

# Status of EEC Activities

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# Path Ahead - EEC Phasing Strategy

## Phase 1 Guidelines – SEMICON West

- EEC Big Picture
- EEC Framework
- Equipment Engineering Data Sharing
- Equipment Engineering Responsibility Sharing
- Equipment Standards

## Phase 2 Guidelines – SEMICON Japan

- APC
  - Run-to-Run Control (R2R)
  - Fault Detection and Classification (FDC)
- Recipe Download and Parameterization
- Enhanced e-Diagnostics

## Phase 1.5 Guidelines – SEMICON Southwest

- e-Diagnostics
- Maintenance Support
- Equipment Ramp-up Support

## Phase 3 Guidelines – SEMI March 2002

- Predictive Maintenance
- Spare Parts Management
- Data Mining
- Machine-to-Machine Matching

## Phase 3++ Guidelines - TBD

- Procurement
- Others...

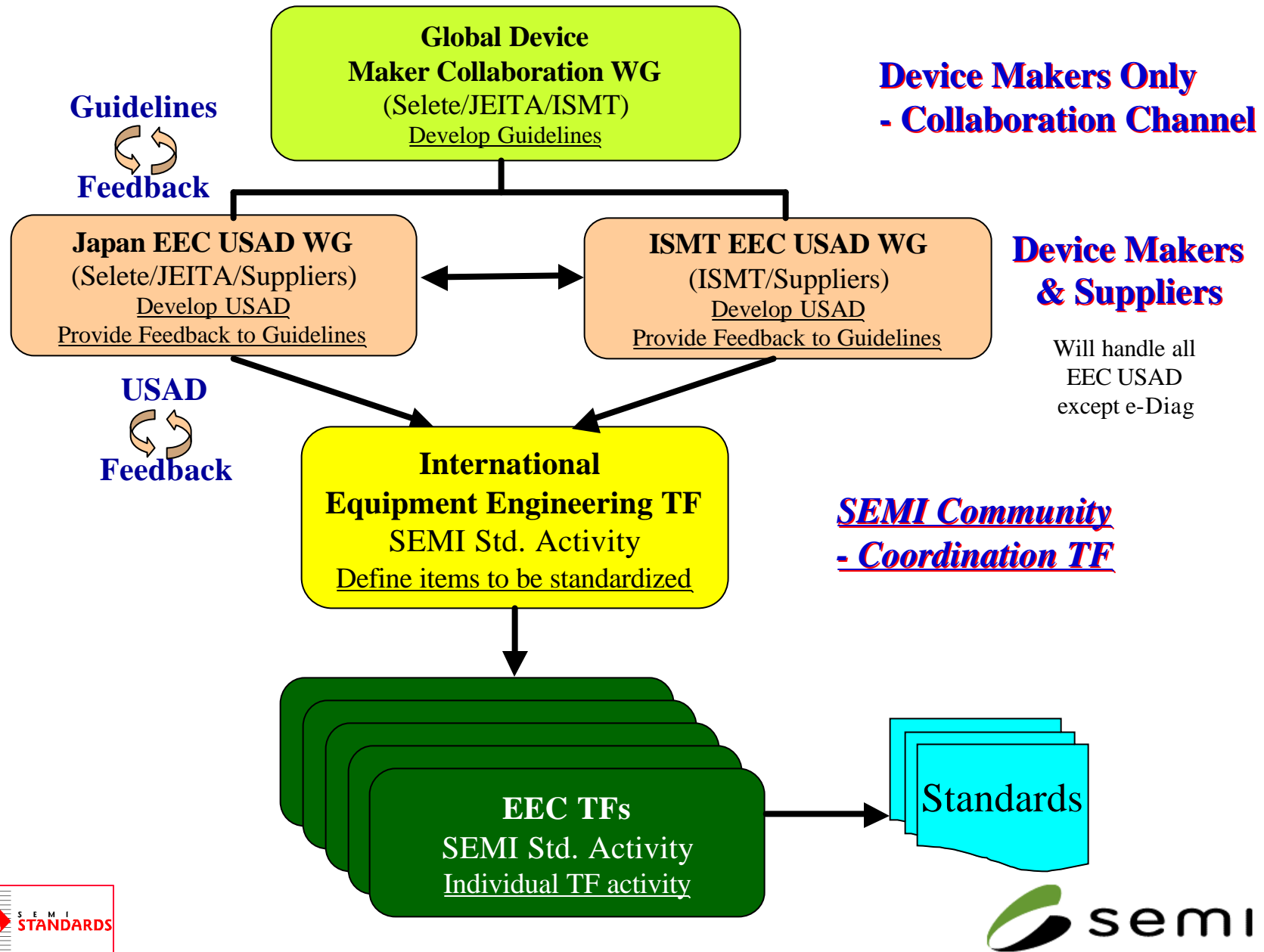


# Background

- **ISMT and Selete/JEITA IC Makers have been collaborating on guidelines for a set of capabilities labeled Equipment Engineering Capabilities (EEC)**
  - **These guidelines represent IC maker consensus on high level requirements and capabilities**
- **IC makers are now working with suppliers to further analyze these requirements and provide increased clarity in order to transition from requirements definition to standards development and implementation**
  - **Hence the ISMT EEC USAD (User System Analysis Doc) WG**
  - **This is a globalization of the same process used for e-Diagnostics**
    - **IC Makers defined the original set of guidelines**
    - **IC Makers and Suppliers defined the e-Diagnostics Guidebook**
- **The entry point to the SEMI Standards process is the IEE TF**
  - **USAD to be used as direction for standards activities**
  - **IEE TF to coordinate activity and ensure technical compatibility**
  - **New task forces to be spawned for specific standards**



# Relationships of EE Work Groups



# EEC USAD WG Charter and Scope

## Charter

- Develop the necessary analysis and documentation to successfully transition from the Global EEC guidelines to standards / implementation

## Scope

- Give feedback to the Global EEC Guidelines
- Develop User System Analysis documentation to give direction/priority to standards bodies
- Analyze and adopt existing standards where appropriate
- Sponsor prototyping efforts where appropriate

**EEC USAD WG**  
(Device Makers/Suppliers)  
Develop USAD  
Provide Feedback to Guidelines

## Strategies

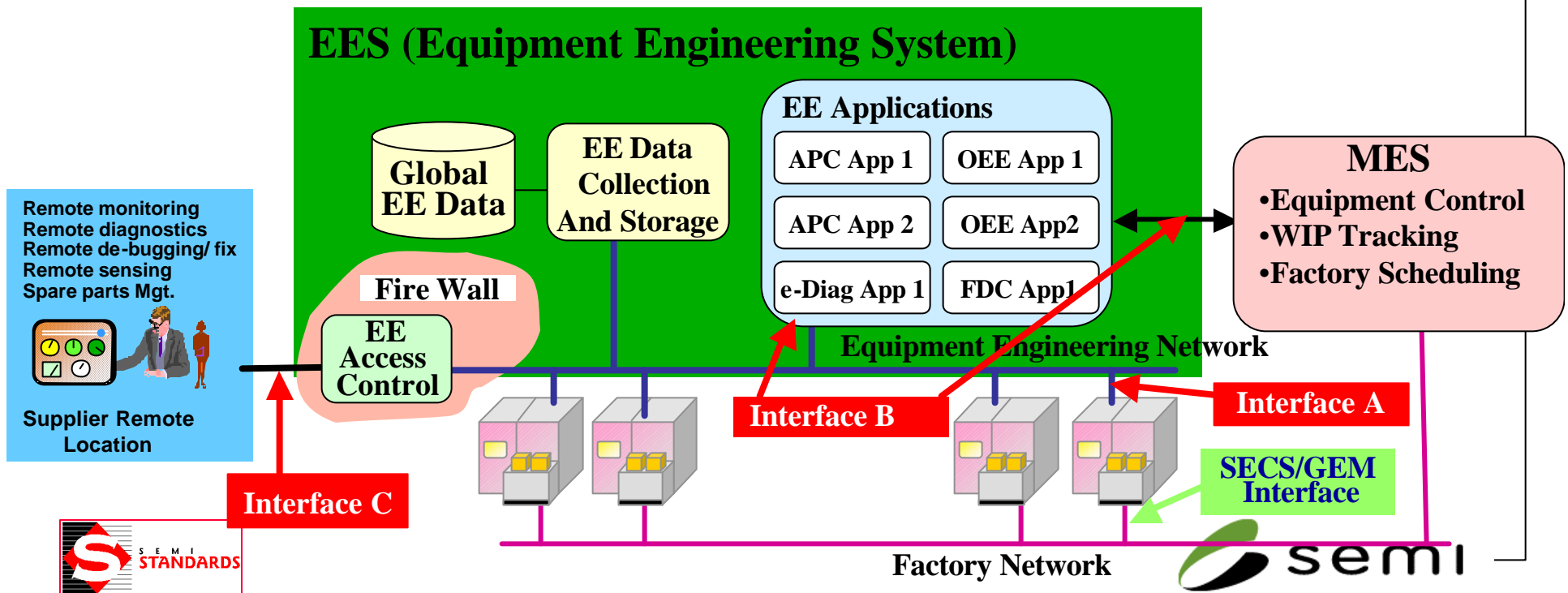
- Define a phased approach based on joint priorities
  - Develop a fast-track schedule similar to e-Diagnostics
- Charter sub-teams to develop detailed proposals
- Use the WG to review detailed proposals and status
- Partner with SEMI to synchronize standards milestones



# ISMT USAD Deliverables

- Give feedback to the Phase 1 Global EEC Guidelines based on detailed analysis
- Analyze the data, protocol, and security requirements for support of the Equipment Interface (Interface A)
- Analyze the data, protocol, and security requirements for open EEC Application Interfaces (Interface B)
- Analyze the data and protocol requirements for external access to EEC implementations (Interface C)

ISMT EEC USAD WG  
(ISMT/Suppliers)  
Develop USAD  
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# ISMT USAD Status

- **ISMT USAD WG weekly telecon held jointly with the ISMT e-Diagnostics WG**
  - **Thursday's, 10:00 – 11:30am CDT**
  - **Agenda**
    - **Develop and Review Schedule / Progress**
    - **Charter sub teams**
    - **Approve sub team output**
    - **Resolve sub team issues**
- **Sub teams to be chartered from the EEC WG for each deliverable**
  - **Formalize guideline feedback**
  - **First team - develop data taxonomy document**
  - **EEC DTT WG Telecon - Tuesday's 2:30-3:30pm CDT**

**ISMT EEC USAD WG**  
(ISMT/Suppliers)  
Develop USAD  
Provide Feedback to Guidelines



# Japan USAD Status

- **JEITA USAD WG**

- **Kick-off meeting**

- **September 18 13:00-18:00**
    - **13 suppliers, 4 device makers**
    - **Proposed initial document from Selete**

- **Formed three sub teams - Discuss**

- **Infrastructure SWG - EES interface and connectivity**
    - **Application SWG - EES application study**
    - **Business SWG - Business related issues study**

**Japan EEC USAD WG**

(Selete/JEITA/Suppliers)

Develop USAD

Provide Feedback to Guidelines

- **Deliverables**

- **Analysis results of detail requirement based on Global EEC guidelines**

- **Partnership**

- **ISMT USAD WG**

- **Review and feedback**

- **SEMI**

- **Share/synchronize standardization work**



# IEE Charter (From TFOF)

- This task force will maintain the architectural integrity of models and modifications to models produced by task forces responsible for developing Equipment Engineering System (EES)-related standards.
- This task force will develop and maintain the roadmap for the development of standards describing the implementation of Equipment Engineering System (EES) capabilities.
- This task force will actively work to continually communicate the scope, organization, and results of EES-related work to the SEMI community.

International  
Equipment Engineering TF  
SEMI Std. Activity  
Define items to be standardized



# IEE Status

- **IEE Task Force formed at SEMICON West**
  - **TFOF approved by I&CC**
  - **Co-chairs identified –**
    - **Lance Rist/SEMATECH, Mark Pendleton/Domain Logix (U.S.)**
    - **Tomoyuki Masui/Selete, Kozo Aso/FRIC (Japan)**
- **First Meeting to be at SEMICON Southwest**
  - **Wed., Oct. 17, 1-5pm**
- **Japan IEE formed in September**
  - **Nearly identical TFOF approved by Japan I&CC**
  - **Initial meetings have occurred in Japan**
- **Joint Telecon Held Oct. 4<sup>th</sup>**
  - **Introductions, plans, synchronization**

**International  
Equipment Engineering TF**  
SEMI Std. Activity  
Define items to be standardized



# IEE Next Steps

**International  
Equipment Engineering TF**  
SEMI Std. Activity  
Define items to be standardized

- **IEE TF Meeting At SEMICON SW**
  - Regular TF Meeting – Introductory Materials
  - Joint IEE Telecon (following week) – Synchronize
- **Determine USAD WG's Roadmap/Schedules**
  - Dependent on EEC Collaboration/GL Schedule
  - Much of the work cannot begin without this input
- **Begin Basic Work**
  - Construct reference models from existing standards
  - Create roadmap (will be very rough pass)
  - Identify problem areas
  - Plan TF/WG structure to handle future work

