Abstract

Reversible logic has become immensely popular research area and its applications have spread in various technologies for their low power consumption. In this paper we proposed an efficient design of random access memory using reversible logic. In the way of designing the reversible random access memory we proposed a reversible decoder and a write enable reversible master slave D flip-flop. All the reversible designs are superior in terms of quantum cost, delay and garbage outputs compared to the designs existing in literature.

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Index Terms

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Flip-flops  Garbage Output  Random Access Memory  Reversible Logic  Quantum

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