Recent Trends For Physically Challenged People

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Abstract: **Neuro sky and sign language are used to communicate with the deaf and dumb people. It can resolve the obstacle among the physically challenged people. The aim of the project is to classify the signals based on electroencephalogram. In this project emotion and intention can communicate with human beings. If the frequency is matched it displayed on the LCD and the words automatically converted into audible signals.**

***Keywords*: Neuro sky, sign language, EEG**

INTRODUCTION

To communicate with the disability person sign language and thoughts to translate their actions based on BCI. In this world many people are deaf and dumb, so they are facing many difficulties in day to day life. Based on sign language develop a glove with a sensor to interpret with 26 alphabets in ASL. The Electroencephalogram is also used to classify the signal with alpha, beta and gamma interact with the deaf and dumb people.

GESTURE RECOGNITION AND EEG BRAIN SIGNAL

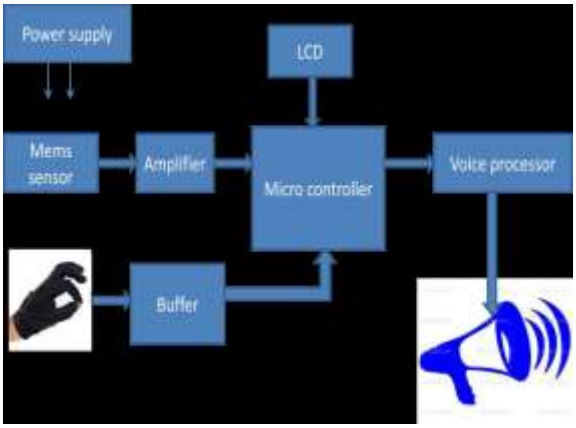
Body movement is based on gesture. The amount of data can be stored in a controlled. Segmentation is used to find the terminal point and data processing unit perform controlling and transferring function. In electroencephalogram recording of waves and thoughts reflect their surface of the brain, that signal is called an action potential. In this potential it can move from one cell to another cell called synapse.

DESIGN METHODOLGY

Camera act as an input device and image can be captured. If we use the camera it is less clarity, more powerful and expensive. In brain computer interface based on five senses we can detect the surrounding environment. Brain is covered with neurons so it can persist the data from the synaptic terminal based on invasive and non invasive we can detect the data.

BLOCK REPRESENTATION

MEMS sensor reduces the power and cost. Depends on stress detect the hand motion. It is embedded with a circuit. The hand motions are detected and stored in the microcontroller. The output is stored in the voice processor unit. By using the LCD its display output with hand motions and played through speakers.



In this block power source for all units is connected with power supply. Based on stress accelerometer produce their different states. The output of an accelerometer is given, the input to the amplifier. It amplifies the signal and given input to the microcontroller.With the voice bank input monitored and displayed on LCD.

ELECTROENCEPHALOGRAM

Information about emotion people can communicate with each other based on nonverbal information such as intention and emotions. Emotional states such as joy, fear, sadness, digests, anger, surprise on the emotional recognition system in speech or facial expressions

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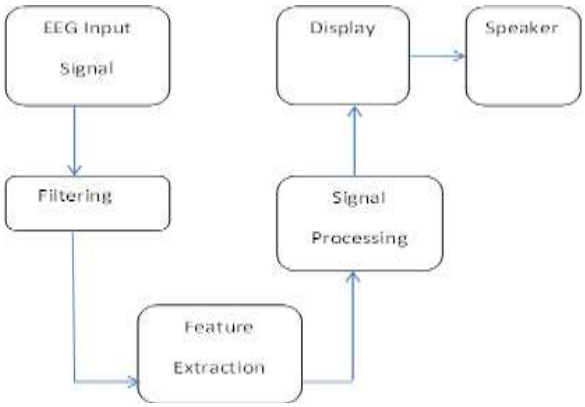
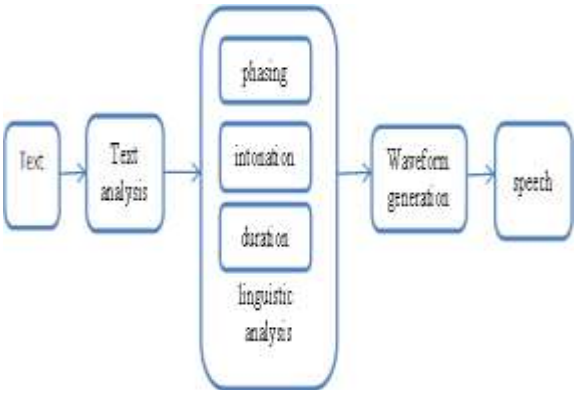


Brain computer interface can translate the brain activity into corresponding commands. Signal acquisition and signal processing are used to extract the signals.

SPEECH SYNTHESIS

The data corresponding to the terminal signal are given to the speech synthesizer it produces artificial speech as the given text as an input java application to incorporate speech technology into a user interface



Human speech is an artificial production for speech synthesis. Based on the computer system it can be implemented in hardware and software. On Normal language text into speech is based on text to speech.

RESULTS AND DISCUSSIONS

The MEMS sensor for detecting the hand motions and values in micro controller unit. Based on output it displays in LCD and played through speakers. It can be implemented with Embedded C language Electroencephalogram uses electrical activity inside the brain and generated by neurons when it is active. Based on disabilities , we can communicate and helps him to express thoughts using BCI. This improves quality of life.

CONCLUSION

The algorithm and working principle are useful for a deaf and dumb person. Based on the sign language can detect the action. The User can be controlled alone with no assistance.

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