

Workshop Summary

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INTERNATIONAL SEMATECH



Interface A Standards Timeline

ISMI Member Companies #1 priority is access to data from equipment. The embodiment of this goal is called Interface A, a second equipment port for data access. Several SEMI standards are required to support this.

Standard	Description	Concept Level Status	Implementation Level (XML) Status
Common Equipment Model (CEM, E120)	Describes the physical structure of equipment	Approved, in revision	Approved, in revision
Equipment Self Description (E125)	Describes the data provided by equipment	Approved, in revision	Submitted Aug, 2004 Vote Oct 2004
Equipment Client Authentication / Authorization (E132)	Restricts access to equipment services	Approved, in revision	Submitted Aug, 2004 Vote Oct 2004
Data Collection Management (E134)	Defines and activates data collection plans	Approved, in revision	Submitted Aug, 2004 Vote Oct 2004

Interface A Standards are Nearing Completion!



EDA Discussion Forum

What: Equipment Data Acquisition Interface Forum

Who: IC makers, OEMs, suppliers, consultants, service providers, etc.

Why: Industry participants can use this forum to pose questions, discuss issues, and document learnings related to the Interface A suite of standards

Where: www.ismi.sematech.org/emanufacturing/forums.htm
registration is required so e-mails can be forwarded to participants

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Equipment Data Acquisition Discussion Topics

- **Authorization and Authentication (E132 & E132.1)**
 - General
- **Common Equipment Model (E120 & E120.1)**
 - General
- **Equipment Self Description (E125 & E125.1)**
 - General
- **Data Collection Management (E134 & E134.1)**
 - General
- **300mm and EDA**
 - General
- **XML and SOAP (SEMI E121, E128, & other XML specs)**
 - Performance
 - General
- **Other Category**
 - General

Equipment Expectations - Internal

- **Implementation quality is critical**
 - **EDA Interface must be integrated directly**
 - Layering atop old (e.g., SECS-II) communication will not meet performance and reliability needs
 - **Data Quality must be assured**
 - Sampling-to-reporting latency reduced
 - Time stamps accurate
 - Formatting, units, etc. correct and consistent
 - **Time Synchronization**
 - Internal Time Synch must be <10ms (sampling rate)
 - Equipment components must integrate well
 - » “Blackbox” add-ins problematic
 - NIST research has shown that equipment-factory synchronization can be easily accomplished
 - The factory provides the “master” clock

What we are seeing

- **Grand assumption of e-Manufacturing**
 - Access to the required data makes decision making more effective
- **Interface A suite of standards are essentially complete**
- **Standards are implementable**
- **Standards are implemented**
- **Performance needn't be an issue on properly architected solutions**
- **IC Makers will be requiring starting in 2005**

Key ISMI MC Messages

1. Fully functional 300 mm standards are assumed
2. Interface A (a.k.a. DDA/EDA) is now the KEY ISMI MC focus. Interface A standardization is nearing completion and supplier community is implementing
3. The ISMI MCs are cooperating with suppliers early to assure mutual understanding and success
4. Interface A prototypes are being evaluated at ISMI
5. Leading OEMs are deploying e-Diagnostics solutions (1000s of tools) and reporting significant benefit
 - Fabwide coverage requires Interface A and C standardization
6. ISMI MCs will require Interface A on equipment purchased starting as early as 2Q05

