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(54) Title: PACK AND UNPACK NETWORK AND METHOD FOR VARIABLE BIT WIDTH DATA FORMATS

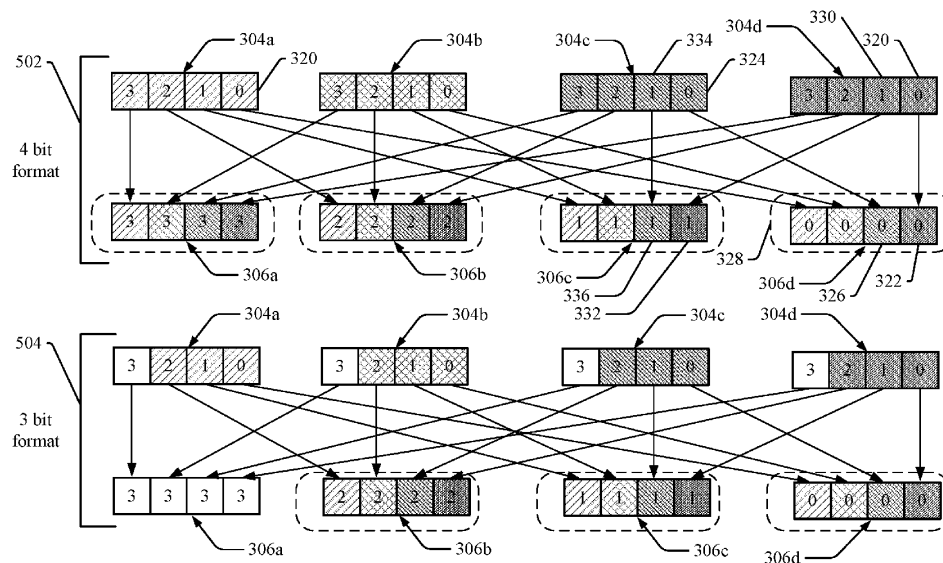


FIG. 5

(57) Abstract: Disclosed are methods and apparatus for bit packing data having various bit widths in a computer system. The methods and apparatus utilize a fixed bit packing or unpacking network that is configured to pack or unpack data bits of a number of different bit widths from a first number of bit locations to a second number of bit locations in the computer system. The network is specifically configured to pack bits stored in a same bit slot position in respective bit locations of the first number of bit locations by routing the bits into bit slots of a same bit location in the second number of bit locations to form bit bundles in respective ones of the second number of bit locations. Use of a fixed packing network affords optimal matching of bit width to an application that minimizes cost, area, and power, as well as decreasing or minimizing latency.

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