Abstract

Interconnection Networks are playing a vital role in parallel processing. The speed of hardware has become proportional to response time of electronic circuits. But requirement for more reliability, bandwidth, processing power and throughput is increasing constantly. This paper introduces a new Multistage Interconnection network named as irregular Modified Alpha Network (Modified ALN), which is a modified form of Alpha network. This network acquires increased values of performance parameters as compared to other existing MINs like Alpha, Quad Tree and Augmented Shuffle Exchange Network.

Reference

- P K Bansal, Kuldip Singh and R C Joshi, "Reliability and Performance analysis of a Modular Multistage Interconnection Network", Microelectron, Reliable, printed in Great Britain, Vol 33, No 4, pp 529-534.

Index Terms

Computer Science
Parallel Processing

Key words

Multistage Interconnection Network

design of new Network

Redundancy Graph

Routing
Fault Tolerance

permutation passable

Experiment results

Bandwidth

Probability of Acceptance

Processor Utilization

Processing Power

Throughput

Conclusion