Title (en)
CELL-BASED SWITCH FABRIC ARCHITECTURE ON A SINGLE CHIP

Title (de)
ZELLEN BASIERTE VERMITTLUNGSTELLENARCHITEKTUR AUF EINEM EINZELNEN CHIP

Title (fr)
ARCHITECTURE DE MATRICE DE COMMUTATION BASEE SUR DES CELLULES

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Application
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Abstract (en)
[origin: WO02098066A2] A switch fabric implemented on a chip includes an array of cells and an I/O interface in communication with the cells for permitting exchange of data packet between the cells and components external thereto. Each cell includes a transmitter in communication with the I/O interface and in communication with every other cell of the array, the transmitter being operative to process a data packet received from the I/O interface to determine a destination of the packet and forward it to at least one cell of the array selected on a basis of the determined destination. Each cell further includes plural receivers associated with respective cells from the array, each receiver being in communication with a respective cell allowing the respective cell to forward data packets to the receiver, where the receivers are in communication with the I/O interface for releasing data packets thereto. In this way, the transmitter in a given cell functionally extends into those cells where dedicated receivers are located, reducing transmitter memory requirements and allowing the switch fabric to be implemented on a single chip.

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