26, 09:00 – 12:00 Noon Pacific
SEMI Global Headquarters, Milpitas, California/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*	*Raman*	*Kartik*
Canon	*Jones*	*Chris*	JEOL Ltd.	Asayama	Kyoichiro
Entegris	Fuller	Matthew	*Lam Research*	*Gould*	*Richard*
Entegris	*Wang*	*Huaping*	*LK Semiconductor Consulting Services*	*Kwakman*	*Laurens*
Hitachi-High Tech	Onishi	Tsuyoshi	*Tokyo Electron Limited*	*Mashiro*	*Supika*
Infineon	*Hollerith*	*Christian*	*UA Associates*	*Hartsough*	*Larry*
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*
6896	New Standard: Specification for 300 mm Film Frame FOUP (FFF)	**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 SNARF(s) Granted a One-Year Extension

#	*TF*	*Title*	*Expiration Date*
6832	Electron Microscopy Workflow TF	New Standard, Specification for Shipping Container for Transport of Transmission Electron Microscope (TEM) Lamella Carriers (LC) from LC-supplier to LC-end user	Summer 2025

NOTE 1: If the Standards Document Development Project is found to be continuing, but cannot be completed within the current project period, the TC Chapter may grant a one-year extension at a time, as many times as necessary. [*Regulations* § 8.3]

Table 7 Activities Approved by the GCS between meetings of the TC Chapter

#	*Type*	*SC/TF/WG*	*Details*
7281	SNARF	"6 x12 inch" Reticle Carrier and Load Port TF	New Standard: Specification for 6x12 Reticle Load Port – ***Approved by GCS on 08/12/2024***
7282	SNARF	"6 x12 inch" Reticle Carrier and Load Port TF	New Standard: Specification for Reticle SMIF pod (RSP) Used to Transport and Store 6x12 Reticles – ***Approved by GCS on 08/12/2024***
7283	SNARF	"6 x12 inch" Reticle Carrier and Load Port TF	New Standard: Specification for Mechanical Features of 6x12 EUVL Pod for 6x12 Reticles – ***Approved by GCS on 08/12/2024***
7298	SNARF	E72 TF	Revision to SEMI E72-1016, Specification and Guide for Equipment Footprint, Height, and Weight, with title change to: Specification and Guide for Equipment Footprint, Height, and Mass – ***Approved by GCS on 10/22/2024***

Table 8 Authorized Activities

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

#	*Type*	*SC/TF/WG*	*Details*
7310	SNARF	Integrated Workflows in Failure Analysis TF	New Standard: Specification for Universal Sample Holder.

NOTE 1: SNARFs and TFOFs are available for review on the SEMI Web site at: http://downloads.semi.org/web/wstdsbal.nsf/TFOFSNARF

Table 9 Authorized Ballots

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

#	*When*	*TF*	*Details*
6592	Q1	Electron Microscopy Workflow TF	New Standard: Specification for Container for Transport and Storage of Transmission Electron Microscope (TEM) Lamella Carriers within Electron Microscopy Workflows

Table 10 SNARF(s) Cancelled

None

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.
2023Nov#01	Laura Nguyen	Laura to connect Loek with Christian to revise SNARF. Ongoing. Completed.

1 Welcome, Reminders, and Introductions

Matt Fuller (Entegris) called the meeting to order at 09:30. 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 March 2024

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: Shoji Komatsu / Acteon NEXT LLC
Second: Larry Hartsough / U.A. Associates
Discussion: None.
Vote: 6-0 in favor. Motion passed.

Attachment: [2024West] 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:

<u>Meeting Information</u>

- Last meeting:
    - Monday, September 2, 2024, OVTCCM
    - Official Virtual TC Chapter Meeting / SEMI Japan Office (Hybrid)

- Next Meeting:
  - Thursday, December 12th, 2024, SEMICON Japan 2024

Organization Chart (*refer to attachment)*

Ballot Results *(None)*

Authorized Activities

#	*Type*	*SC/TF/WG*	*Details*
7290	SNARF	Panel Level Packaging (PLP) Panel FOUP TF	Line Item Revision to SEMI E182-0424 - Specification for Panel FOUP Loadport for Panel Level Packaging

Authorized Ballots

#	*When*	*SC/TF/WG*	*Details*
7290	Cycle 8, 2024	Panel Level Packaging (PLP) Panel FOUP TF	Line Item Revision to SEMI E182-0424 - Specification for Panel FOUP Loadport for Panel Level Packaging

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.
- Japan EM Workflow Liaison TF (Japan Team) is mainly contributing following item.
  - Mechanical design of LCC body by using 3D CAD
  - How to lock and release of the LCC lid
  - Detail of ID mark on the backside of side connector and top face of LCC.
    ・・・That is discussing with expert who is a member of Traceability TC.
- EM Workflow TF schedules to hold the ballot submission in Q1 2025.

Panel Level Packaging(PLP) Panel FOUP TF

- Revision of E182-0424
  - Ballot for E182 Panel FOUP Loadport
  - Doc.7290 was voted on in cycle 8. The results will be reviewed at SEMICON Japan.
    - Line Item 1
      - Correct missing or incorrect numbers x236, y237, r236, r243 in Figure 14.
      - Correct incorrect numbers y374 in Figure 15.
    - Line Item 2
      - Delete the KC pin height definition in chapter 7.1.
      - Change z160 in Table 2, Figures 8 and 9.
- Future activities include plans to update the E181 as shown in the figure on the right and add options to the E182.

Open SNARF

- 7172, New Standard: *Specification for Next Gen Assembly / Test Carrier,* Expire December 2026 (Next Gen Assembly / Test Material Handling Task Force)
- 7290, Line Item Revision to SEMI E182-0424 - *Specification for Panel FOUP Loadport for Panel*, Expire January 2027 (Panel Level Packaging (PLP) Panel FOUP TF)

Five-Year Review: None

Staff Contact: Takeaki Hirabara at thirabara@semi.org

Attachment: JA_PIC_Liaison_20241105_Final

3.2 *SEMI Staff Report*

Laura Nguyen (SEMI) gave the SEMI Staff Report. Of note:

SEMI Global 2024 Calendar of Events

- SEMCON West (July 9-11; San Francisco, CA)
- SEMICON Taiwan (Sept 4-6; Taipei, Taiwan)
- SEMICON India (Sept 11-13; New Delhi, India)
- Energy Taiwan/X Net-Zero Taiwan (Oct 2-4; Taipei, Taiwan)
- SEMICON Europa (Nov 12-15; Munich, Germany)
- SEMICON Japan (December 11-13; Tokyo, Japan)

Global Standards Summit 2024: *Innovating Tomorrow: Standards for Future Factories*

- Inaugural SEMI Event @ SEMICON Japan 2024
  - Thursday, December 12 | 10:30 AM to 4:30 PM, Tokyo Big Sight, Conference Tower, Room 606
- Objective: Identify standards-critical areas and work towards an industry
- standardization strategy for the next 3- and 7-year time horizons.
- Session Topics:
  - Smart Manufacturing for Future Factories
  - Packaging Architectures & Materials
  - Environmental Sustainability
- Why Attend?
  - Learn – Hear issues critical to the future advancements of semiconductor manufacturing, what's happening to address them, as well as the standards needed to help enable.
  - Influence – Contribute to the direction of standards development by providing inputs to help optimize future factories.
  - Network – Organized networking events with other stakeholders from suppliers to solution providers to end customers.
  - Discover – Explore what SEMICON Japan has to offer (e.g., Sessions on AI & Data, Sustainability, Manufacturing, Integration of Front & Back-end; Standards Meetings)

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

Europe Standards Meetings @ SEMICON Europa 2024

- November 12-14, 2024
- ICM (Internationales Congress Center München)
  - Meeting Room: Staffelsee (Mezzanine Level)
- TCs: Silicon Wafer, Gases, Liquid Chemicals, Compound Semiconductor Materials, ERSC

Upcoming NA Meetings 2025

- NA Standards Winter Meetings: February 24-27, 2025, at SEMI HQ, Milpitas, California/USA
- NA Standards Summer Meetings: June 2-6, 2025 *(tentative)*, at SEMI HQ, Milpitas, California/USA
- SEMICON West: Oct 6-9, 2025, at Phoenix Convention Center, Phoenix, Arizona/USA

Critical Dates for SEMI Standards Ballots

- Cycle 8-2024: Ballot Submission Due: Oct 1/Voting Period: Oct 15 – Nov 14
- Cycle 9-2024: Ballot Submission Due: Nov 8/Voting Period: Nov 22 – Dec 23
- Cycle 1-2025: Ballot Submission Due: Dec 17, 2024/Voting Period: Jan 8 – Feb 7
- Cycle 2-2025: Ballot Submission Due: Jan 23/Voting Period: Feb 11 – Mar 13
- Cycle 3-2025: Ballot Submission Due: Mar 5/Voting Period: Mar 19 – Apr 18
- Cycle 4-2025: Ballot Submission Due: Mar 20/Voting Period: Apr 9 – May 9
- 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

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

Standards Publications Report

Cycle	*New*	*Revised*	*Reapproved*	*Withdrawn*
July 2024	2	5	0	0
August 2024	0	5	4	0
September 2024	0	9	5	0
October 2024	2	1	0	0

Total in portfolio – 1,092 (includes 349 Inactive Standards)

New Standards

Cycle	*Designation*	*Title*	*Committee*	*Region*
July 2024	SEMI D85	Guide for the Tone Reproduction Curves for Transparent Displays	FPD - Metrology	TW
July 2024	SEMI FH4	Test Method and Guide for the Tactile Characteristics of Flexible Hybrid Electronics Materials and Products	Flexible Hybrid Electronics	JA
October 2024	SEMI E191	Specification for Computing Device Cybersecurity Status Reporting	Information & Control	NA
October 2024	SEMI E191.1	Specification for SECS-II Protocol for Computing Device Cybersecurity Status Reporting to Specification for Computing Device Cybersecurity Status Reporting	Information & Control	NA

Regulations & Procedure Manual Updates

- *Regulations* (Feb 20, 2024)
  - New definition of "Standards Document"
  - Clarification of confidential presentation materials
    - https://www.semi.org/sites/semi.org/files/2024-02/Standards%20Regulations%20February%2020%202024.pdf
- *Procedure Manual* (Feb 20, 2024)
  - The use of Connect@SEMI for TF management and document development depository (next slide)
- *Procedure Manual* (Sept 27, 2024) **New!**
  - Clarification of § 6.4.5.10 for discharging of a TF
  - New ¶ 6.4.5.11 Designation of a TF as Dormant.

        - 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

- By Feb 2025, all Standards Task Forces shall use Connect@SEMI to host documents that are currently in development.
- Each Standards Task Force will have its own Community Page on Connect@SEMI.
- All program members may log in at: https://connect.semi.org
    - Enter their username and password (same as program membership log-in)
    - Contact staff if questions.
- Training materials are available at: https://www.semi.org/standards
    - Under Standards Developer Resources → Collaboration Tools (scroll to the bottom)

SEMIViews 4.0 – Available Now! *{refer to attachment graphics}*

- New SEMIViews platform launched on August 19, 2024.
- SEMIViews 4.0 Features include:
    - Upgraded user interface, Improved company user administration functions
    - Dynamic landing page, including feeds for new and revised Standards, upcoming meetings & events, and a reference center
    - Enhanced search functionality and navigation panel, New SEMI Volumes Library, User defined shortcuts via Collections, Favorites, and now, Bookmarks
- Additional features planned in the pipeline.

SNARF 3-Year Status: Gases

- 6592: New Standard: Specification for Container for Transport and Storage of Transmission Electron Microscope (TEM) Lamella Carriers within Electron Microscopy Workflows
    - SNARF expires Spring 2025

Activities Approved via GCS between Meetings

- SEMI E72 TF, 7298 SNARF, Revision to SEMI E72-1016, Specification and Guide for Equipment Footprint, Height, and Weight, with title change to: *Specification and Guide for Equipment Footprint, Height, and Mass*
    - *Approved by GCS on 10/22/2024*

Five-Year Review

- SEMI E177-0919E, *Specification for Transmission Electron Microscope (TEM) Lamella Carriers Used in Electron Microscopy Workflows*

Attachment: Staff Report November 2024 v4_PIC

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 file name for each balloted document is provided under each ballot review section below.

4.1 Document # 6896 — New Standard: Specification for 300 mm Film Frame FOUP (FFF)

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

Attachment: 6896_ProceduralReview

5 Subcommittee and Task Force Reports

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

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

- Newly formed at SEMICON West 2024
- Three new SNARFs were submitted for two-week review and approval via GCS before Fall meetings *(refer to Table 7)*
    - 7281, New Standard: Specification for 6x12 Reticle Load Port
    - 7282, New Standard: Specification for Reticle SMIF Pod (RSP) Used to Transport and Store 6x12 Reticles
    - 7283, New Standard: Specification for Mechanical Features of 6x12 EUVL Pod for 6x12 Reticles
- TF meets every two weeks
    - Kick off meeting – August 12, 2024
    - Seventh meeting - November 04, 2024 5:30pm to 7:00pm U.S. CDT
- Priority
    - TF decided to first focus on mask shop applications, hence
    - RSP612 standard **first** - Single pod used in mask shops (similar to RSP200 for 6x6 masks)
    - EUV612 standard **later** – Dual pod used in fabs
- 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	Feb. 2025

- "6x12inch" Reticle Specs by ASML *{refer to attachment for images}*
    - ASML has made some basic 6x12-inch mask dimension specs public
    - TF members requested the following (additional)
    - Add width of edge exclusion zone
    - Add pellicle frame dimension specs (but ASML isn't far along on pellicle frame design)
    - Remove RPAS windows from drawing as they are incorrect hence misleading
- Key Technical Decisions
- Mask shop applications
    - Name of pod: RSP612 😊
    - Pod bottom opening 😊
    - Reticle orientation relative to tool – long side facing tool or short side? ☹
    - Reticle handling exclusion zones ☹
- Fab applications
    - Name of pod: EUV612 😊
    - Pod bottom opening ☹
    - Reticle orientation relative to tool – long side facing tool or short side? ☹
    - Reticle handling exclusion zones ☹
- Reticle Orientation relative to Tool *{refer to attachment for images}*
    - Reticle long side facing tool or short side?

    - We need to hear Tool manufacturers' opinions
        - Long side -
        - Short side –
- Reticle Handling Exclusion Zones *{refer to attachment for images}*
    - Where can we touch the reticle?
        - Pod
        - Robot
- Summary
    - SEMI Task Force for 6x12 EUV mask handling has been formed
    - Good participation by tool makers
    - Intel has been providing great support and guidance
    - Need participation from other end users, such as tsmc and Samsung
    - ASML has made some key 6x12inch mask dimension specs public
    - Seven meetings held to-date
    - Current priority is mask shop application
    - Current key decision to make is the orientation of reticle on loadport

Attachment: SEMI TF 612 report out for PIC NA TC Chapter Fall meeting_Nov 06, 2024

5.2 *Electron Microscopy Workflow Task Force*

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

Agenda

- Activity update since July 2024
- Outcome Focus Team Meetings
- Planning 2024-2025

Activity Update

- Since July 2024, the Taskforce has continued to advance the LCC specifications through focus team and taskforce meetings
    - Four focus team meetings and three Taskforce meetings were organized in these last four months. A latest version of Doc6592, V1.3, has been prepared and its content is currently under review at Taskforce level.
    - Activities progressed as planned, the LCC Standard is fully defined in Doc 6592V1.3 and only a few tolerance specs need still to be added.
- Progress made in July – November 2024 period
    - In Q3 2024, the Taskforce has concluded and agreed on several missing LCC specifications:
        - Magnetic and mechanical force lid locking specs, mechanical interface spec for Lid open/close robot
        - ID mark areas on redefined side connector, lid open/close sensor window specs
        - LCC stacking feature specs
- Peter Wagner has updated Doc 6592 to include all these new specifications in text and figures.
- LCC specifications have been finalized. *{refer to attachment for images}*
- And new specs were added in LCC Standard document 6592 version 1.3: *{refer to attachment for images}*

- Summary and Planning 2024 activities (Aiming at a LCC Standards document ready for Ballot before end Q4 2024
- We have completed the specifications for the LCC.
- Doc 6592 has been updated to V1.3 and is now under review by TF members
    - Consistency of specifications, Consensus on design choices and dimensions/tolerances
    - Text edits (corrections, clarity,…), add still missing items (if any)
- Approve Doc 6592 V1.3 at TF level 11-12 / 2024
    - Reach out to all relevant Tasforce members/ stakeholders for their feedback!
- Create final draft for Ballot, review draft at Taskforce level 11-12 / 2024
- Issue first final version of Doc.6592 for a ballot cycle in Q1 2025 12 / 2024
- Start work on Standard for LC shipping box (down-scaled plastic LCC version) Q1, 2025 LC shipping container SNARF and Doc 6832
- Request to authorize for Letter ballot for 6592

On behalf of Laurens Kwakman (LK Semiconductor Consulting):

Motion:	Authorize the Document for Letter Ballot 6592, New Standard: *Specification for Container for Transport and Storage of Transmission Electron Microscope (TEM) Lamella Carriers within Electron Microscopy Workflows*, for submission early next year.
By / 2nd:	By: laurens kwakman / LK Semiconductors Consulting Services Second: Kyoichiro Asayama / JEOL
Discussion:	None
Vote:	7-0 in favor. Motion passed.

Attachment: SEMI EM TF -PIC Update 6 November 2024

5.3 *SEMI E72 Revision Task Force*

Supika Mashiro (TEL) reported for this Task Force. Of note:

Agenda

- TF roster and meeting attendance
- Activities from NA Spring meeting 24’ and today
- Results of Letter Ballot 7195
- Change in scope of Document (resulting in new SNARF)
- Next Actions

Activities from SEMICON WEST meeting and today

- The TF has continued on disposition of Negatives/Comments received on the ballot (Doc.#7195) and reflected to the CoC Table.
- TF agreed that advanced Fab needs should be addressed by separating specs for older/newer Fabs.
- Since the decision warranted change of Scope in SNARF, new SNARF was created, submitted and approved by the GCS

Next Actions

- Plan of TF meetings

- Bi-weekly meeting 16:00-17:00 Monday (PST) is planed until we finish with dispositioning Negatives / Comments and become ready for next Ballot.
- Next meeting is planned on November 12

Attachment: E72Revision TF Report to NAPIC TC_20241106

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

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

- There are currently no meetings and no active business
- One upcoming Five-Year review for SEMI E177, *Specification for Transmission Electron Microscope (TEM) Lamella Carriers Used in Electron Microscopy Workflows*
    - May ask for Reapproval ballot at the next TC Chapter meeting.

5.5 *Film Frame FOUP Task Force*

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

- Ballot Review: refer to Table 4
    - Passed, as balloted
- Will focus on LP side of this standard
- Drafting of Doc 7194
- Plan
    - Spring/winter: to ask for ballot

5.6 *JA Next Gen Assembly / Test Material Handling Task Force (did not meet)*

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

- Have not met since SEMICON West
- Currently still working with the consortia to align on additional proposals
- Next meeting will be at SEMICON Japan
    - Plan to have proposals to make updates to the panel LP and possibly new interfaces

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

Christian Hollerith (Infineon) reported for this Task Force verbally. Of note:

- Currently aligning JSON activity with Information & Control NA Chapter before kickoff meeting is planned.
- Present PIC SNARF for approval in *{Refer to New Business'}*

6 Old Business

None

7 New Business

7.1 *Integrated Workflows in Failure Analysis SNARF*

Motion:	Approve the SNARF for New Standard: Specification for Universal Sample Holder.
By / 2nd:	By: laurens kwakman / LK Semiconductors Consulting Services Second: Stefan Radloff / Intel
Discussion:	None
Vote:	6-0 in favor. Motion passed.

Attachment: SNARF_Universal-Sample-Holder_atm_final

8 Action Item Review

8.1 New Action Items are noted in Table 11. 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 meeting is tentatively scheduled for the week of February 24-27, in conjunction with SEMI Standards NA Winter Meetings 2025. Schedule details TBD. Please check www.semi.org/standards for updates.

Tentative Schedule (Pacific):

- TBD, Next Gen Assembly / Test Material Handling (NGAT) Japan TF
  - *May meet the week prior or virtually*
- TBD, Integrated Workflows in Failure Analysis TF
  - *Will meet virtually when I&C is in alignment*

Monday, February 24

- 15:00-17:00, "6 x12 inch" Reticle Carrier and Load Port TF *(TF Leader virtual)*
- 16:00-17:00, SEMI E72 Revision TF

Tuesday, February 25

- 15:00-16:00, Electron Microscopy Workflow TF
- 16:00-18:00, Film Frame FOUP (FFF) TF *(TF Leader virtual)*

Wednesday, February 26

- 08:30-09:00, Global PIC Maintenance TF *(tentative, depending on Five-Year Review)*
- 09:00-12:00 Noon, PIC NA TC Chapter Meeting

Adjournment: 10:48.

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 February 26, 2025.**

Table 14 Index of Available Attachments[#1]

Title	*Title*
Required Meeting Elements March 2024	E72Revision TF Report to NAPIC TC_20241106
[2024West] PIC NA TC Chapter Meeting Minutes	SEMI EM TF -PIC Update 6 November 2024
JA_PIC_Liaison_20241105_Final	SEMI TF 612 report out for PIC NA TC Chapter Fall meeting_Nov 06, 2024
Staff Report November 2024 v4_PIC	SNARF_Universal-Sample-Holder_atm_final
6896_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.