

# Technical Visit to Silterra Malaysia Sdn. Bhd.

ELECTRONIC ENGINEERING TECHNICAL DIVISION



reported by  
Dr Huzain Fahmi bin  
Hawari,  
Committee Member,  
Electronic Engineering  
Technical Division.



*IEM participants checking out the state of the art foundry facility system.*

On 15 August, 2016, the Electronic Engineering Technical Division (eETD) arranged a technical visit to Silterra Malaysia Sdn. Bhd. in Kulim Hi-Tech Park, for 24 participants comprising IEM members from Kuala Lumpur, Kedah and Penang.

It started at 2 p.m. with an overview presentation on Silterra operations by its deputy director, Dr Mohd Azizi bin Chik, who was part of Silterra FAB start-up team.

## THE BACKGROUND

Silterra is a project of strategic national interest which promotes front-end semiconductor manufacturing and is a catalyst for high technology investments in Malaysia.

Started in November 1995 as Wafer Technology Malaysia Sdn. Bhd., it was renamed Silterra Malaysia Sdn. Bhd. in December 1999. It has served many top-tier global fabless design and product companies, covering the consumer electronics, communications & computing and mobile device market segments.

It offers CMOS design and a broad range of fabrication processes for Integrated Circuits

(IC) in Advanced Logic, Mixed Signal & Radio Frequency and High Voltage applications. Silterra provides complete design solutions for the creating of leading-edge products, optimised for its high-yielding manufacturing processes, through strategic partnerships with industry-leading Intellectual Property (IP) design library providers, Design Services and Electronic Design Automation (EDA) suppliers. Silterra also offers comprehensive in-house Failure Analysis (FA) services to high-tech companies and universities, performing detailed construction and failure analysis of nano-scale structures.

## TALK ON SEMICONDUCTOR FABRICATION IN SILTERRA

Dr Mohd Azizi bin Chik started the talk by sharing the semiconductor growth in Malaysia. "The future for semiconductor fabrication is healthy with the recent expansion of Infineon Kulim and the OSRAM plant will be established in Kulim Hi-Tech Park in 2017," he said.

It is interesting to note that wafer fabrication is a very complex process of 300-900 steps and more than 35% re-entrance to the same equipment at 10-18 times. To ensure

semiconductor manufacturing operation, selection of products to be processed and processing time have to be scrutinised.

Silterra's Industrial Engineering has also been working on manufacturing operation simulation modelling which can be used for continuous improvement strategy and manufacturing optimisation options.

Finally, Dr Azizi shared information about Silterra products and technology and how they end up in the final market. He also gave information on the company's current expansion activities before concluding the presentation.

During the Q&A session, IEM participants were interested to find out more about the nano-scale technology and devices fabricated at Silterra.

The technical visit ended with a tour of Silterra's facilities.

### **INTRODUCTION TO IEM TALK AND MEMBERSHIP DRIVE**

In conjunction with Engineering Week, eETD also conducted a parallel session titled Introduction to IEM, and a membership drive for some 80 Silterra engineers. It was conducted by Ir. Bernard Lim Kee Weng. ■



*Silterra engineers attending the IEM talk conducted by Ir. Bernard Lim.*