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2.12 Block Diagram of Sign-Magnitude Addition/SubtractionReferences; 2.13 Sign-Magnitude Addition/Subtraction; Problems; 3 High-Speed Adder; 3.1 Conditional-Sum Addition; 3.1 Conditional-Sum Addition; 3.2 Carry-Completion Sensing Addition; 3.2 Conditional-Sum Adder; 3.3 Generation and Transmission of Carries; 3.4 Construction of Carry-Completion Sensing Adder; 3.3 Carry-Lookahead Addition (CLA); 3.3.1 Carry-Lookahead Adder; 3.3.2 Block Carry Lookahead Adder; 3.5 Carry-Lookahead Adder; 3.6 Block Carry-Lookahead Adder; 3.4 Carry-Save Adders (CSA); 3.7 Carry-Save Adder; 3.8 Carry-Save Adder Tree
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4.3 Unsigned Number Multiplication

Sommario/riassunto

Arithmetic and Logic in Computer Systems provides a useful guide to a fundamental subject of computer science and engineering. Algorithms for performing operations like addition, subtraction, multiplication, and division in digital computer systems are presented, with the goal of explaining the concepts behind the algorithms, rather than addressing any direct applications. Alternative methods are examined, and explanations are supplied of the fundamental materials and reasoning behind theories and examples.No other current books deal with this subject, and the author is a leading authority