

Abstract

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New Techniques for Improving Utilization of Dynamically Reconfigurable Devices in On-line and Real-time Environment

Dynamically reconfigurable devices can change their functions and connection within the computation operation. We introduce a new heuristics for moving running tasks on the reconfigurable chip to collect contiguous empty space for the incoming tasks. we derive a new measure for the area fragmentation of the chip resource which reflects the area fragmentation state of the reconfigurable chip. We also introduce a task placement method, Fragmentation Aware Placement (FAP), based of the introduced area fragmentation measure.