

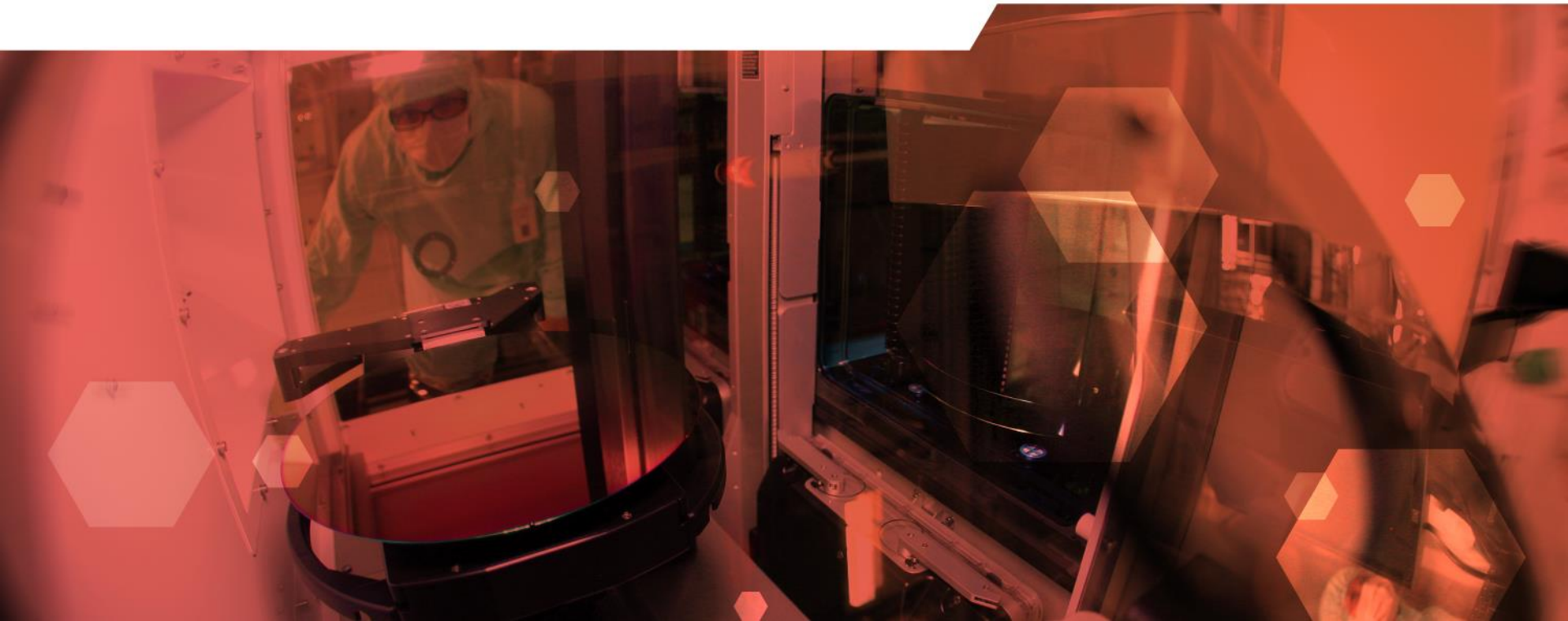
Single Device Traceability Task Force Report

Spring 2019 Standards Meetings

Zoe Conroy | Cisco (zfconroy@cisco.com)

Dave Huntley | PDF Solutions (dave.huntley@pdf.com)

Chris Portelli | STMicroelectronics (chris.portelli@st.com)



TF Meeting Summary

- April 4th, 2019 Spring Meetings
 - 7 of attendees in person
 - 0 of attendees remote/online
- TF Leadership & changes (if any):
 - Zoe Conroy | Cisco (zfconroy@cisco.com)
 - Dave Huntley | PDF Solutions (dave.huntley@pdf.com)
 - Chris Portelli | STMicroelectronics (chris.portelli@st.com)

Ballot Activity Summary

- Ballot Adjudication:
 - Passed:
 - Ballot #6450 Cycle 7 2018
 - NEW STANDARD: SPECIFICATION FOR SINGLE DEVICE TRACEABILITY FOR THE SUPPLY CHAIN
 - Published as SEMI T23
 - Failed:
 - None
- New Ballots and ballot plans
 - **Ballot #6471** for Line-Item Revision to T23
 - To be authorized for Cycle 5-2019 submission at Spring Traceability TC Meeting

Ballot # 6471

Line-Item Revision to SEMI T23-0119

Doc# 6471

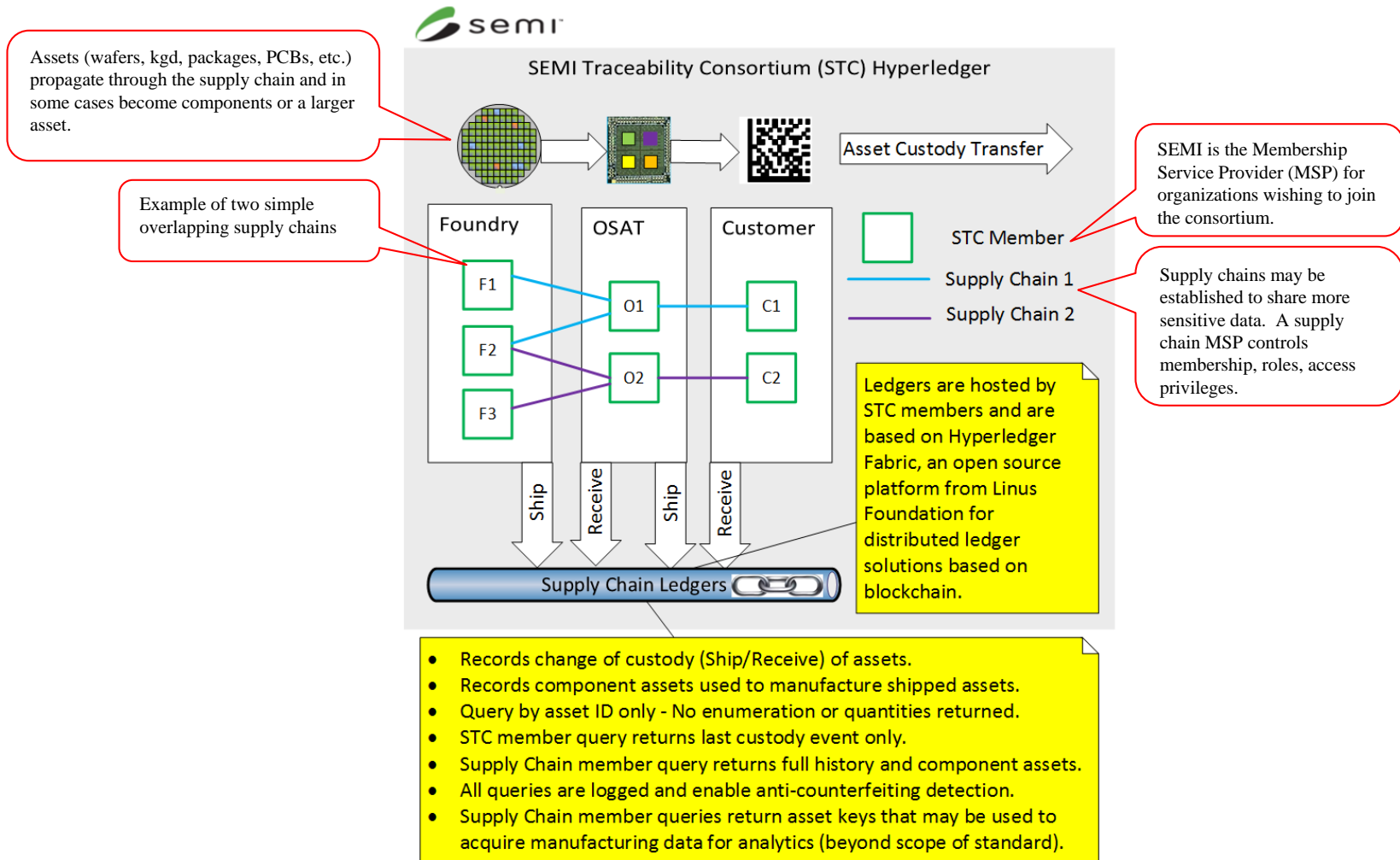
- Line Item Revision to SEMI T23-0119, *Specification for Single Device Traceability for the Supply Chain*
 - **Line item 1** – Improve clarity on carrier objects and identifiers. Add requirements when devices cannot support physical or electronic IDs (use of E142 in certain situations). Includes updates to section R1-1.6
 - Line Item 2** – Add Compliance Statement for clarity.
 - Line Item 3** – Clarify device ID requirements section, including opaque ID and scope of uniqueness.
 - Line Item 4** – Update Figure R1-2 with new graphics.
- Ballot planned for Cycle 5-2019
 - **Ballot Submission Date to SEMI Staff:** May 10, 2019
 - **Voting Period Starts:** May 24, 2019
 - **Voting Period Ends:** June 24, 2019
 - **Ballot adjudication at SEMICON West:** July 2019

New SNARF Counterfeit Prevention Standard

SNARFs

- New SNARFs proposals
 - New Standards: Specification for Counterfeit Prevention for the Electronics Manufacturing Supply Chain
 - Rationale:
 - There is no room for uncertainty in the genealogy of electronic parts that are part of just about everything we use. There are security, health and safety and brand value issues at stake. It should always be possible for stakeholders to query the genealogy of a part to verify its authenticity. This requirement is often addressed in specific supply chains by custom solutions driven by the final part manufacturer. It would be less expensive and more robust to have an industry wide solution which would also address the counterfeit risk downstream from the part manufacturer through a distributor and reseller network.
 - Liaisons with other Global Technical Committees/TC Chapters/Subcommittees/TFs: Information and Control Committee
 - SNARF distributed for 2 week GTC member review
 - **SNARF to be approved at Spring Traceability TC meeting**
- Revised SNARFs proposals
 - None
- SNARFs to abolish
 - None

Specification for Counterfeit Prevention for the Electronics Manufacturing Supply Chain



New Standard – Specification for Counterfeit Prevention

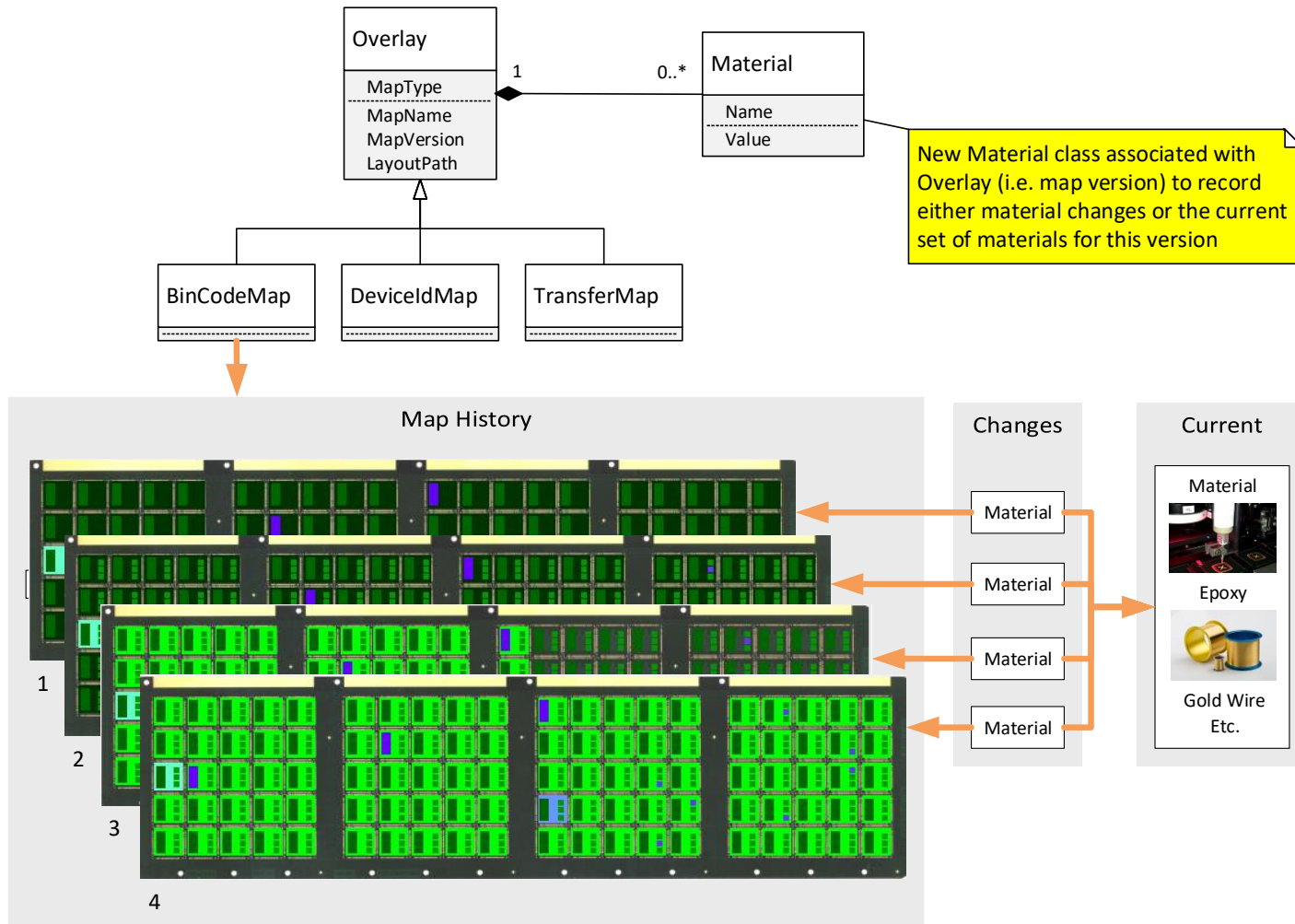
- Participation in beta testing of the counterfeit prevention standard
 - Draft “Request for participation”. Warren Savage / Dave Huntley
- Conferences/events/publications to promote new counterfeit prevention standard activity;
 - ITC Fall 2019 – Abstract submitted
 - APC Fall 2019 - Abstract due July.
 - APEX 2020 - ?
- Draft Background, Purpose, Scope and Limitations (Dave Huntley)
- Target ballot submission Cycle 5-2020

Alternative proposal for ballot 6301A (SEMI Korea)

Background

- Ballot #6301A - Line Item Revisions to SEMI E142-0211
 - Prepared by the Advanced Backend Factory Integration TF of SEMI Korea
 - Ballot received 4 rejects and so must be revised
 - Dave Huntley, co-author of SEMI E142, submitted one of the rejects and offered to provide an alternative proposal
- The Alternative Proposal is summarized in as follows
 - Add a record of materials in a new optional Material class associated with the E142 Overlay rather than as a MatCodeMap that inherits from Overlay alongside BinCodeMap, etc.
 - The Material class records any changes to the consumable packaging materials used for the specific map version (Overlay)
 - The complete set of materials used in a particular map version can be assembled from the map history
 - This assumes that the equipment is stopped and any strip maps are uploaded as a new map version whenever a consumable material is replaced
 - This will eliminate the duplication of slowly changing data for each device

Alternative Proposal



Next Steps

- Please contact Dave.Huntley@pdf.com if you have any questions about this alternative proposal.
 - Affirmative feedback from Korea

Other Activities:

- DARPA Security & Die Traceability

Key Takeaways from Liaison Meeting with DARPA

- **DARPA Programs:**

- **Supply Chain Hardware Integrity for Electronics Defense (SHIELD)**
 - <https://www.darpa.mil/program/supply-chain-hardware-integrity-for-electronics-defense>
 - <https://defensesystems.com/articles/2019/01/16/darpa-supply-chain-security.aspx>
- **Assembly and Integration of Secure SoCs (AISS)**
 - See attachment: “AISS – Assembly and Integration of Secure SoCs- Oct2018”

- **Other Resources:**

- IEEE/Accellera IP Security Working Group
 - <https://www.accellera.org/news/press-releases/270-accellera-forms-ip-security-assurance-working-group>
- White Paper: WP-Electronics Supply Chain Integrity Enabled by Blockchain (see attachment)

Upcoming SDT TF Meeting Schedule

- SDT TF Conference calls
 - TBD
- Next Face to Face Meetings
 - SEMICON West, 2019
 - Location/date/time/ teleconferencing information to be provided
 - Contact
 - Inna Skvortsova (SEMI NA)
 - 1.408.943.6996
 - iskvortsova@semi.org

Backup