Abstract

In the recent era, Reversible computing is a growing field having applications in nanotechnology, optical information processing, quantum networks etc. In this paper, the authors show the design of a cost effective reversible programmable logic array using VHDL. It is simulated on Xilinx ISE 8.2i and results are shown. The proposed reversible Programming logic array called RPLA is designed by MUX gate & Feynman gate for 3- inputs, which is able to perform any reversible 3- input logic function or Boolean function. Furthermore the quantized analysis with comparative finding is shown for the realized RPLA against the existing one. The result shows improvement in the quantum cost and total logical calculation in proposed RPLA.

References

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