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(54) Title: A SEMI-CONDUCTOR INTEGRATED CIRCUIT

(57) Abstract

A semi-conductor integrated circuit, as made, comprises an area thereof formed with a plurality of cells cc, each cell having a plurality of resources which comprise storage/programming resources and functional resources. The functional resources comprise at least one of routing resources and logic function resources according to the cell type. As made each cell has a finite number of resources in it. According to one aspect, the resources available to one cell are augmented by utilising resources from at least one other cell. This is achieved without preventing the donor cell from functioning independently. Also described is a hierarchical routing structure disposed in successive layers. The cells are disposed in a matrix array of cells divided into zones. There is a plurality of zones in the array and a zone porting arrangement for each zone. According to another aspect of the invention the successive layers of routing resource comprises zone interconnect comprising local direct connection paths connecting at least some of the cells with some other cells, and medium connection paths extending from the zone porting arrangement and selectively connectable with at least some of the cells in a zone; and global connection paths having selectable connections with the zone porting arrangement of each zone; and further comprising one or more further successive levels of routing resource having a respective porting arrangement to connect that level of routing resource with the preceding level of routing resource.

