

A Study On Human Mind Behavior Using Futuristic Headband System

V.MALATHI¹ Dr.N.SHANMUGAPRIYA²

¹MCA Student, Department of Computer Applications (PG), Dr.SNS Rajalakshmi College of Arts and Science, Coimbatore – 641049.

²Head of the Department, Department of Computer Applications (PG), Dr.SNS Rajalakshmi College of Arts and Science, Coimbatore – 641049.

ABSTRACT: The mind reading techniques reads the mind state of the person This can done by getting the face expression and by seeing his activity for example those person who gets tension the face it seems to be stressed. not only the humans can read the mind it may possible for system also reads the mind of the persons Mind reading can be done by using Face expression analysis through Futuristic headband.

Keywords: Mind Reading computer, advantages, disadvantage, Face Action unit Analysis, Head Pose Estimation ,human computer interface

1. INTRODUCTION

The Machine may infer the mental state of human being. It is most complexity of understanding the human's mentality. No one knows what a decision would be taken by the person in the next second by executing his present thoughts or what is his present thinking about any other person and what will be the next action of that person and many more. But all the questions can answer by mind reading computer. The different technologies were used in the Mind reading computer for example scanning of the face expressions along with head gestures and identifying the volume and inside level of oxygen and the blood which is flowing in the vicinity of brain. Mind reading computer can provide lot of application for medical fields and also for some persons

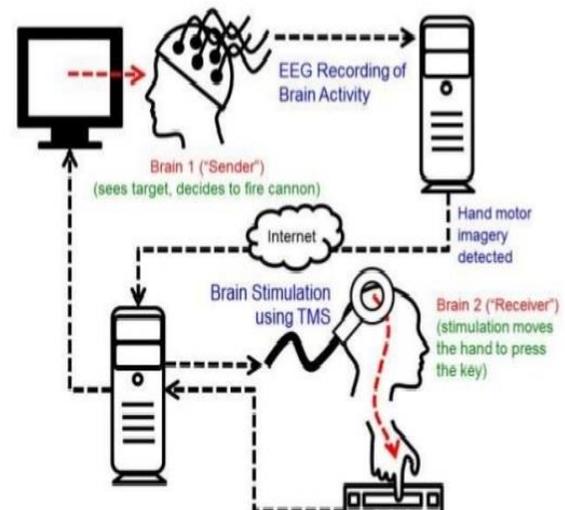
2. FUNDAMENTAL OF MIND READING COMPUTER

Mind reading computer detect the person thoughts and emotions. The begging step of the mind reading computer is the person mostly the human expresses their mental states by face expressions and gestures. Whether they are communication or not it doesn't matter but the decisions taken by human beings is completely depends on humans mental state. In case we have an mind reading computer we

can change the decision of others. if it's in the wrong thoughts or intension we can prevent the wrong into the good intension. And it can used to stop the violence. It will become the better world. The mind reading computer is not established now but it might be in future. It is

Mainly used for physically handicapped persons they can able to drive a car access online services or an mobile phone just by thinking.

FLOW CHART FOR MIND READING COMPUTER



APPLICATIONS OF MIND READING COMPUTER

- Lie detection
- Pain detection
- Brain-computer interfaces
- Pattern analysis and future research

3.MIND READING COMPUTER SYSTEM

The human doesn't need to type or speak something to the system the Mind reading system technology may understand default. Mind reading

can done through the scanning of face expressions. The machine may works based on digital camera it is used to analyze the face expression to understand the humans mental state like whether they were confused happy or sad something etc..It may checks first head gestures and face expression and express the particular persons mental state. and its checks stored database and it compares with present result if it match then its considered to be an final state. Different parameters and movement are analyzed it identify gestures like open mouth, eyes Movement and half closed eyes. For example if human thinks something means it specified by the inner raise of eyebrows.



Futuristic Head Band:



Mind Controlled Wheelchair



4.FACE UNIT ANALYSIS

Facial action unit is analysis performed by FACS (facial action coding system) system is used for analyze the face expression units which it inspected by the eyebrows raised inner and outer, lips apart, mouth stretch, and etc... The headband that measures how much light was not pre-occupied letting the computer gauge the metabolic demands that the brain makes. The results are matched with an MRI it can be gathered with lightweight equipment. Another technology for mind reading computer can be electroencephalograph this device takes the electrical current from various parts of the brain it is used by medical researchers

5. HEAD POSE ESTIMATION

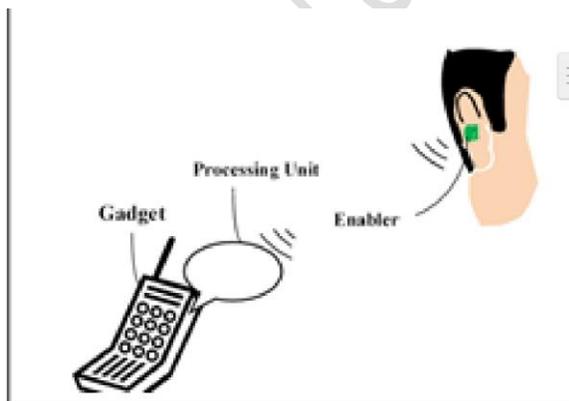
There are two types of analysis are there first is motion and shaped Base investigation and the second is color base. The motion and shape base analysis is used for real time video system. The second color based analysis is used for computational. Smile face is identified by lip shape tracking polar distance between two lips corner and anchor point is computed by lip pucker. Change in polar distance is calculated with respect to starting frame.

If Mouth is open or closed this is identified by color descriptors. Space between two lips and teeth are it to be represented by different color. For example green color is represent the teeth and red color is represent the space Another method of mind reading computer can be done by using futuristic headband. The headband can wear over the head. when this process may done oxygen and volume level of blood is measured is called FNIRS (functional near infrared spectroscopy).The user wears futuristic headband that sends infrared signal to the tissues of the head it is absorbed by active blood filled tissues.



6. ADVANTAGES AND APPLICATION

The mind reading computer is mainly used for paralyzed patients and an handicapped persons. and it may useful for comma patients those who are not able to speak. This works may done by mapping brain waves if you think about moving left, right, forward or back and that may works accordingly. It may used in an military purpose sting operations and investigations. Mind reading computer that prevent from terrorism. And it can be combined with consoles and it used for mind gaming.



DISADVANTAGES

The disadvantage of the system is that data can be hacked by unauthorized person so the privacy can be cracked. Terrorist and hackers can steal the important

data so for that it will be more dangerous it also 100% accuracy can't be gained by using mind reading computers. Accuracy of the mind reading computer can be up to the level of 86.4%



7. CONCLUSION

Mind reading computer will assume what other person is thinking or feeling .We are masterful at taking a small cue such as raised eyebrow, We all jump to conclusions about other people's behaviors at some time. We usually judge without checking. This pattern causes a deal of interpersonal difficulties and another important Meta model problem solving strategies. Some time attribute intention to other person's behaviors or absence of behavior. That time we will think someone is interested in us, and some other is not interested in us. Other's behavior y effect on us, and judge our own behavior by our intentions.

REFERENCE:

- 1.B.N. Pasley et al., "Reconstructing Speech from Human Auditory Cortex," PLoS Biology, vol.10,no.1,2012,e10001251; doi:10.1371/journal.pbio.1001251.
- 2.Day, "Mind-Reading Computers," in Computing in Science & Engineering, vol. 14, no. 4, pp. 104-104, July-Aug.2012. doi:10.1109/MCSE.2012.79
3. B.N. Pasley, "Reconstructing Speech from Human Auditory Cortex", PLoS Biology, vol. 10, no. 1, pp. e10001251,2012.
- 4.Tian,J.,Ahmaniemi,T.,Boda,P.,Vetek,K.,Apparatus, method and computer program product providing a hierarchical approach to command-control tasks usingabraincomputerinterface,U.S.PatentNo.8,005,76

6, August 23, 2011.

5. Tan, D., Saponas, T., Morris, D., Turner, J., Wearable electromyography-based for human-computer interface, U.S. Patent Application Publication No. 2009/0326406, December 31, 2009.

6. M. Pantic and L. Rothkrantz. Expert system for automatic analysis of facial expressions. Image and Vision Computing, 18:881–905, 2000

7. Fuentemilla, L., Cashdollar, N., Bunzeck, N., Penny, W., Dyzel, E. 2010. Theta coupled periodic replay in working memory. Curr Biol. 20 (Apr. 2010), 606-612

8. P. Rozin and A. B. Cohen. High frequency of facial expressions corresponding to confusion, concentration, and worry in an analysis of naturally occurring facial expressions of americans. Emotion, 3(1):68–75, 2003.

Journal of Engineering Sciences