Abstract

Computation using biological Deoxyribonucleic acid (DNA) strand is increasingly found to be a viable proposition. A unique generalized efficient algorithm for forming any Boolean circuit strand is proposed in this paper. The implementation of the Boolean circuit using the proposed algorithm is also presented. This Boolean circuit requires only one kind of bio-operation at each level. Further, this paper adopts a uniform representation for logical 0 and 1 for all Boolean circuit. Simulation to validate the efficient algorithm is also presented in this work.

Reference

An Efficient Algorithm for Constructing DNA Boolean Circuit


Index Terms
An Efficient Algorithm for Constructing DNA Boolean Circuit

Key words

Boolean circuit
DNA computing
Truth table
Traffic light signaling
Graph