Abstract

All reversible circuits have an intrinsic advantage over traditional irreversible circuits, because they reduce power consumption. Due to this, reversible circuits have been a source of constant excitement and great enthusiasm in the scientific community. Reversible logic is highly useful in nanotechnology, low power design and quantum computing. This paper proposes a design for a faster adder using reversible gates.

References

1. Laszlo B. Kish, Texas A&M University, Department of Electrical Engineering, College Station, TX 77843-3128, USA Received 16 July 2002; received in revised form 19 September 2002; accepted 19 September 2002, Communicated by C.R. Doering, “End of Moore’s law: thermal (noise) death of integration in micro and nano electronics.”
2. Trevor Pering, Tom Burd, and Robert Brodersen University of California Berkeley,
Electronics Research Laboratory, “Dynamic Voltage Scaling and the Design of a Low-Power Microprocessor System”

12. Asher Peres, “Reversible logic and quantum computers”, The American Physical Society

Implementation of a Fast and Power Efficient Carry Select Adder using Reversible Gates


Area, Delay and Power Comparison of Adder Topologies. R.UMA, Vidya Vijayan, M. Mohanapriya, Sharon Paul.

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