SEMI Technology Community

The Collaborative Alliance for Semiconductor Test (CAST) is a SEMI Technology Community that develops, coordinates, and directs all SEMI services for the semiconductor test community. Its charter includes:

- Foster pre-competitive collaboration
- Research, develop and promote standards that enable industry productivity improvements
- Perform pre-competitive benchmarks
- Act as a representative and an advocate for the members

Addressing Critical Test Challenges

CAST is focused on areas identified as “challenges” and for which no known solution is existing or for which solutions are undesirable.

CAST role is to:

- Put the relevant actors/technical leaders together
- Formulate options
- Define guidelines leading to standards
- Undertake/Sponsor pre-competitive initiatives

CAST Working Groups

Rich Interactive Test Data Base (RITdb)

- **Focus:** Develop the next-generation format following STDF to allow more flexibility in data types and support for adaptive test.
  - RITdb enables a real-time streaming model that provides the ability to collect and monitor data/systems from sand to landfill
- **Rationale:** While Standard Test Data Format (STDF) is widely used in the semiconductor industry, there is a need for more efficient and flexible format to manage “big test data.”

Tester Event Messaging for Semiconductors (TEMS)

- **Focus:** Establish a vendor-neutral way to collect test cell data by standardizing ATE data messaging system based on industry-standard internet communication protocols between a test cell host and a server.
- **Rationale:** Address surging demand for real-time data analysis, real-time ATE input and control of the test flow to improve test yield, throughput, efficiency, and product quality.

Chip ID & Traceability

- **Focus:** develop a standardized approach for enabling traceable die-level identification (ID) throughout the IC manufacturing, test, and assembly processes to the point of use in the final system.
- **Rationale:** Many product types representing significant volumes that do not provide ID traceability. Without component-level traceability, it is extremely difficult to analyze failures and drive corrective action.
Participating Companies include:
Advantest
AMD
ASE
Broadcom
Cisco
Infineon
INFRASTRUCTURE Advisors
Maxim
NVIDIA
Mentor/Siemens
PDF Solutions
Qualcomm
Roos Instruments
STMicroelectronics
Teradyne
Texas Instruments
UTAC
Xcerra

CAST Events (2018)
• CAST 2018 Workshop – Nov 8 (Milpitas, CA)

Industry Stakeholders

CAST Participation – Join Today!
Benefits:
• Influence technology direction
• Networking in a non-competitive environment
• Professional development
• Industry recognition (company & individual)
• Leverage industry-wide resources

Membership:
• SEMI members
  o No fees
  o Submit CAST membership application
    ▪ Designate representatives to serve in the steering committee and in the working group(s)
  o Voting
• CAST Customer Advisory Panel (CAP) members
  o Open to chipmakers
  o No fees
  o Non-voting

Become a SEMI Member
SEMI connects members to opportunities and information that advance sales, speed collaboration, and enable electronics innovation. Through activities, communities, programs, and events, SEMI helps members achieve together what each cannot do alone:
• Access global markets, customers, and investors
• Shape policies and regulations with collective action
• Solve pre-competitive issues through global communities and working groups
• Gain early visibility to inflections in technology markets