Neuro-Computer Interface as a Means of Increasing Efficiency of Mental Activity

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The aim of this work is the creation of brain - computer interface for studies of human biorhythms. In the work conducted a unique experiment to determine frequency ranges of biorhythms in various States of the individual based on his age and gender. Addresses the following state of the people: listening to music (different frequencies and rhythm), communication, solving mathematical problems, creative activity. The study of the various biorhythms allowed to reveal the minimum and the maximum frequency of the prevalent biorhythm. Their average value in each age category indicated the frequency bands corresponding to a particular state. The novelty of this method of research consists in possibility of its implementation in real-time, availability, visibility of results and visualisation of data obtained directly in the process of neuro-computer interface. Performed research allow us to identify promising methods of stimulating mental activity in the conditions of hard physical and creative activity. I received results testify to possibility of application of brain-computer interface in tasks of biomechanical control.

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