In this paper, two general architectures of Carry Select Adder (CSA) have been introduced for high speed addition. These CSA architectures utilize the hybridized structure of Carry Lookahead Adder (CLA) and Ripple Carry Adder (RCA). In these architectures the critical path delay has been reduced by reducing the number of multiplexer stages. The proposed designs are compared with regular CSA based on RCA. The second architecture showed 11.3%, 3.9% improvement in delay and an overhead of 13% in area.
A Novel Ripple/Carry Lookahead Hybrid Carry Select Adder Architecture

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Index Terms

Computer Science

Architecture

Keywords

Carry Select Adder  Carry Lookahead Adder  Ripple Carry Adder  hybrid Adder