



# The Institution of Engineers, Malaysia

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## TALK ON

### “Railway Signalling Overview and Its Application in Malaysia”

Organised by the Mechanical Engineering Technical Division, IEM  
BEM Approved CPD/PDP Hours: 2 Ref No: IEM16/HQ/435/T

Date : 2 November 2016 (Wednesday)  
Time : 5.30 pm – 7.30 pm (Refreshments will be served at 5.00pm)  
Venue : C&S & TUS Lecture Room, 2<sup>nd</sup> Floor, Wisma IEM, Petaling Jaya, Selangor  
Speaker : Ir. Shahrizaman bin Zamhury

#### SYNOPSIS

Railway Signalling is one of the most important aspects in systems engineering that ensures trains are running safely on railway track. The talk will provide the participants the basic of signalling history starting from 1860's Mechanical Signalling, multi-aspect signalling, computer based interlocking until the current Communication Based Train Control (CBTC) technology. Among the subjects to be presented are components of signalling system such as train detection (track circuit, axle counter), point operating mechanism, interlocking (mechanical, relay based and computer based interlocking), automatic warning system (AWS), train protection warning system (TPSW), fixed block signalling system, signalling design principles, braking rates, braking distance, headway, headway capacity, points and junctions and moving block signalling system including the grades of automation CBTC system.

The presenter will also explain the relationship between headway and train capacity from a given projected passenger ridership list. Types of technology used in urban rail and heavy rail in Malaysia will also be presented in the talk.

#### BIODATA OF SPEAKER



Ir. Shahrizaman started his career in railways since joining KTM Berhad in 1993 as a signal and communications engineer in the first KTMB's Double Track Project (Rawang - Seremban and Sentul - Pelabuhan Klang lines).

He joined PUTRA Sdn Bhd (nka RapidKL's Kelana Jaya Line) in 1995 and was part of the pioneer team in Operations & Maintenance organization when LRT2 started its service operations in 1998. In 2007, he joined RapidKL's Project Group for coordinating and monitoring the activities related to Fleet Expansion Project which involves in the procurement of additional 35 trainsets and upgrading of existing wayside systems equipment. Between 2012 and 2013, he led Prasarana's E&M System Works (Signaling, Power System, Trackwork and Communications) project team for the Kelana Jaya's Line Extension Project.

In 2014, he led Prasarana Integrated Management Engineering Services (PRIME) CAPEX Team for upgrading of wayside signaling & communication beside working in the early phases of a new Light Rail Transit Line 3 (LRT3). He was also involved in the pre-tender stage works for LRT3 such as conducting feasibility studies, determining systems requirement, preparing operational objectives & requirement, preparing Railway Scheme and also tender for Project Delivery Partner.

He started to join PRIME Consultancy as the Head of Engineering & Technical Support Section since middle of 2015 and have worked to provide engineering and technical support services locally, regionally and internationally (mainly in the Middle East).

Ir. Shahrizaman obtained his Bachelor's Degree in Electrical Engineering from Lamar University, Texas, USA in 1990. He is a Professional Engineer registered with Board of Engineers Malaysia (BEM), a Corporate Member of Institution of Engineers Malaysia (IEM), a Member of UK based the Institution of Railway Signal Engineers (IRSE) and currently as a Committee Member for IRSE Malaysian Section. He is currently part of Working Group Committee members organised by SPAD for developing railway signalling and communications standards in Malaysia.

**Ir. Dr. Kannan M. Munisamy**  
Chairman  
Mechanical Engineering Technical Division, IEM

#### ANNOUNCEMENTS TO NOTE:

- Preferential admission to talk shall be accorded to IEM members (pre-registration and online registration are NOT required). Telephone and/or fax reservation will NOT be entertained.
- Non members may also attend the talk but will need to pay a registration fee of RM50 and an administrative fee of RM15. GST is inclusive.
- For members of affiliated organisations, there will be no registration fee payable. However, they are requested to produce their membership card as proof of membership. For the list of affiliated organisations, please refer to IEM website at [www.myiem.org.my](http://www.myiem.org.my) under International/MoU.
- Limited seats are available on a "first come first served" basis (maximum 100 participants).
- IEM members are required to produce membership cards for confirmation of attendance (CPD purpose).
- Latecomers will not be allowed to enter if the lecture hall is full nor be entitled to CPD.
- ***IEM members who fail to produce their membership cards will be charged a fee of RM25.00. GST is inclusive.***

#### ADMINISTRATIVE FEE

- Kindly be informed that an administrative fee of RM15 is payable for talks organized by IEM. GST is inclusive.
- The fee would be used to cover overhead costs, building maintenance expenses as well as contribute to Wisma IEM Building Fund.
- All contributions will be deeply appreciated by IEM.
- Student Members are however exempted.

#### PERSONAL DATA PROTECTION ACT

I have read and understood the IEM's Personal Data Protection Notice published on IEM's website at <http://www.myiem.org.my> and I agree to IEM's use and processing of my personal data as set out in the said notice.

#### CPD HOURS CONFIRMATION

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