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# Heong Chee Meng 向志明



## MAJOR PROJECTS

### **Klang Valley MRT 1 (SBK Line) — Remote Control (SCADA) System for 210 escalators over 24 stations**

2013–2017. Modbus-based SCADA with browser-based HMI (supplied by main contractor). Includes remote start/stop and error monitoring. Includes DevOps-style deployment without increasing R&D headcount. Project completed ahead of schedule.

## EXPERIENCE

### **MS Elevator, Prai — R&D Assistant General Manager**

Nov 2009 - PRESENT

In charge of New Product Development for elevators, escalators and related products for Toshiba CV300 series, MCB2060GL serial and MS68 series. Manages several development teams and reports directly to Group CEO.

### **MS Systems Software, Prai — R&D General Manager**

2012 - PRESENT

In charge of New Product Development. Products include controller software MCB2060GL series elevator, Destination Control System for Toshiba elevators, BACnet/Modbus Elevator/Escalator Remote Monitoring & Control System for MRT escalators. Currently working on IoT for Escalators & Elevators Maintenance including Data Mining. Manages several development teams and reports directly to Group CEO. Architect and Lead Developer.

### **ON Semiconductor, Seremban — Senior Staff Engineer**

2000 - Oct 2009

Development of electronics & software for semiconductor assembly equipment, e.g., semiconductor parametric testers, wire-bonders, die-attach, etc



捷运职员亲切的向乘客派发宣传单，欢迎他们首日免费使用捷运服务。（图：星洲日报）

## SKILLS

Low-cost rapid product development.

Training R&D teams, succession planning.

Rapid Prototyping, especially for Internet of Things (IoT) for Industry, e.g. HTML5, Android Apps, LAMP Stack, containerization(docker), Amazon AWS

Embedded Linux development since 1995: kernel, and device drivers.

DevOps, especially in Product Deployment

Industrial/Commercial embedded controllers, firmware, Industrial long-distance (incl wireless) signalling: TCP/IP, UDP, Modbus, RS-485, RS-232C

## **Motorola, Seremban — Senior Electronics Engineer**

1994 - 2000

Joint development (with Philips Semiconductor, Nijmegen) of electronics & software for automated factory (reel-to-reel) semiconductor assembly equipment, e.g., semiconductor parametric testers, wire-bonders, die-attach, etc

## **EDUCATION**

### **Universiti Malaya, Kuala Lumpur — B. Eng(Elect) Hons, 2nd Upper**

1981 - 1985

Electronics and control theory as electives, graduated with Honours, 'A' for thesis.

## **Projects**

### **Quill Sentral — Destination Control System**

2012-2015 DCS for 28 Toshiba CV300 elevators. Improved performance 48% enabling customer to reduce total elevators from 32 to 28. Features MyKad-based passenger access control, touch-screen multimedia interface. Smartphone-compatible. Remotely-maintained IoT capability

### **MCB2060GL — Elevator Controller Software**

2012-2014 Asymmetric Multiprocessing C-language for the 32-bit NEC 70F3107. Inverter driven Servo PMSM Traction Machine, 4-Car Group, Battery-backed Automatic Rescue. Full regulatory compliance, backwards-compatible. 800 units produced, also exported to Myanmar, Indonesia, & Bangladesh, e.g., IOI Boulevard

### **FETTest 20% Speedup — FETTest Parametric Semiconductor Tester Sustained 20% Speedup**

2006-2009 Achieved using only software, and replacement of embedded PCs. Used novel methods like Virtual Machines to maintain compatibility. VMs are commonplace today, but not when used to drive

## **IEEE Technical Papers**

**Sustainable Speedup of Semiconductor Manufacturing Legacy Linked Diebond and Wirebond Systems EMAPS 2009**

**Sustainable Speedup of a Legacy Semiconductor Manufacturing Parametric Test System EMAPS 2009**

**Enabling recipe automation for non SECS/GEM semiconductor assembly machines EMAPS 2007**

## **LANGUAGES**

Written & Spoken: English, Bahasa Melayu. Spoken: Cantonese, Hokkien, Hakka, Dutch



high-speed IO. Run rate is in tens of millions a year.