

North America TC Chapter Physical Interfaces & Carriers Global Technical Committee

Liaison Report | December 2021

v1

Meeting Information

- Last meeting
 - Wednesday, December 8, 2021
 - SEMICON West Hybrid Event
- Next meeting
 - Wednesday, March 30, 2022
 - NA Spring Meetings [Hybrid] at SEMI HQ in Milpitas, CA

<http://www.semi.org/en/standards-events>

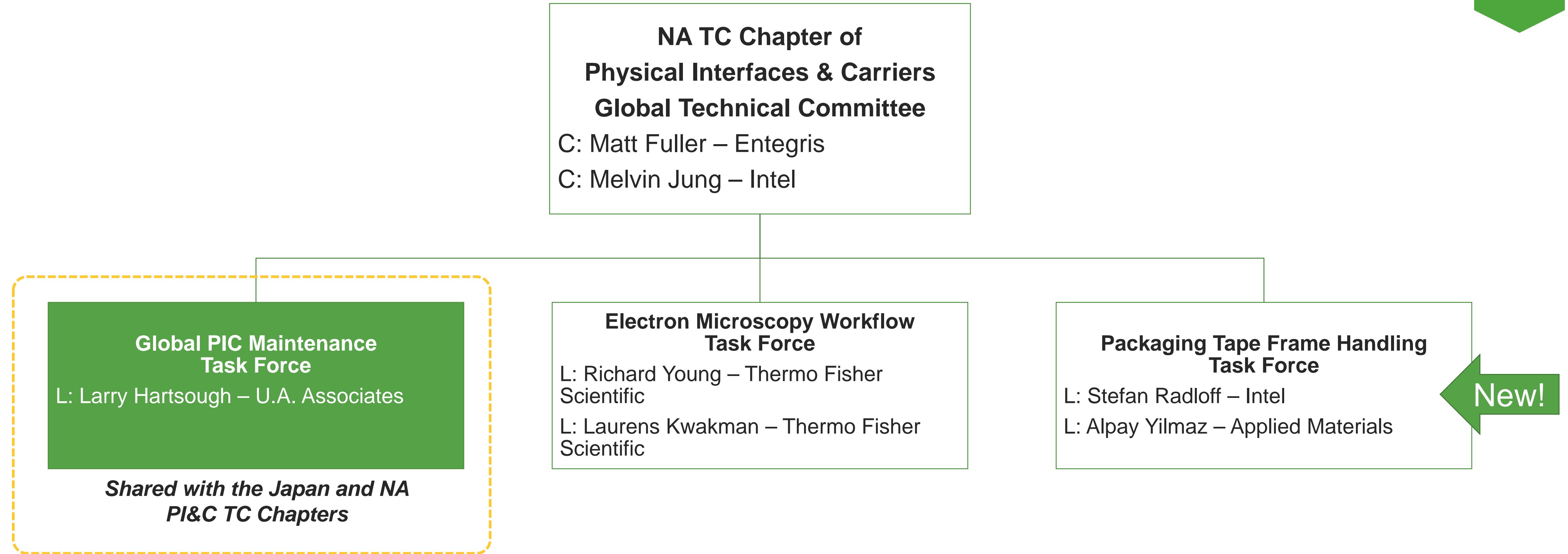
Committee Structure Changes

Previous TF/SC/CFG Name	New TF/SC/CFG Name or Status Change
---	Packaging Tape Frame Handling Task Force <i>[New]</i>

Leadership Changes

TF/SC/CFG/TC Name	Previous Leader	New Leader
Packaging Tape Frame Handling Task Force <i>[New]</i>	---	Stefan Radloff – Intel Alpay Yilmaz – AMAT

Organization Chart



 = Global Task Force

Ballot Results

Doc #	Document Title	TC Chapter Action
6833	Reapproval of SEMI E63-0616, Specification for 300 mm Box Opener/Loader to Tool Standard (BOLTS-M) Interface	Failed
6834	Reapproval of SEMI E72-1016, Specification and Guide for Equipment Footprint, Height, and Weight	Failed
SEMI E63	SEMI E63-0616, Specification for 300 mm Box Opener/Loader to Tool Standard (BOLTS-M) Interface (Type 2 Editorial Change)	Passed , to be submitted to ISC A&R SC for Procedural Review.

#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.

Authorized Activities

Doc #	Type	SC/TF/CFG	Document Title/Details
-	TFOF	Packaging Tape Frame Handling TF	Approved the TFOF for Packaging Tape Frame Handling Task Force.
TBD	SNARF	Packaging Tape Frame Handling TF	New Standard: Specification for 300 mm Frame Carrier FOUP

Note 1: SNARFs and TFOFs are available for review on the SEMI Web site at:
<http://downloads.semi.org/web/wstdsba1.nsf/TFOFSNARF>

Task Force Highlights [1/2]



- **Electron Microscopy Workflow TF**

- Documents Under Development

- 6592, New Standard: Specification for Container for Transport and Storage of Transmission Electron Microscope (TEM) Lamella Carriers within Electron Microscopy Workflows
 - 6832, New Standard: Specification for Shipping Container for Transport of Transmission Electron Microscope (TEM) Lamella Carriers (LC) from LC-supplier to LC-end user

- Activity Outlook into 2022

- Proposal to ballot a revision to SEMI E177 (LC Standard)
 - 6592 (LCC)
 - Draft to be prepared and reviewed by the TF in Q1-2022
 - Identify open areas for closure in Q1-2022, including Customer Survey #3
 - Further testing to confirm design proposals
 - 6832 (Shipping container)
 - Revisit shipping container standard once draft LCC Standard has been reviewed in Q1-2022

- Ongoing TF teleconference meetings

- Please contact Laura Nguyen to be added to the distribution list.

Task Force Highlights [2/3]



- Global PIC Maintenance TF

- Reviewed Reapproval Ballots for SEMI E63 and E72

- 6833, E63 (BOLTS-M) reapproval (1 Reject)

- Proposed TF Input

- Each Negative is persuasive, but deals only with format or requirement wording issue.
 - SM TF revise in response to Negatives and other wording issues. How to ballot tbd.

- 6834, E72 (Equipment Footprint, Hgt &Wgt) reapproval (2 Rejects)

- Proposed TF Input

- Some Negatives raise technical issues at least one of which is persuasive
 - Explore interest in creating a TF to review the Negatives and prepare a Major Revision Ballot
 - Inquire with NA Facilities TCC (Steve Lewis)

- New Business

- Ask TC Chapter to approve PCR for SEMI E63.

- Refer to Slide 6 for Ballot Results.

Task Force Highlights [3/3]



- Packaging Tape Frame Handling TF (pre-meeting)
 - Proposal: Collaborate with major industry stakeholders under SEMI in order to:
 - Align/re-assess preliminary critical interface dimensions for complex Tape Frame related modules for a small 13-slot Carrier
 - Create new and improve existing correlated Standards for areas with gaps or missing standards.
 - Argument: Most of the industry is transitioning to a small 13-slot/10mm-pitch Tape Frame carrier that is not covered by any SEMI standards. Several different flavors of this carrier exist, causing confusion, custom designs, and interoperability gaps. A standard for this small carrier will:
 - Enhance interoperability relevancy, eliminate confusion to respond to increased industry demand on the matter
 - Ensure consistency in design, operation performance, reliability for the tape frame related modules handling
 - Task Force Recommended Focus Areas:
 - Inconsistency on FOUP critical dimensions and features (Ex: Overall outer/inner dimensions, Regular/Kinematic Coupling , 1st slot location, slot pitch, latch/registration pin locations, exclusion zone, tolerances, OHT delivery, RFID placement, handles etc.)
 - Tape Frame/Film uncontrolled features (Ex: Film thickness, film centering and edge exclusion zoning, 1D/2D Code positioning etc.)
 - Lack of Factory Interface / Loadport common call-outs (Ex: Loadport Pitch / Center Plane Location , BI, FDP / C2 Clearance, Equipment Boundary definition, etc.)
 - Request for help on Naming:
 - Tape Frame ~~FOUP~~ → Already defined in SEMI E184/E185
 - FC FOUP = Frame Carrier FOUP = **too similar / doesn't differentiate**

PIC 5-Year Review

Designation #	Standard Title	Action By	Assigned to
SEMI E117-0117	Specification for Reticle Load Port	January 2022	Global PIC Maintenance Task Force (NA)
SEMI E19-0417	Specification for Standard Mechanical Interface (SMIF)	April 2022	Global PIC Maintenance Task Force (NA)
SEMI E19.4-0417	Specification for 200 mm Standard Mechanical Interface (SMIF)	April 2022	Global PIC Maintenance Task Force (NA)
SEMI E112-1017	Specification for a 150 mm Multiple Reticle SMIF Pod (MRSP150) Used to Transport and Store Multiple 6 Inch Reticles	October 2022	Global PIC Maintenance Task Force (NA)
SEMI E111-1017	Specification for a 150 mm Reticle SMIF Pod (RSP150) Used to Transport and Store a 6 Inch Reticle	October 2022	Global PIC Maintenance Task Force (NA)

Thank you!

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