Abstract

Cyber Physical Systems(CPS) consider a complex system, which is tightly coupled with the environment.In State of the art there is lot of formal aspects of CPS are contributed, but the reliability and security aspects of CPS still equipped with the lack of rigorous testing.
In this work, we verified some more features of CPS like autonomous and complex system of Plane landing behavioral features encapsulate the discrete and continuous real time system modeling. We worked on the timing constraint of landing gear system particularly opening and closing in safe manner. We have extended the previous work by adding time constraints to make system more safe and reliable using high level petri net. Our modeling approach differ from the other system as it is integrated with timing constraints to make system more safe and reliable. In this system state space analysis is more refined and recursion of the system is modified using model simulation for maximum no of iterations.In implementation section, the method is applied to an aeroplane landing detection and control system by the use of high level Petri net models, three complementing analytical approaches are used:imitation,analyzing reachability tree,and verifying model checking. Our technique is sustained by tools to model development and analysis techniques.