

Cost Model
Ankur Agarwal, Ravi Shankar
Center for System Integration, FAU

Demo

We demonstrate the need for concurrency modeling by designing a communication sub-system - component based NOC implementation. For designing a communication sub-system we first designed all the components of the sys-system. We failed repeatedly while trying to integrate these components. Primary reasons for integration failures were deadlocks, livelocks and resource starvation among concurrent execution of processes.

We redesigned our components based on concurrency. Concurrency was modeled with finite state processes (FSP) – A high level, highly abstract concurrency modeling language. These concurrency constructs were then verified with labeled transition state analyzer (LTSA) for possible concurrent violations. After implementing concurrency constructs we remodeled our components. They were then easily integrated to form a final communication sub-system.