

## **Application of TRANSYT-7F on signalized road junction networks in Shah Alam and Petaling Jaya**

### **Abstract**

Traffic Network Study Tool Version 7F software (TRANSYT-7F) is one of the traffic programs used in analyzing and evaluating the performance of road junction networks based on simulation and signal timing optimization. This paper describes the study conducted during evening peak periods in two cities in Malaysia: Shah Alam and Petaling Jaya. The main objectives of this study are to evaluate and compare the performance of road junction networks in Petaling Jaya and Shah Alam cities using TRANSYT-7F software, the performance of road networks such as; Total Travel Times (TTT), Average Delays (AVD), System Wide Travelling Speed (SWTS), Operating Cost (OPC), Level Of Service (LOS), Fuel Consumption (FUC) and Performance Index (PI). The results obtained have shown a clear indication that the software is able to improve the performance of road junction networks in Shah Alam and Petaling Jaya. TRANSYT-7F had increased the SWS in rush hours in various study fields, where the percentage of improvement in the Shah Alam city is up to 23% as well as the Petaling Jaya city is up to 41%. On the other hand, TRANSYT-7F had reduced the FUC up to 33% in Shah Alam and 54% in Petaling Jaya. Moreover, a reduction of PI is nearly 16% and 33% in both cities respectively.