

Future of Nanotechnology in Digital MacDraw

Authors : Pejman Hosseinioun, Abolghasem Ghasempour, Elham Gholami, Hamed Sarbazi

Abstract : Considering the development in global semiconductor technology, it is anticipated that gadgets such as diodes and resonant transistor tunnels (RTD/RTT), Single electron transistors (SET) and quantum cellular automata (QCA) will substitute CMOS (Complementary Metallic Oxide Semiconductor) gadgets in many applications. Unfortunately, these new technologies cannot disembark the common Boolean logic efficiently and are only appropriate for liminal logic. Therefore there is no doubt that with the development of these new gadgets it is necessary to find new MacDraw technologies which are compatible with them. Resonant transistor tunnels (RTD/RTT) and circuit MacDraw with enhanced computing abilities are candidates for accumulating Nano criterion in the future. Quantum cellular automata (QCA) are also advent Nano technological gadgets for electrical circuits. Advantages of these gadgets such as higher speed, smaller dimensions, and lower consumption loss are of great consideration. QCA are basic gadgets in manufacturing gates, fuses and memories. Regarding the complex Nano criterion physical entity, circuit designers can focus on logical and constructional design to decrease complication in MacDraw. Moreover Single electron technology (SET) is another noteworthy gadget considered in Nano technology. This article is a survey in future of Nano technology in digital MacDraw.

Keywords : nano technology, resonant transistor tunnels, quantum cellular automata, semiconductor

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