

# EEC Guideline Phase 2.0 Rollout An Overview

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# Overview

- **The EE Capabilities and Guidelines discussed today are needed to help meet ITRS goals for equipment productivity**
- **Selete/JEITA and International SEMATECH are collaborating in order to send a unified message**
- **Selete/JEITA and International SEMATECH would like the Phase 2.0 EEC Guideline rollout today to continue the discussion in the industry for rapid implementation**
- **These discussions will lead to a further understanding of the productivity improvements, the necessary standardization, and clarify the guidelines in consultation with equipment and software suppliers**

# Key Participants

**Phase 2.0 Guidelines have been ratified by International SEMATECH, JEITA, and Selete Membership**

## **Selete / JEITA**

- **Hitachi**
- **Matsushita**
- **NEC**
- **Sanyo**
- **Toshiba**

## **International SEMATECH**

- **AMD**
- **IBM**
- **Intel**
- **Texas Instruments**



# Overview

**Concepts discussed today are still under development**

- **Phase 1.0, 1.5, and 2.0 Guidelines have reached full consensus**
- **Phase 2.0 Guidelines will be introduced today**
- **Future Phases of the Guidelines will be rolled out at SEMICON West 2002 and SEMICON Japan 2002**

**Presentation Purposes:**

- **Introduce EEC Guideline Activity**
- **Explain the background and fundamental expectations**
- **Review EEC Guidelines from Phases 1.0 and 1.5**
- **Introduce Phase 2.0 Guidelines - Single Point of Control**
- **Obtain feedback and suggestions for future phases**

# EEC Background

**Our industry must move toward highly efficient factories**

- **e-Manufacturing is a key concept enabling this transition**
  - **Factory structures and systems will change**
- **Transition must also be smooth in addition to rapid**
  - **The entire industry must innovate, not just one company**

**International collaboration will help to control risk and cost**

- **ISMT and Selete/JEITA began collaboration in 2000**
- **Analyzing to determine required capabilities and standards**
  - **Enhance equipment performance & availability**
  - **Share responsibility between device makers and suppliers**
  - **Reduce the cost and time required to implement**

# EEC Definition

- **Equipment Engineering refers to all operations for equipment availability improvement and performance maintenance inside and outside of the factory**
  - **Line throughput maintenance and improvement**
  - **Equipment health monitoring and troubleshooting**
  - **Equipment performance improvement**
    - **especially newly introduced equipment**
  - **Collaboration with suppliers (improvement, troubleshooting, re-design, ...)**
  - **Equipment, parts, assembly versions, modification management**
  - **Maintenance operation management and planning**
  - **Process performance adjustment, such as APC/FDC**



**Previous Guidelines**

- EEC Big Picture
- EEC Framework
- Equipment Engineering Data Sharing
- Equipment Engineering Responsibility Sharing
- Equipment Standards
- e-Diagnostics
- Maintenance Support
- Equipment Ramp-up Support

**Phase 2.0 Guidelines – SEMICON Japan**

- Single Point of Control (SPOC)

**Phase 2.5 Guidelines – SEMICON West 2002**

- Categories of Service
- Run-to-Run Control (R2R)
- Fault Detection and Classification (FDC)
- Recipe Download and Parameterization
- Enhanced e-Diagnostics
- Machine-to-Machine Matching
- IM and Standalone Metrology Equipment Operation
- Integrated or Linked Equipment Operations

**Phase 3 Guidelines – SEMICON Japan 2002**

- Predictive Maintenance
- Spare Parts Management
- Data Mining
- Procurement
- Yield Management