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International SEMATECH e-Diagnostics

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NVLS e-Diagnostics 062900

Novellus

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Required Data

- **What data is required from the fab?**
 - Equipment data of system performance
 - MWBI, MTBF, Utilization, MTTR, Availability, Thruput
 - Equipment specific data to baseline systems
 - Key equipment data of system functions (i.e. timing data, sensors, chamber specific information)
 - Tool Status (i.e. Production, PM, Down)
 - Component Failures (i.e. HW, SW, Process)
 - Tool History Files
 - PM Data
 - Cost of Consumables / Spare Usage
 - Process Mix
 - Process Qual / Yield Data



n Usage of Data

- **What will Novellus do with the data?**
 - Track system performance
 - Baseline against “golden” tool
 - Ability to enhance remote assistance to resolve problems
 - Identify potential problems before they happen
(i.e. Predictive Maintenance)
 - Data for CIP
 - Trend Analysis
 - Automated Diagnostic/Order System
 - Optimize system performance



n Proposed Guidelines

- **What are some proposed guidelines Novellus has with regards to e-Diagnostics?**
 - Guidelines that maybe required;
 - Security issues
 - Data integrity/Confidentiality
 - Availability of remote access
 - Frequency data collection
 - Data Format



n Questions

➤ Questions to the Member Companies?

- How much information will be shared with equipment suppliers?
- What level of remote access will be given to the equipment suppliers?
- What will be the lock out mechanism?
- Do member companies believe there is potentially a new business model for this industry?

