

โครงการพัฒนาระบบค้นหาและแจ้งเตือนสิ่งกีดขวางข้างหน้าขบวนรถไฟ

Development of Obstacle Detection and Warning System for Train

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Collaborative agency	State Railway of Thailand (SRT) Thai-German Graduate School of Engineering (TGSS) King Mongkut's University of Technology North Bangkok
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Nowadays the development of technology localization for transportation is important for country's development according to "Thailand's 20 years Strategic Plan of Transportation Development" (2560 – 2579). The State Railway of Thailand (SRT) has placed an importance on accident issue of Thailand's locomotive transportation, requiring a technology solution for the frequent collisions of the trains. Collisions usually occur when the visibility is poor such as in conditions of heavy rain, fog, smog, or nighttime. Since the conventional obstacle detection by train's driver is not sufficient, the alternative method of obstacle detection by the technology that can operate in all weather conditions especially the heavy rain can reduce the loss of life and property from the accidents. Then the X-Band RADAR (Radio Detection and Ranging) technology is one of the best choices of solutions as a collision avoidance system with the appropriate X-Band frequency of 8-12 GHz can detect the small objects down to 4 centimeters in size.