

#### **4. EEG BASED COMMUNICATION MODULE FOR DISABLED PEOPLE USING NI LABVIEW.**

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A new approach for Electroencephalogram (EEG) based communication aid for paralytic patients that uses voluntary eye blinks extracted from EEG signals is presented in this paper. For acquisition of EEG, two surface electrodes are placed over the frontal region of the patient's head and the third one near the auricular region for reference. It was found that EEG signal obtained during voluntary eye blink condition, produces clear signals with larger amplitude (approximately around 260mV) than that of normal EEG (10-100mV). The EEG signal is fed to LabVIEW software through the data acquisition card NI DAQ6009. The eye blink signal extracted from EEG is used to control the communication application. Communication system has three modules – Voice module which is used by the patient to express their needs, secondly the E-Mail module where the patient will be able to type a message and send it through the mail and lastly SMS module which is used by the patients to send SMS to their preferred contacts.

Keywords: EEG, NI LabVIEW, Peak detection, GSM, SMTP, Paralysis, Communication aid.

*Journal of Science and Innovative Engineering & Technology*