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| Author(s) Name | Kamruddin Nur | | |
| Contact Email(s) | kamruddin@aiub.edu | | |
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| Abstract |  |
| A centralized road traffic management system aims at managing all traffic lights of a geographical area concurrently in order to minimize overall traffic congestion. An Automated Centralized Road Traffic Control System (ACRTCS) involves detecting, communicating and managing all traffic lights of the particular geographical area to maintain least traffic congestion at all intersections. By nature, Traffic intersections are discrete, partially observable, stochastic, episodic, dynamic and continuous. For a high volume traffic intensive geographic area, a robust, stable and reliable traffic control system is scarce. This paper presents a formal verification of the Petri Net design model based on requirements of a high quality automated centralized traffic control system using Petri Net simulator HPSim, which detects traffic volume at different traffic intersections, communicates with other intersections and finds the best traffic routing in a busy geographic area. | |