

SEMICON Japan

e-Manufacturing Workshop

Introduction

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ISMI is the only consortium in the world focused on manufacturing

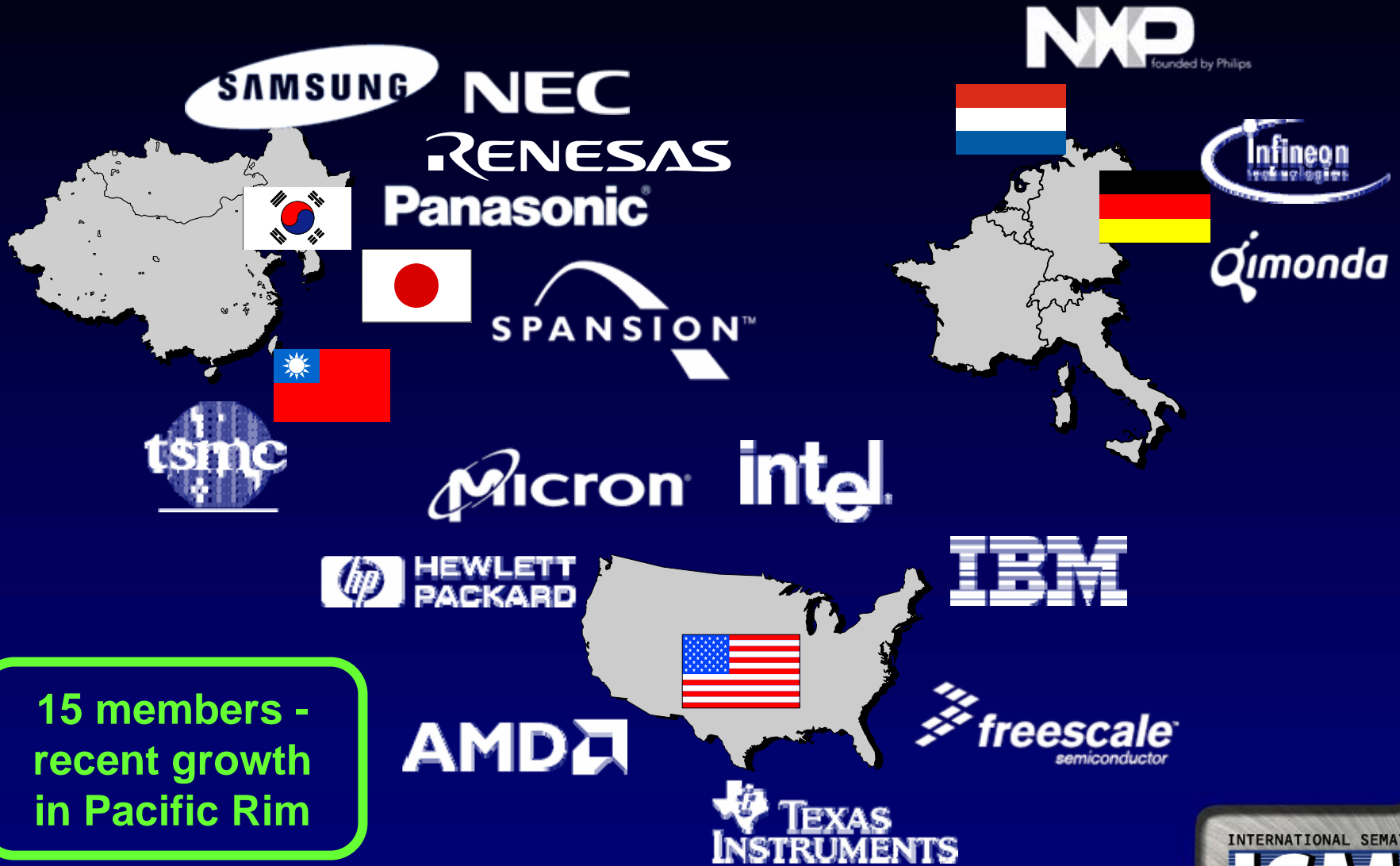


Accelerating manufacturing productivity

- Addressing the dual challenges of increasing productivity while lowering costs
 - Manufacturing productivity
 - Fab cost reduction
- Benchmarking data and methods exclusive to ISMI members



ISMI Members



15 members -
recent growth
in Pacific Rim

Top 12 Chipmakers - 2005

- ★ – Intel
- ★ – Samsung
- ★ – Texas Instruments
- Toshiba
- STMicroelectronics
- ★ – Infineon/Qimonda
- ★ – Renesas Technologies
- ★ – TSMC
- ★ – NEC Electronics
- ★ – AMD/Spansion
- ★ – Freescale
- ★ – NXP (Philips Semiconductor)

**ISMI
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What is e-Manufacturing?

e-Manufacturing is the use of advanced and emerging information technologies to provide automated, data-driven productivity optimization

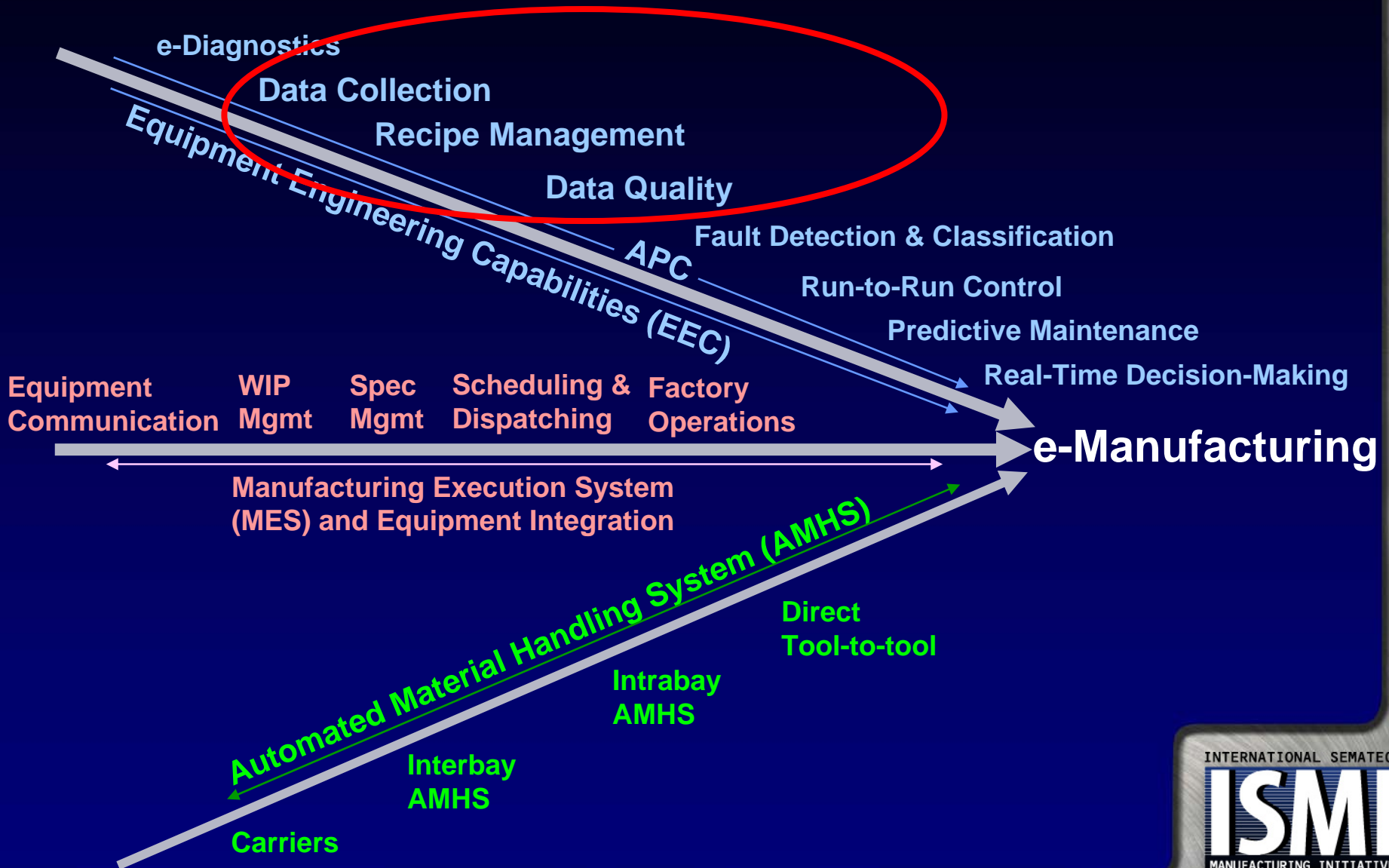
e-Manufacturing has a wide scope

- Improved data availability to enable factory decision support (**enabled by EDA Interface A**)
- Enhanced tools and applications for data utilization in decision making for productivity optimization

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Industry Path to e-Manufacturing



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Key Workshop Topics

- **Getting high quality equipment data**
- **Leveraging a new generation of recipe management for improving process control**
- **Presentations available at ismi.sematech.org/meetings/archives.htm#emfg**

Acronyms

- AMHS – Automated Material Handling System
- AEC – Advanced Equipment Control
- APC – Advanced Process Control
- aka – Also Known As
- API – Application Programmer Interface
- App – application
- AST – Advanced Software Test (or Tester)
- ATP – Advanced Technology Program
- CAA – Client Authentication and Authorization (E132)
- CEM – Common Equipment Model Standard (E120)
- CID RW – Carrier ID Reader/Writer (E99)
- CIM – Computer Integrated Manufacturing
- CJM – Control Job Management Standard (E90)
- CMS – Carrier Management Standard (E87)
- DCM – Data Collection Management Standard (E134)
- DCP – Data Collection Plan
- DDA – SEMI Diagnostics Data Acquisition TF
- DQ – Data Quality
- ECCE – EDA Client Connection Emulator
- EDA – Equipment Data Acquisition (also called Interface A or I/F A)
- EEC – Equipment Engineering Capabilities
- EES – Equipment Engineering System
- EH – Exception Handling
- e-Mfg – e-Manufacturing
- EPIO – Equipment Parallel Input/Output
- EQIP – Equipment Interface Parameters (E126)
- EqSD – Equipment Self-Description Standard (E125)
- EPT – Equipment Performance Tracking (E116)
- F2F – Face-to-face (also called FtF)
- FAST – Factory Automation Standards Tracking
- FDC – Fault Defect and Classification
- FICS – Factory Integration Control System
- GEM – Generic Equipment Model Standard (E30)
- GJG – Global Joint Guidance
- HCI – Human-to-Computer Interface
- HSMS – High Speed Messaging Services Standard (E37)
- HTTP – Hypertext Transfer Protocol
- HVM – High Volume Manufacturing
- ICM – Integrated Circuit Maker
- I/F A – Interface A (also called EDA Interface)
- IMM – Integrated Metrology Measurement Standard (E127)
- MES – Manufacturing Execution System
- MTBF – Mean Time between Failure
- MTTR – Mean Time to Repair
- NIST – National Institute of Standards and Technology
- OEE – Overall Equipment Effectiveness (or Efficiency)
- OEM – Original Equipment Manufacturer
- OS – Operating System
- OSS – Object Services Standard (E39)
- PCS – Process Control System Standard (E133)
- PJM – Process Job Management (E40)
- PO – Purchase order
- R2R – Run-to-run (also called RTR)
- RaP – Recipe and Parameter Management Standard (E132)
- RMS – Recipe Management System
- SECS – SEMI Equipment Communications Standard
- SOAP – Simple Object Access Protocol
- SPC – Statistical Process Control
- SPOC – Single Point of Control
- STS – Substrate Tracking Standard (E94)
- SC – Station Controller
- TDI – Tool Data Interface
- TF – Task Force
- TSP – Test Service Provider
- WIP – Work in Process
- wspm – wafer starts per month
- XML – Extended Mark-up Language

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