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RESEARCH ARTICLE

A Novel Design of Reversible Universal Shift Register

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Abstract: Reversible logic gates provide power optimization which can be used in low power CMOS design, optical computing, quantum computing and nanotechnology. This paper propose a new 4*4 reversible RR gate that works as a reversible 4:1 multiplexer and has a reduced quantum cost. A novel design of Reversible Universal shift register using RR gates with reduced delay and quantum cost is proposed.

Keywords: Flip Flop, Multiplexer, Reversible logic Gate, Garbage Output, Quantum Cost

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