

e-Manufacturing Symposium



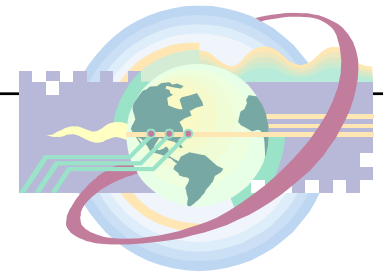
ISMT Standards Certification Guidelines

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SEMATECH

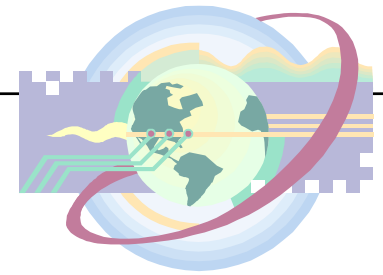
Standards Certification



Presentation Outline

- Objectives
- Status
- 2002 Deliverables
- 2003 Plans
- Key Points about Certification
- Lessons learned from 300 mm SW standards
- Challenges

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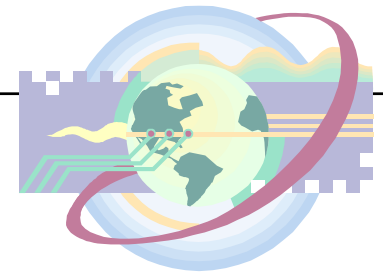


Objectives

Provide guidelines to *enable* 3rd party assessment of conformance to SEMI standards

Work with industry entities to *commercialize* 3rd party certification

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Status

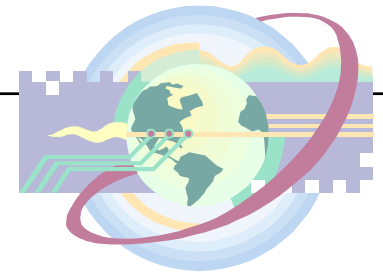
- ✓ Jul '02 Rev 0.01 Draft guidelines on web, presented at e-Mfg Workshop
- ✓ Oct '02 Rev 0.1 industry review draft on web, present at SEMICON SW e-Mfg workshop
- Dec '02 Publish Rev 1.0 Guidelines

◆ Feedback on draft guidelines:

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<http://www.sematech.org/public/resources/stds/certification.htm>

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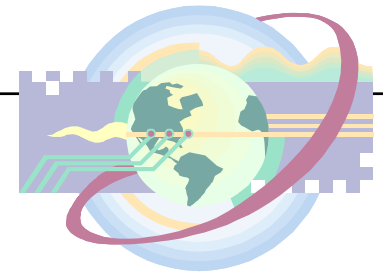


Key Industry Contributors

- Timothy Aanerud (Objective Solutions)
- George Collins (Rudolph Technologies)
- Guy Davis (Brooks-PRI)
- Jesse Ring (Software Quality First)
- Les Marshall, Stephan Gramlich (AMD)
- Lorn Christal, Steve Fulton, Jackie Ferrell (ISMT)
- Debora Ortiz, Scott Rhodes, Tom Hogel (TRW Systems)
- Norman Beasley (Consultant)
- Blaine Crandell (TI)
- Richard Oechsner (Fraunhofer)
- Glenn Stefanski (IBM)
- John Ellis, SEMI

IC makers, test service providers, equipment suppliers, tester suppliers, software suppliers, standards developers, and other interested parties are encouraged to participate in the development of these guidelines.

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2002 Deliverables

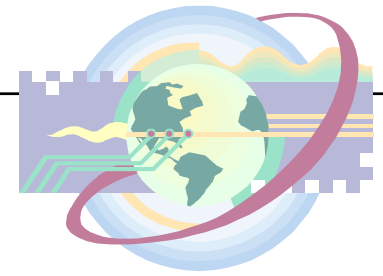
Certification Documents

- ◆ **Standards Certification Overview Guide**
- ◆ **Authorizing Agency and Accreditation Body Guideline**
- ◆ **Test Service Provider Processes and Criteria Guideline**
- ◆ **Assessment Processes and Criteria Guideline**
- ◆ **Assessment Planning Template**
- ◆ **Example of a Test derived from a standard**

Also planned:

- ◆ **ISMT Best Known Practices (Updated)**

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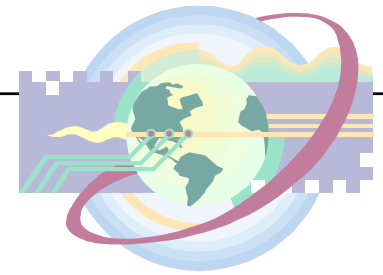


2003 Plans

- ◆ **Certification Guidelines Rev 2.0**
- ◆ **Work with industry to establish 3rd party standards certification infrastructure**
- ◆ **Transition *appropriate* documents into SEMI**
- ◆ **Work with ISMT e-Manufacturing Group and SEMI Committees to employ standards development processes that promote concrete, testable requirements**

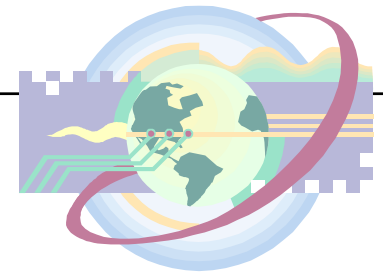
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Key Points about Certification



- ◆ ISMT Assessment Guidelines provide recommended **processes to derive tests from standard requirements**
- ◆ The requirement for 3rd party certification is **decided by the customer** (not ISMT)
- ◆ The ISMT Accreditation and TSP (test service provider) guidelines provide **recommended processes and criteria** - ISMT will not perform these functions
- ◆ The **industry infrastructure** needed to support formal certification is not yet in place – the guidelines provide a starting point
- ◆ **Industry ownership** of the certification process is necessary
- ◆ Certification requires **mature standards and tests**

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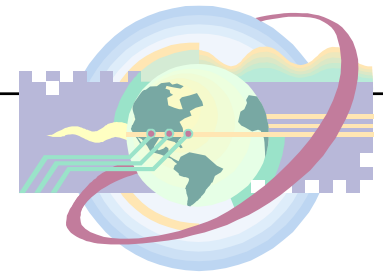
Lessons learned

- ◆ **The 300 mm equipment and AMHS software standards were not written with testability in mind**
 - Open to interpretation
 - Some requirements not used in industry
 - Some 'options' are actually required
 - Known errors in standards
 - More than one way to implement

- ◆ **Continuing User guidance during implementation phase is needed**

- ◆ **Need to revisit the 300 mm SW standards to map test requirements to standards requirements**

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Challenges

- ◆ Industry ownership of certification process
- ◆ Customer 3rd party certification requirements identification
- ◆ Timing for deploying 3rd party certification
- ◆ Validation of certification process
- ◆ Mapping standards requirements to derive good known tests, user consensus on interpretation and usage