

Wafer Test and Yield Analysis

This program is sponsored by:

Kulim Hi-Tech Park

Conducted by:

DreamCatcher Consulting Sdn Bhd

Wafer Test and Yield Analysis

SYPNOSIS

Wafer yield has always been an important performance index for a wafer fabrication plant in meeting increasing demand of semiconductor business. Yield analysis and management is in turn strongly dependant on the effectiveness of wafer test methodology.

The first part of this short course introduces the various wafer test methodologies currently implemented in the present ULSI chip fabrication industry that includes in-line parametric tests, wafer level electrical and sort tests. The associated test issues will also be pinpointed.

The second part of the course discusses the various mechanisms that cause yield-loss in the typical fabrication process, followed by the corresponding modeling. We will also explore the concepts of various sort yield models. In the part of yield management systems, concepts of some commonly-used analytical techniques for design, parameter & test limited yield, including techniques of design schmoos, wafer zones, wafer patterns, process windows, product sensitivity and equipment commonality will be introduced.

WHO SHOULD ATTEND

Engineers, Managers, and Support Personnel involved in the fabrication and development operations that include:

- Process engineers
- Test engineers
- Yield analysis engineers
- Product engineers
- FA engineers
- Reliability engineering
- Application engineering

PEREQUISITE

Basic background and understanding of semiconductor technologies.

COURSE METHODOLOGY

This course is presented in an interactive classroom style utilizing lecture, open discussion and examples.

COURSE DURATION

2 days, 9am - 5pm

COURSE STRUCTURE

- 1) In-line parametric test
 - Wafer test structures
 - Placement and development of test structures
 - Types of parametric tests
 - In-line parametric test equipments
- 2) Wafer sort
 - Performing wafer sort
 - Various wafer sort tests
 - Test issues at wafer sort
- 3) Yield analysis
 - Challenges of device scaling on yield management
 - Causes for yield loss
 - Modeling of yield loss mechanism
 - Usefulness of yield models
- 4) Wafer sort yield models
 - Poisson- model
 - Murphy- model
 - Seed- model
 - Yield management systems

COURSE INSTRUCTOR(S)

Dr Ng Chee Mang

Ng received his B.Sc (Hon.) and MSc., both in Physics from University of Malaya, Malaysia in 1992 and 1994 respectively; Ph.D in Physics in 2001 from National University of Singapore (NUS) under NUS research scholarship.

He joined one of the semiconductor foundries in Singapore as a process engineer and later as a process integration engineer under fab operation. He was involved in developing device technology of various technology generations for communication applications.

Dr Ng is currently the technical trainer and program manager of his company's research programs with both NUS and Nanyang Technological University (NTU). He is also an adjunct assistant professor at the School of Electrical and Electronic Engineering of NTU and Physics Department of NUS. His research interests include structural and electronic studies of strained silicon, advanced materials for next-generation interconnect and fabrication of



silicon based nanowire transistors.

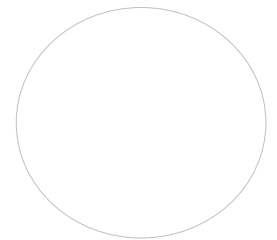
Besides technology and education, Dr Ng counts among his interests traveling, reading, and Chinese medicine.

REGISTRATION FORM
PUBLIC TRAINING PROGRAM

| Course Title [Code] | Wafer Test and Yield Analysis | | |
|----------------------------|--|-------------|---|
| Duration | 2 days | Date | 9th-10th Penang 2010 |
| Venue | DreamCatcher Consulting Sdn Bhd <i>303-5-5 Block , Krystal Point 1, Jalan Sultan Azlan Shah 1900 Penang</i> | | |
| COMPANY INFORMATION | | | |
| Company Name / Address | | | |
| Contact Person | | | |
| Designation | | | |
| Tel | | | |
| Fax | | | |
| E-mail | | | |
| PARTICIPANT/S | | | |
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Date: _____

Kindly fax / email your registration form before
For further information please call Eunice Ooi/ Celine Chang at 04-6407111/7112
Or email : euniceooi@dreamcatcher.asia/ celine@dreamcatcher.asia or fax: 04-6407110