

Expectations for The Detailed Equipment Data As a User

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Introduction

- Expect good results of EDA
 - To be essential for OEE
 - Giving more chances to engineer for improving equipment & process outputs
- However we still have issues to solve
 - Need real benefits
 - Application and Data Quality should be focused
 - Practical Standards & Implementation Guide

EDA Deployment Plan

- EDA standards will be included in our purchasing specification by 1Q in 2006.
 - Will try to make the requirements in detail
 - Hope that a standard tester of Interface A to be available in the business area

EDA Deployment Plan – cont.

- Have a plan to do EDA pilot test by 1Q in 2006
 - EDA data transfer test from EQ. to Samsung Equipment Engineering System
 - Will upload real EQ. data using EDA standards
 - Will use commercial client simulator or in-house simulator

Practical Usage of EQ. Data

- **FDC – Low Light**

- . Hard to find real benefits at current business environment
- . Not easy to persuade top managements with ROI
- . 10Hz Resolution are conceptually acceptable
- . Needs practical effectiveness of EDA

Practical Usage of EQ. Data – cont.

- **EPT – High Light**

- . Use DEE(Detailed Equipment Event)
- . Possible to analyze EQ. performance loss deeply
- . Expect performance improvement of all EQ. models
- . ROI is clear & the engineers want strongly
- . SECS data are insufficient, so we need EDA

Practical Usage of EQ. Data – cont.

- **EPT Case Study : CVD EQ.**

- Objective: EQ. throughput (wafer/hr) improvement

- Analysis :

- . optimal time decision for process time

- . transfer module time

- Data

- . detailed EQ. event data & corresponding time

Expectations (for EQ. Maker)

- Availability of EDA Data in comparison with SECS Data
 - Samsung is still searching for the practical availability of EDA data
- Roadmap for EDA
 - First of all, CEM and Meta data with detailed IO-Device level information are needed

Expectations (for ISMI)

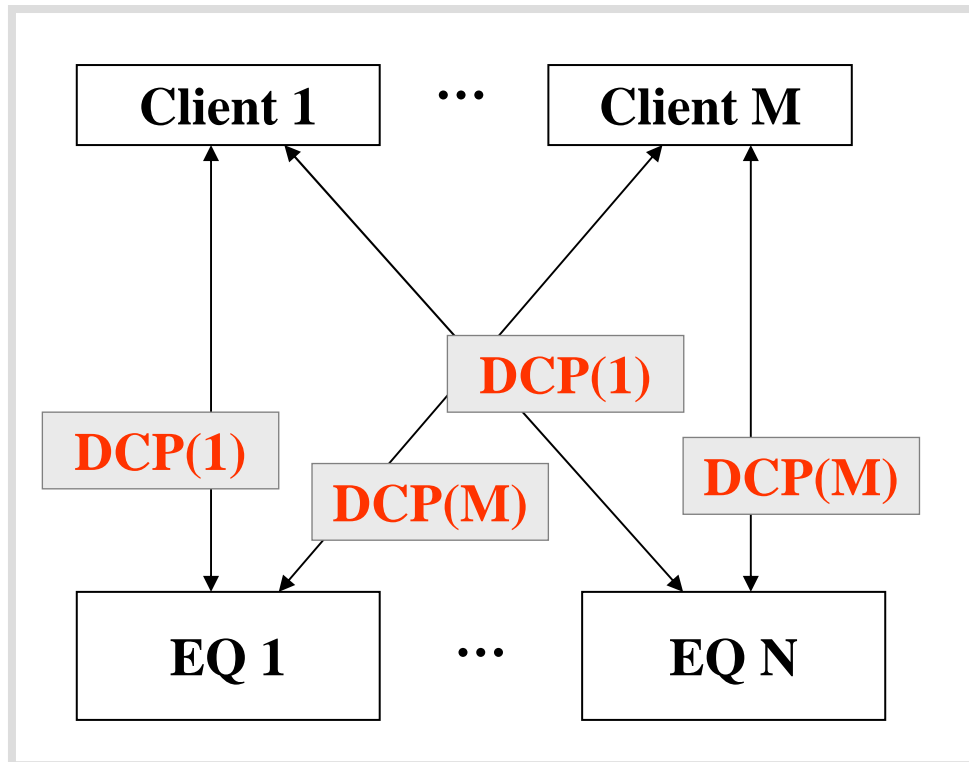
- Gathering and sharing the real advantages of EDA
- Study not only for data quantity but also for data quality
- Practical standards for EDA implementation
- Rapid standardization progress

Expectations (for Selete/JEITA)

- Leading to solve
 - unified standard, DB schema, data structure
 - the TDI cost
 - synchronization of TDI data time
- Guiding for TDI implementation
- Unified standard based on EDA and TDI

EDA Factory Structure Issue

(Client Direct Model)



Session Numbers = Client Access Numbers

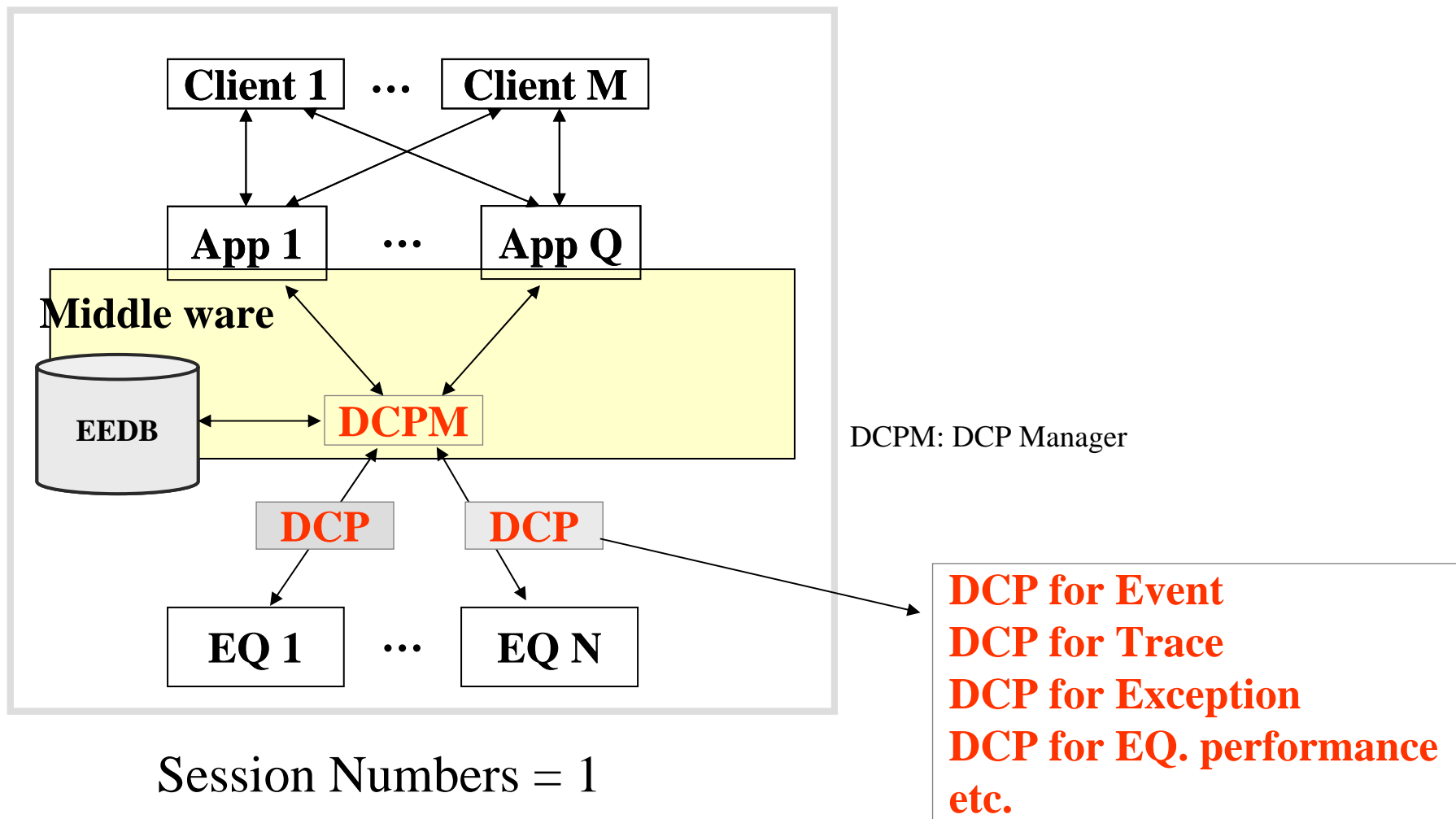
EDA Factory Structure Issue(cont.)

(Client Direct Model)

- Merit
 - DCP per each user
- Demerit
 - No priority for important sessions
 - EQ. performance decrease because of many sessions
 - Need session management guideline for all EQ. model
 - Data Duplication of same EQ. data

EDA Factory Structure Issue(Cont.)

(Middle Ware Model)



EDA Factory Structure Issue (Cont.)

(Middle Ware Model)

- Merit

- Simple session management
- Minimize data duplication
- Effective EEDB availability

- Demerit

- Increase of DCPM load
 - need practical test of DCPM performance

Conclusion

- Samsung's plan
 - more focus on the EPT than FDC for the usage of EDA
 - TDI could be a consideration for the EPT
- Samsung's expectations
 - Practical availability of EDA in comparison with SECS
 - Implementation standards with rapid progress
 - Single tool data collection method (EDA and TDI)