The Design and Implementation of an Enhanced 2D Mesh Switch

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Abstract : In this paper, we propose the design and implementation of an enhanced wormhole virtual channel on chip router. It is a heart of a mesh NoC using the XY deterministic routing algorithm. It is characterized by its simple virtual channel allocation strategy which allows reducing area and complexity of connections without affecting the performance. We implemented our router on a Tezzaron process to validate its performances. This router is a basic element that will be used later to design a 3D mesh NoC.

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