

Blue Brain: A Biological to Virtual Brain Transitional Approach

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Abstract. The power of eternity has created a most precious a human body that contains an auspicious element in it named as Brain that helps to control the complete human body making all the elements and parts of body to work and response according to the activities performed by the nerves present in the scalp of human body defined as human brain. The earlier aspect which is the fundamental institution build by almighty, Since there is a huge advancements in the field of technology, the scientist are trying to construct a instrumental concept that performs the activities similar to human brain, this concept is known as blue brain. It is considered as the brain present in the virtual form and it is made of artificial neurons. As it is a known fact that the working of brain gets drain due to the collapse of human body, hence there might be a necessity to store or retrieve the activities of human brain which might be consisting of vast knowledge for the benefit of human kind. This concept of human brain activities to be stored and later retrieve is called as Blue brain. The researchers are preparing a brain which will be identical to human brain in terms of its strength to feel, sense, predict, perform and process all the activities that are similar to human brain. In this paper, we try to illustrate the fundamental perception of virtual blue brain with its significance in the field of medical sciences, technology and its usage in knowledge sharing for the betterment of human life styles.

Key words: Virtual brain, blue brain, nanobots, neurons, synapses, RTneuron, biological

INTRODUCTION

A mathematical representation of human brain is created through inversed engineering by simulation of electronic chips which are build up at neural level, this concept helps to build a virtual brain is called as Blue brain. And it was enlightened at Swiss Federal Technological institute during the year 2005. Basically, the proposed framework was design to gain maximum knowledge about the electric activity of human brain, which leads to a better understanding about the perception and causes of brain illness and their respective treatments. The information data was collected by means of electrodes in the patch form which are identifiable under microscopes; it gave a glimpse of tissue like slices residing within the brain nerves, these collected data might be variant in size and types based on the neurons which helps in obtaining optimized neural models that collaborate to form an artificial network within the cerebral out layers.

[¹The first and foremost system created for the purpose of virtual brain simulation was introduced by IBM with the name “Blue Gene” which was later referred as blue Brain]¹. This model consists of customized components associated with neurons and neural layers. A simulator contains hundred columns of brain outer surface represented in form of minute circuits. Each level of simulation contains more than one million neurons and synapses. The above structure of simulation is similar to that of real tiny mammals whereas the simulation size of human brain consist of billions neurons that requires lot of conversion and process for recreation.