



Physical Interfaces & Carriers Japan TC Chapter Meeting Summary and Minutes

Japan Standards Winter Meetings 2023

Thursday, December 14, 2023, 13:00-16:00 (JST)

Tokyo Big Sight, Tokyo Japan/ Official Virtual TC Chapter Meeting (Hybrid)

TC Chapter Announcements

Next TC Chapter Meeting

Friday April 12,2024,13:00-16:00[JST] @SEMI Japan office (via OVTCCM) Hybrid

Table 1 Meeting Attendees

Italics indicate virtual participants.

Co-Chairs: Ito Yasuhisa (MURATA MACHINERY), Tsuyoshi Nagashima (Miraial Co., Ltd.), Daisuke Sado (DAIHEN Corporation)

SEMI Staff: Mami Nakajo

<i>Company</i>	<i>Last</i>	<i>First</i>	<i>Company</i>	<i>Last</i>	<i>First</i>
Hirata Corporation	Toyoda	Noriyoshi	TOKYO SEIMITSU CO., LTD.	Taniguchi	Naomune
DAIFUKU	Suzuki	Tomoko	JEOL	Asayama	Kyoichiro
Tokyo Electron Ltd.	Mashiro	Supika	Shin-Etsu Handotai Co., Ltd.	Yamaguchi	Takashi
Intel	Suzuki	Takashi	Shin-Etsu Handotai Co., Ltd.	Odashima	Satoshi
Intel	Radloff	Stefan	Marubeni Plax Corporation	Igeta	Luke
SINFONIA TECHNOLOGY	Matsukubo	Taisuke	Disco	Kobinata	Kyosuke
Hirata Corporation	Kanazawa	Kenji	Disco	Gonsui	Shinobu
DAIHEN Corporation	Sado	Daisuke	SINFONIA TECHNOLOGY CO., LTD.	Suzuki	Atsushi
Acteon NEXT LLC	Komatsu	Shoji	TDK	Okabe	Tsutomu
MURATA MACHINERY	Ito	Yasuhisa	SINFONIA TECHNOLOGY	Matsukubo	Taisuke
Miraial Co., Ltd.	Nagashima	Tsuyoshi	SEMI Japan	Nakajo	Mami
Self	Yoshida	Yukihiro	SEMI Japan	Osawa	Naoko

Table 2 Leadership Changes

<i>WG/TF/SC/TC Name</i>	<i>Previous Leader</i>	<i>New Leader</i>
Next Gen Assembly / Test Material Handling TF		Stefan Radloff

Table 3 TC Chapter Structure Changes

<i>Previous WG/TF/SC Name</i>	<i>New WG/TF/SC Name or Status Change</i>
	Next Gen Assembly / Test Material Handling TF

Table 4 Ballot Results

<i>Document #</i>	<i>Document Title</i>	<i>Committee Action</i>
7112	Line Item Revision to SEMI E181-0423 SPECIFICATION FOR PANEL FOUF FOR PANEL LEVEL PACKAGING, SEMI E181.1-0423 - SPECIFICATION FOR PANEL FOUF FOR 510 mm – 515 mm PANEL SIZE and 12 SLOTS, SEMI E181.2-0423 - SPECIFICATION FOR PANEL FOUF FOR 510 mm – 515 mm PANEL SIZE and 6 SLOTS, SEMI E181.3-0423 - SPECIFICATION FOR PANEL FOUF FOR 600 mm – 600 mm PANEL SIZE and 12 SLOTS, SEMI E181.4-0423 - SPECIFICATION FOR PANEL FOUF FOR 600 mm – 600 mm PANEL SIZE and 6 SLOTS	
LI-1	Clarify the area to prevent Panel FOUF from falling from AMHS in E181	Passed as balloted
LI-2	Modify the panel FOUF internal area considering mass production and that includes changing the definition of first slot height in E181, E181.1, E181.2, E181.3 and E181.4	Passed as balloted
LI-3	Delete the number of slots information in Figure 24 of E181	Passed as balloted
7113	Line Item Revision to Line Item Revision to SEMI E182-0621 - SPECIFICATION FOR PANEL FOUF LOADPORT FOR PANEL LEVEL PACKAGING	
LI-1	Change the y140 value	Passed as balloted
LI-2	Add the “APPLICATION NOTES” to the Related Information	Passed as balloted

#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 Ratification Ballot Results

<i>Document #</i>	<i>Document Title</i>	<i>ISC A&R Action</i>	<i>A&R Forms</i>
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

<i>#</i>	<i>Type</i>	<i>SC/TF/WG</i>	<i>Details</i>
None			

Table 7 Authorized Activities

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

<i>#</i>	<i>Type</i>	<i>SC/TF/WG</i>	<i>Details</i>
TBD	SNARF	Panel Level Packaging (PLP) Panel FOUF Task Force	Line Item Revision to SEMI E185-1222: Specification for 300 mm Tape Frame FOUF
TBD	SNARF	Panel Level Packaging (PLP) Panel FOUF Task Force	Line Item Revision to SEMI E184-1221E: Specification for 300 mm Tape Frame FOUF Load Port
TBD	SNARF	Next Gen Assembly / Test Material Handling Task Force	New Standard: Specification for Next Gen Assembly / Test Carrier

#1 SNARFs and TFOFs are available for review on the SEMI Web site at:

<http://downloads.semi.org/web/wstdsbal.nsf/TFOFSNARF>

Table 8 Authorized Ballots

#	When	TF	Details
TBD	Cycle2-2024	Panel Level Packaging (PLP) Panel FOUF Task Force	Line Item Revision to SEMI E185-1222: Specification for 300 mm Tape Frame FOUF
TBD	Cycle2-2024	Panel Level Packaging (PLP) Panel FOUF Task Force	Line Item Revision to SEMI E184-1221E: Specification for 300 mm Tape Frame FOUF Load Port

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

#	TF	Title	Expiration Date
None			

Table 10 SNARF(s) Abolished

#	TF	Title
None		

Table 11 Standard(s) to receive Inactive Status

Standard Designation	Title
None	

Table 12 New Action Items

Item #	Assigned to	Details
20231214-01	Panel Level Packaging Panel FOUF TF	To take back the discussion from New Business about the height of the first panel in SEMI E181.2.

Table 13 Previous Meeting Action Items

Item #	Assigned to	Details
20230721-01	SEMI Staff	To notify SEMI NA Staff that the approval results regarding Reapproval of SEMI E72-1016 are missing in the NA Liaison Report. >Closed
20230721-02	SEMI Staff	To change the Initiating Region of SEMI E152-0619 from Japan to NA in the 5-year List >Closed
20230721-03	Global PIC Standards Maintenance TF	To prepare and submit Line Item Revision to SEMI E181-0423, E181.1-0423, E181.2-0423, E181.3-0423, E181.4-0423 and Line Item Revision to SMI E182-0621 in Cycle 07-2023 >Closed
20230721-04	Global PIC Standards Maintenance TF	To prepare SNARF and Document of revision to SEMI E185 by the next TC chapter meeting>Closed



1 Welcome, Reminders, and Introductions

Tsuyoshi Nagashima (Miraial Co., Ltd.) called the meeting to order at 13:00. The meeting reminders on antitrust issues, intellectual property issues and holding meetings with international attendance were reviewed. Attendees introduced themselves.

Attachment: 1.2_Required Element Nov 2022_E+J (new template),

2 Review of Previous Meeting Minutes

The TC Chapter reviewed the minutes of the previous meeting.

Motion:	Approve the previous minutes as written
By / 2nd:	Shoji Komatsu /(Acteon NEXT LLC) / Daisuke Sado (DAIHEN Corporation)
Discussion:	None
Vote:	15 in favor and 0 opposed. Motion Passed.

Attachment: 2_PIC Mins_20230721_approved

3 Liaison Reports

3.1 PIC North America TC Chapter

Mami Nakajo (SEMI) gave the SEMI Staff Report. based on the material.

Attachment: 3_NA PIC Liaison Report Nov2023 v1

4 SEMI Staff Report

Mami Nakajo (SEMI) gave the SEMI Staff Report. based on the material.

Attachment: 4_Staff Report Dec 2023 HK_N_AY,

5 Ballot Review

NOTE 1: TC Chapter adjudication on ballots reviewed is detailed in the Audits & Review (A&R) Subcommittee Forms for procedural review. The A&R forms are available as attachments to these minutes. The attachment number for each balloted document is provided under each ballot review section below.

5.1 Cycle 7-2023 submitted by the Japan TC Chapter

5.1.1 Doc7112, Line Item Revision to SEMI E181-0423 SPECIFICATION FOR PANEL FOUP FOR PANEL LEVEL PACKAGING, SEMI E181.1-0423 - SPECIFICATION FOR PANEL FOUP FOR 510 mm – 515 mm PANEL SIZE and 12 SLOTS, SEMI E181.2-0423 - SPECIFICATION FOR PANEL FOUP FOR 510 mm – 515 mm PANEL SIZE and 6 SLOTS, SEMI E181.3-0423 - SPECIFICATION FOR PANEL FOUP FOR 600 mm – 600 mm PANEL SIZE and 12 SLOTS, SEMI E181.4-0423 - SPECIFICATION FOR PANEL FOUP FOR 600 mm – 600 mm PANEL SIZE and 6 SLOTS

- Line Item #1: Clarify the area to prevent Panel FOUP from falling from AMHS in E181
- Line Item #2: Modify the panel FOUP internal area considering mass production and that includes changing the definition of first slot height in E181, E181.1, E181.2, E181.3 and E181.4
- Line Item #3: Delete the number of slots information in Figure 24 of E181



Motion:	Line item(s) [1], [2] and [3] passed TC Chapter review as balloted and will be forwarded to the ISC A&R SC for procedural review.
By / 2nd:	Shoji Komatsu (Acteon NEXT LLC) / Stefan Radloff (Intel)
Discussion:	None
Vote:	14 in favor and 0 opposed. Motion Passed.

The ballot passed TC Chapter review as balloted. See attachment for ballot adjudication.

Attachment: 7112

5.1.2 Doc7113, Line Item Revision to Line Item Revision to SEMI E182-0621 - SPECIFICATION FOR PANEL FOUP LOADPORT FOR PANEL LEVEL PACKAGING

- Line Item #1: Change the y140 value
- Line Item #2: Add the “APPLICATION NOTES” to the Related Information

Motion:	Line item(s) [1], and [2] passed TC Chapter review as balloted and will be forwarded to the ISC A&R SC for procedural review.
By / 2nd:	Shoji Komatsu (Acteon NEXT LLC) / Daisuke Sado (DAIHEN Corporation)
Discussion:	None
Vote:	15 in favor and 0 opposed. Motion Passed.

The ballot passed TC Chapter review as balloted. See attachment for ballot adjudication.

Attachment: 7113

6 Subcommittee and Task Force Reports

6.1 Global PIC Standards Maintenance TF

Shoji Komatsu (Acteon NEXT LLC) reported for the task force. Of note:

Attachment: 6.1_TF meeting minutes rev0-20231120E

6.2 Japan Electron Microscopy Workflow liaison TF

Kyoichiro Asayama (JEOL) reported for the task force. Of note:.

Attachment: 6.2_EMWF TF -PIC_J Update December 14 2023 r1

6.3 Panel Level Packaging Panel FOUP TF

Shoji Komatsu (Acteon NEXT LLC) reported for the task force as attached slides.

Attachment: 6.3_Panel FOUP TF report_20231214

6.4 [Liaison: 3D Packaging & Integration JA TC Chapter] Panel Level Packaging Glass Carrier TF

There is no update.

6.5 [Liaison: 3D Packaging & Integration NA TC Chapter] Panel Level Packaging Panel TF

There is no update.



7 Old Business

7.1 Project Period Review – None

7.2 5 years review – None

8 New Business

8.1 Proposal of New Activity

Shoji Komatsu (Acteon NEXT) reported on this topic.

8.1.1 SNARF Proposal for Line Item Revision to SEMI E185-1222: Specification for 300 mm Tape Frame FOUN

Motion:	Approve the SNARF for: Line Item Revision to SEMI E185-1222: Specification for 300 mm Tape Frame FOUN
By / 2nd:	Shoji Komatsu (Acteon NEXT LLC) / Stefan Radloff (Intel)
Discussion:	None
Vote:	14 in favor and 0 opposed. Motion Passed.

Motion:	Authorize the Document for Letter Ballot of Line Item Revision to SEMI E185-1222: Specification for 300 mm Tape Frame FOUN Cy2-2024
By / 2nd:	Shoji Komatsu (Acteon NEXT LLC) / Daisuke Sado (DAIHEN Corporation)
Discussion:	None
Vote:	15 in favor and 0 opposed. Motion Passed.

Attachment: SNARF_E185_R1

8.1.2 SNARF Proposal for Line Item Revision to Line Item Revision to SEMI E184-1221E: Specification for 300 mm Tape Frame FOUN Load Port

Motion:	Approve the SNARF for: Line Item Revision to Line Item Revision to SEMI E184-1221E: Specification for 300 mm Tape Frame FOUN Load Port
By / 2nd:	Shoji Komatsu (Acteon NEXT) / Naomune Taniguchi (TOKYO SEIMITSU CO., LTD.)
Discussion:	None
Vote:	14 in favor and 0 opposed. Motion Passed.

Motion:	Authorize the Document for Letter Ballot of Line Item Revision to SEMI E184-1221E: Specification for 300 mm Tape Frame FOUN Load Port
By / 2nd:	Shoji Komatsu (Acteon NEXT LLC) / Daisuke Sado (DAIHEN Corporation)
Discussion:	None
Vote:	15 in favor and 0 opposed. Motion Passed.

Attachment: SNARF_E184_R1

Stefan Radloff (Intel) reported on this topic.

8.1.3 Proposal for New TFOF: Next Gen Assembly / Test Material Handling TF

Motion:	Approve the TFOF of Next Gen Assembly / Test Material Handling TF
By / 2nd:	Stefan Radloff (Intel) / Shoji Komatsu (Acteon NEXT LLC)
Discussion:	Supika Mashiro (Tokyo Electron Ltd.) questioned that inconsistent of the wording of the Scope. Equipment module to platform interface versus equipment to platform to interface.

	In accordance with Supika's pointing out, Stefan Radloff (Intel) corrected Scope Item 3 to say "equipment module to platform interface".
Vote:	14 in favor and 0 opposed. Motion Passed.

Attachment: NGAT AMHS TF TFOF r2.1

8.1.4 SNARF Proposal for Next Gen Assembly / Test Carrier

Motion:	Approve the SNARF New Standard: Specification for Next Gen Assembly / Test Carrier
By / 2nd:	Stefan Radloff (Intel) / Shoji Komatsu (Acteon NEXT LLC)
Discussion:	<p>Daisuke Sado (DAIHEN Corporation) pointed out that since they didn't know the dimension, as the JEDEC Standards hasn't been published yet. And asked how to recognize the dimension while we made the new Standards.</p> <p>Stefan Radloff (Intel) answered that it is necessary to make sure the Standards before the finalize the carrier.</p> <p>Shoji Komatsu (Acteon NEXT LLC) asked when we could know the details of JEDEC tray.</p> <p>Stefan answered it supposedly would be in the next month.</p> <p>Supika informed in Intercommittee ballot section of the SNARF that we could revise SNARF without having a new SNARF, but just revised it.</p> <p>Supika express concern about the anti-trust implication of disclosing unpublished application. As SNARF and TFOF will be posted online and will be publicly available, discussing existence of the unpublished patent application wouldn't constitute anti-trust issue.</p> <p>Stefan and members agreed that SEMI should discuss this is the legal council.</p>
Vote:	13 in favor and 0 opposed. Motion Passed.

Attachment: NGAT AMHS TF carrier SNARF r5.1

8.2 Panel FOUP Discussion

Shoji Komatsu (Acteon NEXT) and Stefan Radloff (Intel) addressed the committee on this topic.

Regarding SEMI E181.2, Stefan Radloff (Intel) propose to decrease the first panel height.

Action Item: 20231214-01, (Panel Level Packaging Panel FOUP TF) To take back the discussion from New Business about the height of the first panel in SEMI E181.2.

9 Action Item Review

9.1 Open Action Items

Item #	Assigned to	Details
20230721-01	SEMI Staff	To notify SEMI NA Staff that the approval results regarding Reapproval of SEMI E72-1016 are missing in the NA Liaison Report. >Closed
20230721-02	SEMI Staff	To change the Initiating Region of SEMI E152-0619 from Japan to NA in the 5-year List >Closed
20230721-03	Global PIC Standards Maintenance TF	To prepare and submit Line Item Revision to SEMI E181-0423, E181.1-0423, E181.2-0423, E181.3-0423, E181.4-0423 and Line Item Revision to SMI E182-0621 in Cycle 07-2023 >Closed

<i>Item #</i>	<i>Assigned to</i>	<i>Details</i>
20230721-04	Global PIC Standards Maintenance TF	To prepare SNARF and Document of revision to SEMI E185 by the next TC chapter meeting>Closed

9.2 New Action Items

<i>Item #</i>	<i>Assigned to</i>	<i>Details</i>
20231214-01	Panel Level Packaging Panel FOUF TF	To take back the discussion from New Business about the height of the first panel in SEMI E181.2.

10 Next Meeting and Adjournment

The next meeting is scheduled for Friday April 12, 2024, 13:00-16:00[JST] @SEMI Office Tokyo (via OVTCCM) Hybrid

See <http://www.semi.org/standards-events> for the current list of events.

Adjournment: [16:19]>.

Respectfully submitted by:

Mami Nakajo
Standards & EHS
SEMI Japan
Phone: 81.3.3222.5949
Email: mnakajo@semi.org

Minutes tentatively approved by:

Tsuyoshi Nagashima (Mirai), Co-chair	January 10, 2024
Daisuke Sado (DAIHEN), Co-chair	January 10, 2024
Yasuhisa Ito (MURATA MACHINERY), Co-chair	January 8, 2024

Table 14 Index of Available Attachments#1

<i>Title</i>	<i>Title</i>
1.2_Required Element Nov 2022_E+J (new template)	7112
2_PIC Mins_20230721_approved	7113
3_NA PIC Liaison Report Nov2023 v1	SNARF_E185_R1
4_Staff Report Dec 2023 HK_N_AY	SNARF_E184_R1
6.1_TF meeting minutes rev0-20231120E	NGAT AMHS TF TFOF r2.1
6.2_EMWF TF -PIC_J Update December 14 2023 r1	NGAT AMHS TF carrier SNARF r5.1
6.3_Panel FOUF TF report_20231214	

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.