Abstract

In this paper we have discussed various memory architectures for Quantum Dot Cellular automata. New architectures have been proposed and their comparison has been done on the basis of area and latency. A protocol for using the serial memory has been outlined. A hybrid memory has been proposed. It is shown that the hybrid memory can be used as a tradeoff between area advantage of serial memory and latency advantage of parallel memories to get an optimized result.

References

- M. Macucci, 2006, Quantum Cellular Automata, Imperial college Press.
Quantum Dot Cellular Automata Memories

- http://www.mina.ubc.ca/qcadesigner, QCADesigner documentation, consulted on 20 Nov. 2011

Index Terms

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