

A New Design for Molecular Processor

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Abstract

In this paper, it will be tried to propose a new design for a molecular processor. This design from molecular electronics theory has obtained.

Keywords: Molecular Electronics, RISC Architecture, Benzene Rings, Molecular Gates

1. Introduction

In this paper, I want to propose a new idea for a bio. Processor that will work on high speed. This processor theory will be on a hardware design idea. Explanation of this idea, from a basic computer architecture has been obtained. For more complex architecture, we will work on it.

2. Architecture of Basic Computer

• Processor Components:

1. Control Unit
2. Computing and Logic Unit
3. Addressing Unit
4. Memory Management Unit
5. Cache

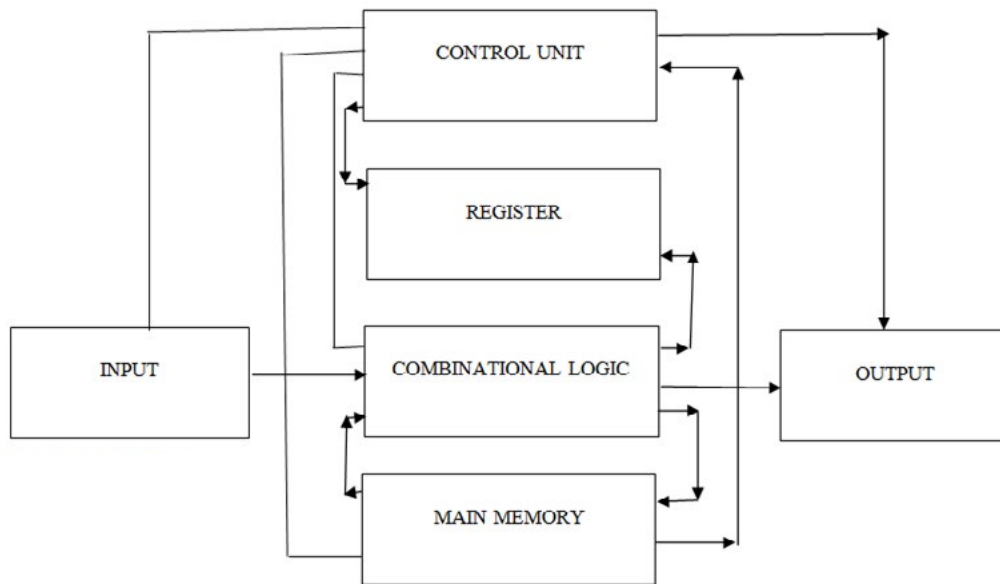


Figure 1: Processor Design

There are two types of control organization. Hardware control and micro-programmed control. In the hardware type, logic control circuits are implemented with gates, flip flops, decoders, and other digital circuits. There are two types of control organization. Hardware control and micro-programmed control. In the hardware type, logic control circuits are implemented with gates, flip flops, decoders, and other digital circuits.

In this design, due to the fact that all gates and circuits are hardware and molecular techniques are used, all gates are designed in the form of benzene rings, and in this way, with the help of benzene rings, all circuits are formed.

3. Architecture of Basic Molecular Computer

In basic computer design, there are the following hardware parts:

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1. Memory unit
 2. 9 Registers
 3. 7 Flip Flops
 4. Two decoders
 5. A 16-bit common bus
 6. Controlling the Logic of the Cosmos
 7. Collector (Logic Circuit Connected to AC Input)
- Processor commands are formed with information exchange with memory to LOAD, STORE which has a memory address and a address register. the computer control unit consists of 1-taking instruction from memory, 2- Decoding the command and 3- Execution.

Also, in my opinion a RISC architecture is proper for this design because the construction of RISC is based on hardware, the speed is more higher.

4. Result

My goal in this design will be hardware design, and I am dealing with most of the logic gates, and all logic gates are based on molecular benzene rings [1].

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1. Sergey Edward Lyshevski. (2007). "Nano and Molecular Electronics Handbook". *CRC Press*.

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