Optimization of Multiprocessor Scheduling using Genetic Algorithm

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Abstract

Multiprocessor architectures are becoming more attractive for embedded systems, primarily because major processor manufacturers like Intel and AMD are designing cost effective processors even for personal computers and laptops. This makes such architectures very desirable for embedded system applications with high computational workloads, where additional, cost-effective processing capacity is often needed. This increased usage of multiprocessor attracted the researchers for multiprocessor scheduling problems. Multiprocessor scheduling is a NP hard problem. In this paper a Genetic Algorithm (GA) based multiprocessor scheduling algorithm is proposed whose implementation is simple and the obtained results are optimal for the studied set of problems.

References

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Index Terms

Computer Science  Algorithms

Keywords

Multiprocessor Architecture  Multiprocessor Scheduling  NP Hard  Genetic Algorithm