

Adaptive routing algorithm in x-Folded TM topology

ABSTRACT

In recent days, more complicated interconnection topologies have been replaced with previously simple topologies that also exhibit high performance. x-Folded TM network is a TM network that is folded according to the imaginary x-Axis in interconnection networks. For a x-Folded TM network, there is a reduction in the average distance and diameter which corroborates the efficient performance. Also many routing algorithms can be applied to interconnection network for the efficient use of network resources. This paper presents the effectiveness of the x-Folded TM network with the average latency and network throughput under the adaptive routing algorithm to improve dynamic communication performance. We evaluate the communication performance with simulating the topology under the adaptive routing algorithm. It is found from the result that the performance of a x-Folded TM network has been improved compared with other topologies.

Keyword: Adaptive routing; Diameter; Interconnection network; Latency; x-Folded TM topology