Abstract

This paper proposes a new cube based topology called the Folded Metacube (FMC). The new topology has attractive features such as reduced diameter, cost and improved broadcast time in comparison to the Metacube. Two separate routing algorithms one-to-one and one-to-all broadcast are proposed for the new network. Performance analysis such as cost effectiveness, time-cost-effectiveness and reliability of the new topology are carried out. The proposed
network exhibits noticeable improvement in terms of the topological parameters and is superior to the other existing cube based networks.

Reference


Index Terms
Key words
Interconnection network  Folded hypercube
Metacube
Routing
Performance analysis
Reliability analysis