Abstract

Most traditional computers lose information during the process of computation. Reversible computation is different from the traditional computation in that it preserves information while manipulating it. Energy dissipation is proportional to the number of bits lost during computation. Power dissipation can be negligible if overall design consisting of reversible logic only. The area of reversible logic has received great importance in recent years because of its beneficial feature of reduction in power dissipation. In this design different types of combinational circuit i.e. reversible multiplexer (RM), reversible de-multiplexer (RDM), reversible encoder (RE) and reversible decoder (RD). This paper represents the new methods and approaches to implement the components of the processor and modified design is to utilize advantages of existing techniques and at the same time overcoming drawbacks.

References


Index Terms

Computer Science Circuits and Systems

Keywords

CMOS Technology, Reversible Gate, Multiplexer, Encoder