

Abstract

Traffic light is a signaling tool used in intersection to manage the traffic flow through intersection. Traffic light has critical functions, so it needs a perfect ways to capture requirements, with formal method.

Formal method can produce specification that un-ambiguous, consistent, and complete since it uses mathematical description in each development process. RAISE (Rigorous Approach to Industrial Software Engineering) is one of a few formal method that can be used to do specification, verification, and translation. Specification in RAISE is RSL (RAISE Specification Language). Main purpose of RSL is giving help in ways to do huge case and modular specification, and providing paradigms like applicative, imperative, and concurrent.

This final project specified itself to an analytical part of block condition and safety that can be happened in a traffic light control system. The data of this final project is from observation in Buah Batu – Soekarno Hatta intersection, at Bandung. From the result experiments, the highest block condition happened 169 times in one cycle busy traffic, and also produce an ideal block condition: 0 times in quiet traffic.

Keywords: RAISE, RSL, formal method, traffic light, block conditon