

From: Mark Sandstrom

Title: Hardware Automation of Scheduler, Placer, Inter-Task Communications and IO System Functions for Manycore Processors Dynamically Shared among Multiple Applications

Abstract: To enable maximizing on-time processing throughput across multiple concurrent applications on dynamically shared manycore processors by eliminating system software overhead, we present a hardware automation of system functions, including allocating processing cores among applications based on their processing load variations and contractual entitlements, prioritizing and mapping application task instances for execution, accordingly dynamically configuring communications and memory access, and on programmable hardware, execution core types.

Length: 30 min