

91. EMBEDDED SYSTEMS BASED BRAIN WAVE CONTROL

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Stress is a prevalent and costly problem in today's workplace. It is a result of harmful physical and emotional response that occurs when there is a poor match between job demands and the capabilities, resources, or needs of the worker. Constant stress results in cardiovascular disease such as depression, concentration and memory loss. Addiction is one of the chronic disorders that are characterized by the repeated use of substances or behaviors, despite clear evidence of morbidity secondary to such use. It is a combination of genetic, biological, pharmacological and social factors. Example: gambling, alcohol drinking, taking narcotic drugs and certain mannerisms. The therapies that are present today are very time consuming. According to recent statistics, Tamil Nadu stands third among all Indian states in death due to drunker driving. A driver subjected to long drive falls asleep and ends up in accident. In this paper we briefly discuss about the brain wave and brain's reaction during stress, addiction and drunk. This paper also explains the basic task of Brainwave Controller, and how stress and addiction is identified with the help of brainwave and how these are controlled using the principle binaural beats. Also the device can detect the brainwaves and process it to determine whether it is addicted or stressed. In addition to controlling the brainwaves, it also has a feature to avoid an individual who consumes alcohol to drive a vehicle. This paper promises to be an economical solution for the people who suffer from stress, addiction and to prevent accidents.

Keywords Stress, Brainwave, cardiovascular disease, binaural beats, addiction, driving under influences (DUI) and ignition interlock system or device (IID).

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