



Decode The Human Brain!

[BII] Biologically Inspired Intelligence

Understanding The Biological Ideal!

One of the big dreams of mankind is, to build an equivalent to the human brain. All today's computers are generally based on the theory of Konrad Zuse and John von Neumann. These are very clever formal data handling concepts. - But the human brain is not limited on formal operations. Therefore, we believe that there must be an improved way of data handling. If we like to build a biologically compatible machine with the same abilities like our brain, we have to copy exactly the biological situation.

To date, science has endeavored to understand this process by analyzing the reactions of the brain and the given neural structure, and then recording the communication stimuli. But in practice, the brain structure does not represent a fixed information pattern. Similar information patterns, in different brains, may be represented in totally different neural structures. These structures can virtually change with every input of data or even previously known data can be reorganized.

Understanding The Brain Functions

The goal of our research was to emulate the ability of the brain to think as realistically as possible (biologically inspired intelligence) for recreating the same ability in a computing system. By understanding the functions of the elements and pathways in the neocortex the software now has the capability to process similar complex analyses and problems as humans.

Cracking the Neural Code

The secret is to find and understand the genetic algorithm (GA). This algorithm not only describes why and how the cells (neurons) fire, but also successfully interpret the actual meaning of the stimuli e.g. can differentiate the various meanings of one identical expression depending on its usage.

Decoding The Neocortical Information Processing Is The Key!

We must build an environment, where neurons (cells) follow the same specific set of rules as our biologically ideal does. We need to transfer the why and how they fire into a generic mathematic formula. This genetic algorithm, in combination with the HSM (holosemantic meshwork), is the key to building intelligence in computing. The experts of semantic system ag have researched 20 years, in order to crack the code!