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Developing Curricula for Signaling and Communication Course at Malaysia Railway Academy (MyRA) through Industrial Collaboration Program

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Abstract : This paper presents the propose knowledge transfer program on railway signaling and communication by Original Equipment Manufacturer (OEM) Thales Portugal. The fundamental issue is that there is no rail related course offered by local universities and colleges in Malaysia which could be an option to pursue student career path. Currently, dedicated trainings related to the rail technology are provided by in-house training academies established by the respective rail operators such as Malaysia Railway Academy (MyRA) and Rapid Rail Training Centre. In this matter, the content of training and facilities need to be strengthened to keep up-to-date with the dynamic evolvement of the rail technology. This is because rail products have evolved to be more sophisticated and embedded with high technology components which no longer exist in the mechanical form alone but combined with electronics, information technology and others. These demand for a workforce imbued with knowledge, multi-skills and competency to deal with specialized technical areas. Talent is needed to support sustainability in Southeast Asia. Keeping the above factors in mind, an Industrial Collaboration Program (ICP) was carried out to transfer knowledge on curricula of railway signaling and communication to a selected railway operators and tertiary educational institution in Malaysia. In order to achieve the aim, a partnership was formed between Technical Depository Agency (TDA), Thales Portugal and MyRA for two years with three main stages of program implementation comprising of: i) training on basic railway signaling and communication for 1 month with Thales in Malaysia; ii) training on advance railway signaling and communication for 4 months with Thales in Portugal and; iii) a series of workshop. Two workshops were convened to develop and harmonize curricula of railway signaling and communication course and were followed by one training for installation equipment of railway signaling and Controlled Train Centre (CTC) system from Thales Portugal. With active involvement from Technical Depository Agency (TDA), railway operators, universities, and colleges, in planning, executing, monitoring, control and closure, the program module of railway signaling and communication course with a lab railway signaling field equipment and CTC simulator were developed. Through this program, contributions from various parties help to build committed societies to engage important issues in relation to railway signaling and communication towards creating a sustainable future.

Keywords : knowledge transfer program, railway signaling and communication, curricula, module and teaching aid simulator
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