Abstract

This work presents a performance estimation of classified n-bit binary adders. Since gate count and gate level depth directly related to speed, area, and power consumption of the adder circuit, therefore they are adopted as performance criteria. 2-inputs gate model is adopted as basic unit for the performance evaluation. The main focus of the work on carry ripple, carry lookahead, and multilevel carry select adders. The study showed that ripple carry adder is the best among other adders from area point of view. Whereas carry lookahead and multilevel carry select based on carry lookahead adders are the best from delay point of view. For the area delay product, 3 levels carry select adder based on carry ripple showed that it is the best.

References

- Shailesh Siddha, Area Efficient 4-Input Decimal Adder Using CSA and CLA, Journal of
Performance Estimation of n-bit Classified Adders


Index Terms

Computer Science
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Keywords
Performance Estimation of n-bit Classified Adders

Performance estimation  gate level depth  gate count  delay  area  power consumption
ripple adder
carry ahead adder
multilevel carry select adder.