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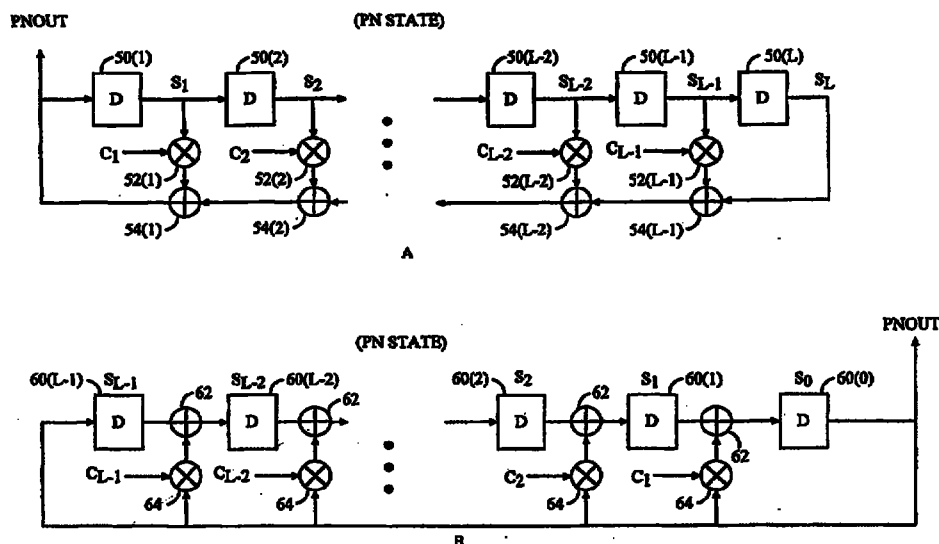
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(54) Title: CODING SYSTEM HAVING STATE MACHINE BASED INTERLEAVER



(57) Abstract

The present invention is a novel and improved technique for performing coding with particular application to turbo, or iterative, coding techniques. In accordance with one embodiment of the invention, interleaving is performed by generating the address of a memory using a PN state generator. Data is written into a memory (26) in sequential order, and then read out using addresses specified by the PN state generator. To deinterleave, the interleaved data is written into a memory (16) using addresses specified by the PN state generator. To deinterleave, the interleaved data is written into a memory (26) using addresses specified by the PN state generator, and then read out in sequential order. A set of PN state generators that provide excellent coding performance is provided.