



North America TC Chapter Flexible Hybrid Electronics Global Technical Committee

Liaison Report | October 2025

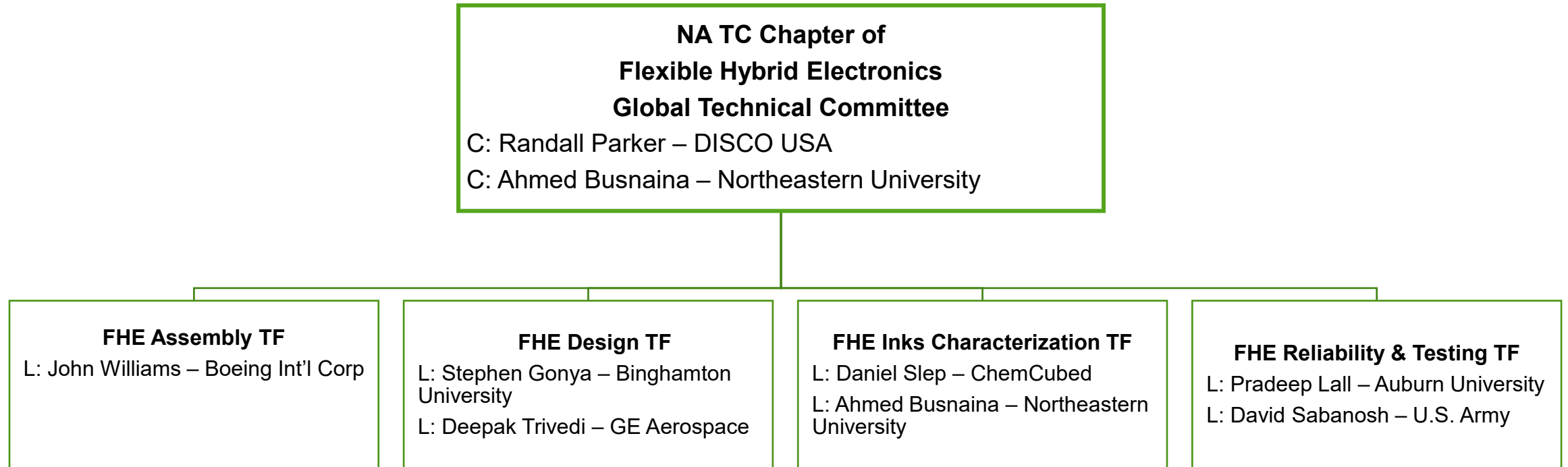
v1

STANDARDS

Meeting Information

- Last meeting
 - Thursday, October 9, 09:00-12:00 Noon Mountain
 - SEMICON West 2025, Phoenix, Arizona
- Next meeting
 - TBD
 - TF meetings may meet at Flex Conference 2026
- For more details, visit: <http://www.semi.org/en/standards-events>

Organization Chart



SNARF(s) Approved by GCS

(in between TC Chapter Meetings)

#	Type	SC/TF/WG	Details
7242	Ballot Authorization	FHE Reliability TF	<p>New Standard: Guide for Reliability of Flexible Hybrid Electronics</p> <p>– Approved for Cycle 7-2025, by GCS on 07/27/2025</p>

Ballot Results

Doc #	Document Title	TC Chapter Action
7193A	New Standard: Guide For Substrate Design Of Flexible Hybrid Electronics	Failed
7242	New Standard: Guide for Reliability of Flexible Hybrid Electronics	Passed , with editorial changes

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.

Task Force Highlights

- Each Task Force's Charters and Scopes are available to view online
 - <http://downloads.semi.org/web/wstdsbal.nsf/TFOFandSNARFsbyCommittee!OpenView&Start=1&Count=1000&Expand=9.2#9.2>
- Task Forces that have begun document development
 - FHE Design TF
 - FHE Reliability & Testing TF
 - FHE Inks Characterization TF
- Some of the TFs currently meet bi-weekly and monthly
 - **Searching for additional participants to join these efforts!**
 - Please email Laura Nguyen for teleconference details

Task Force Updates

FHE Design Task Force

- **Ballot 7193A Results:** 6 Interest Reject, 1 Accept with comments
 - Ballot **failed** TC Chapter review
- Summary of rejects
 - Change 3.2 to "This Guide does not contain information on e-textiles". Delete references to IPC-8921
 - Delete last sentence of 15.4 that references ongoing work in FHE
 - Delete 2.1.1 Overview of FHE
 - Include references and citations from important printed electronics documents; IPC-2292 and IEC-62899-201/202
 - Change PET op temp to 120C (7.1) and change PEN op temp to 155C (7.2)
 - Suggestions given to:
 - delete section 5.2 (Definitions), section 8 (Inks), and section 9 (Printing Methods) in their entirety
 - add to section 18 design-to-manufacturing data information that is quite extensive

FHE Reliability & Testing Task Force

- 7242: Guide for Reliability of Flexible Hybrid Electronics
 - Guide will focus on methods for evaluation of FHE assemblies and systems, including but not limited to substrates, inks, interconnect materials, encapsulants, and electronic components in fabricated FHE test vehicles post assembly to determine the reliability of the combined design and production process.
- **Ballot 7242 Results:** 7 Reject, 1 Comment, and 1 Accept with comments
 - Ballot passed with editorial changes
 - 7242 was reviewed and rejects addressed during the TC Chapter at SEMICON West
 - Some messaging can be mis interpreted as currently written, so editorial changes were made to address some of the concerns.

FHE Inks Characterization Task Force

- Doc 7212: Guide for Inks Characterization for Flexible Hybrid Electronics
 - Provides guidance on established tests to develop methods that pertain to reliability and testing of incoming inks. Inks in this Guide refer to all incoming printable materials, such as screen-printing pastes and ink jet inks.
- Update
 - Pulled material from both Design and R&T document pertaining to inks into an outline
 - Structure of the document needs to be cleaned up
 - Continuing to add methods from all sources – “one stop shop” document
 - More details still needed
 - Reviewing Inks Table for Suggested Ink Tests Depending on Deposition Method
 - To add corresponding 'letter' to appropriate
 - Open Items:
 - Identify ASTM standards that are related to Ink testing that you find useful.
 - Include references
 - Replace Printable Conductor Performance by Type Figure in Appendix 2, since some data is not correct and cannot be traced back.
 - To be submitted for Ballot when ready

FHE Assembly Task Force

- SNARF 7222: New Standard: Guide for Flexible Hybrid Electronics Assembly
 - Guide will describe known best practices, processes, and procedures for attaching and validating FHE
 - Summarize existing trials used
 - Define assembly methods for testing, material properties, processes for inks and substrates, reliability of assembled components
- Task Force is currently not meeting
- **Call to Action:** Looking for new co-leader



THANK YOU

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STANDARDS