



iJRASET

International Journal For Research in
Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 4

Issue: III

Month of publication: March 2016

DOI:

www.ijraset.com

Call: ☎ 08813907089

E-mail ID: ijraset@gmail.com

A Novel Method For Disabled People

M.Lavanya¹, Dr.M.Newlin Rajkumar²

¹Pg Scholar ,Department Of CSE,Anna University Regional Centre ,Coimbatore.

²Assistant Professor, Department Of CSE,Anna University Regional Centre,Coimbatore.

Abstract: In daily life to help handicapped and physically challenged people we need of Bioengineering control devices. In electroencephalogram brain activity is measured using mind wave. By the graphical representation of EEG signal we can get accuracy. In this paper data acquisition can be done by using biosensor.

Index terms: EEG, Mindwave, Biosensor, BSLEACS

I. INTRODUCTION

Based on EEG interconnection is represented as thoughts and emotional states. Electrical discharge have interaction between neurons. But it is impossible to measure outside the skull.

In this paper brain activity is measured by using the neurosky mindflex EEG headset it is known as brain computer interface. For visualization and procession of detecting data acquisition and data processing application can be visualized. BSLEACS(Brain Computer Interface Based Smart Living Environment Auto Adjustment Control System) is detected and universal plug and play home networking for smart house application. Sign acquisition and Embedded signal processing are used for long term electroencephalogram. So Low power consumption is used for smart house application in daily life.

BSLEACS had verified in a room and adjustment can be controlled automatically. And it also extended and integrated with the UPnP home networking for another application. Drowsiness detection software is proposed because number of road accidents. Based on the physical activities we can identify drowsiness of driver and alarmed. Electroencephalogram can be used to detect the state of the device by using mindwave. The changes between conscious are mapped using as threshold values for alarm. Based on the amplitude and frequencies it may be result in different pattern of neural interaction alpha and beta waves are detected based on the waveform of EEG signals. The electrical activity produces these waves and thus all electrical devices create some level of ambient noise. Measuring mental activity through waves is loud concert EEG devices is measured by using environment.

II. IMPLEMENTATION

Non invasive BCI is used for scanning devices to be read brain signals. The brain signals from many points is used to identify a wider range of brain activity. The brain signals are used for transmission with the help of sensors.

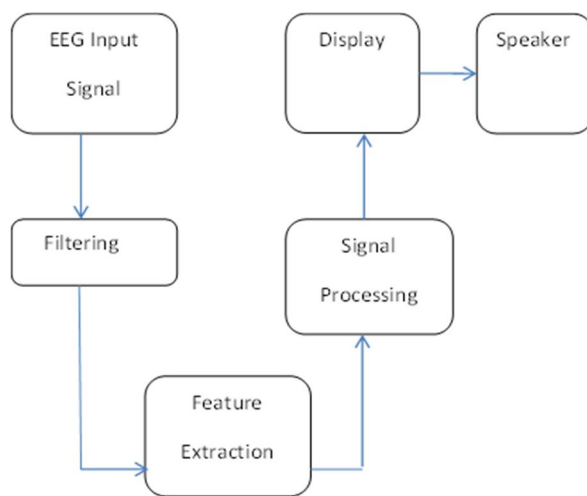


Fig 1. Block diagram

Based on laptop is used to read brain signals are transmitted to controlled unit. In this neurosky mindwave RF is used to transfer

International Journal for Research in Applied Science & Engineering Technology (IJRASET)

data. By using bluetooth this shows the state of the person

A. Wireless Signal Acquisition

The mindflex EEG headset is used to measure EEG signals electrodes placed on the scalp and detected brain signals is neurosky chip.

III. HARDWARE AND SOFTWARE

The neurosky mindflex EEG headset is cheapest biosensor. Neurosky biosensor is a wearable product for body and mind health. This solution can capture, quantify so that people can monitor and improve performance, then transfer the data between mindwave and the computer.

A. Microsoft Visual Studio 2012

The Microsoft visual studio is used to implement and support programs in OS. The brain computer interface can run on PC and divided into two data processing and data visualization parts. The output of visualization part displays the given signals by columns and time plot

IV. EXPECTED RESULT AND DISCUSSION

The Human brain works in terms of learning, memory and social interaction motivation. The module is developed to help elderly people and patients can't able to use their hands. Hardware system is programmed and database values with a particular task.

V. CONCLUSION

This paper deals with the design and implementation of BCI technique. The Mindflex EEG headset is measured by using data processing and data collection. The brain activity and the present state and nobility of development is unable to use their hands. To run it is coded in c#program. Data is transmitted using Zigbee standard.

REFERENCES

- [1] Stafford Michahial, R.Ranjith Kumar, Hemath Kumar P, Puneeth Kumar A, Speech synthesizer And Feature Extraction using DWT with classification By Euclidian Distance and neural network of EEG signals, International Journal of Advanced Research in Computer and Communication Engineering Vol. 1, Issue 4, June 2012.
- [2] Lun-D Liao, Chin-Teng Lin, Kaleb McDowell, Alma E. Wickenden, Klaus Gramann, Tzyy-Ping Jung, Li-Wei Ko, Jyh-Yeong Chang, Member, IEEE, Biosensor Technologies for Augmented Brain-Computer Interfaces in the Next Decades, Proceedings of the IEEE Vol. 100, May 13th, 2012.
- [3] Luzheng Bi, Xin-An Fan, and Yili Liu, Member, IEEE, EEG-Based Brain-Controlled Mobile Robots: A Survey, IEEE transactions on human-machine systems, vol. 43, no. 2, march 2013.
- [4] Priyanka Abhang, Shashibala Rao, Bharti W. Gawali, Pramod Rokade, Member, IEEE, Emotion Recognition using Speech and EEG Signal – A Review, International Journal of Computer Applications (0975 – 8887) Volume 15– No.3, February 2011.
- [5] J. Malmivuo, R. Plonsey, Bioelectromagnetism, Principles and Applications of Bioelectric and Biomagnetic Fields, Oxford University Press, New York, 1995
- [6] Neurosky Inc, MindSet Communications Protocol, Neurosky Inc., 2010
- [7] Lebedev M.A., Nicolelis M.A., Brain-machine interfaces: past, present and future, Trends Neurosci, 29, 536-546, 2006
- [8] NeuroSky Inc, The brain Wave Signal (EEG), NeuroSky Inc, 2009
- [9] J. Katona, A. Kovari, T. Ujbanyi, Visualization of brainwaves, Dunakavics, DF Press, in press.
- [10] J. Katona et al. • Evaluation of The Neurosky MindFlex EEG Headset Brain Waves Data.



10.22214/IJRASET



45.98



IMPACT FACTOR:
7.129



IMPACT FACTOR:
7.429



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089  (24*7 Support on Whatsapp)