Abstract

This paper is concerned with a Genetic Algorithm based scheduling an Input-Queued Switch. This paper uses binary encoding of real parameter vectors as chromosomes, as genes and as alleles. In this paper we investigate that a scheduling of IQ with GA we obtain feasible solutions. Initial Population is generated by permutation method and fitness was calculated by weighted sum of the packet arrivals. The tournament method of parent’s selection and single point crossover point is adopted. It is tested with 4 X 4 Input Queued switch. The result shows that the GA has been successfully applied to scheduling of IQ switches. Experimental results are also shown that GA based scheduling of an IQ switches have better performance in throughput and low latency.

References

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Index Terms

Computer Science
Artificial Intelligence
Keywords
Genetic Algorithm  Input-Queued Switch  Scheduling  Tournament Selection
Crossbar-fabric