DESIGN OF DATA PATH CONTROLLER IN AN INTERCONNECTION NETWORK

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ABSTRACT

The paper presents the modeling of data path controller and its application in an interconnection network in 2-D and 3-D mesh topology. These controllers are required to route the signal from source to destination nodes in a network. The link would be wired, wireless or optical but it uses the path controller at the junction to route the signal to various nodes in the network. Here, all the input and output ports are buffered and wait for the controller. Data path controller logic is different from the traffic signal controller due to more robust and efficient logic for high speed data transfer in between data buses. Such architecture is required in a massive interconnection network to share resources in between processing nodes.

KEYWORDS: Data Path Controller, Traffic Signal Controller, TSP, Interconnection Network and Topology