

1. Abstract

There has been a rise in using Mixed criticality for designing Real time systems with safety criticality over the recent years. These safety criticality systems include like Avionics, Automotive, Unmanned Ariel Vehicles. Applications with varying functionalities, each functionality having different criticality (or significance) are implemented upon a shared platform. Due to uncertainties in estimating the execution time and different levels of task importance, multiple worst case execution times are considered. This paper discusses the motivation for mixed criticality systems and the performance evaluation of two different scheduling algorithms, Global and MCF for multiprocessors with sporadic task-set. Global is based on fp-EDF and EDF-VD, a preemptive uniprocessor mixed criticality scheduling algorithm and MCF is based on fluid scheduling model. Results show that MCF outperforms Global.