Abstract

This paper presents the novel design of half adder and full adder using reduced number of QCA gates. This design utilizes the unique characteristics of QCA to design a half and a full adder. The basic component of QCA is a cell consisting of two electrons and four logically interacting quantum dots. Simulation indicates a fast, efficient and very attractive performance (i.e. complexity, area and delay).

References

A Novel Design of Half and Full Adder using Basic QCA Gates

928-930,August 1997.

Index Terms

Computer Science  

Circuits And Systems

Keywords

QCA  

half adder  

full adder