

Abstract

Communication protocols are used to allow secure communication over the network. The correctness of protocol has been achieved through rank function. Secure socket layer (SSL) protocol is used for the communication it works on the protocol layer so that the intruder could not be able to attack the message. The communication between sender and receiver is done by encryption keys to ensure secure end to end communication. Protocols processes and its verification is done by using CSP Language which is a well known language for protocols modeling and verification. Rank Function is used to prove the authenticity of the Secure Socket Layer (SSL) protocol. Process Analysis Tool Kit (PAT) Model Checkers used to analyze and simulate railway system process traces which is taken as case study as it is the most crucial computerize communication systems all over the world to ensure safe traveling.