

Review on Advantages of Blue Eyes Technology

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Abstract: *Blue eyes technology going to lead the life in near future. This technology works on the concept of artificial intelligence. Its purpose is that computer can work like human. A lot of research work is going on it and IBM research team has already come with this blue eye technology in which a computer can sense human feelings and behaviour and understand it. The purpose of this technology is that it gives human power and abilities to computer so that computer can interact with human similar to that way one human interact with another through speech, facial expressions and touch. All humans understands each other's feeling and emotions just by reading the facial expressions. This blue eyes technology going to create a computer that can have a human abilities like recognising the facial expressions and understand it and give the result accordingly. Some electronics gadgets are used in blue eyes technology which can sense and control human feelings and emotions. The proper hardware and software are loaded on this system. This technology can be applied everywhere where permanent operator attention required. In this technology, the meaning of blue is Bluetooth connection, eyes means eye movement and technology means techniques. Blue eyes system contains two devices, one is Data Acquisition System (DAU) and other is Central System Unit (CSU) which are connected by Bluetooth. The function of Data acquisition systems is to receive information from the sensor and send it via Bluetooth and also the message from CSU to operator. The CSU gives visualization interface by buffering incoming sensor data.*

Keywords: Mobile measuring device, Artificial intelligence, Central System Unit, Bluetooth

I. INTRODUCTION

Artificial intelligence (AI) is the ability of computer machine or programme which can think and learn. It is a theory and development of computer systems that normally requires human intelligence [1]. AI may possess features of human intelligence like speech recognition, visual perception, decision making etc. The cost of Artificial intelligence system is very huge because of complex system and it has certain disadvantage. They are;

- High cost
- Unemployment
- Difficulty with software development
- Few experienced programmers
- Security risk

With respect to the limitation mentioned above, blue eyes technology is a preferred solution to overcome such limitation, such as there is high cost in creating artificial intelligence, implementation of blue eyes system on the other hand is less expensive and less time consuming. Data security is concern in AI, whereas there is no safety of data in blue eyes technology and don't have to worry about the security. Blue eyes technology has a different level of data security which required three important things as follows:

1. In blue eyes technology, only the registered mobile device could connect.
2. For this Bluetooth connection authentication is required and Bluetooth connection encryption is also required.
3. Access rights restrictions.

II. METHODOLOGY

The purpose of this technology is to design a computer that has sensory ability like human beings [2]. In order to sense it uses modern video cameras and high quality microphone which can capture minor changes also. The machine can understand what user wish, his eye movements, and even realize his physical or emotional states. This system design mainly with a mobile measuring device (DAU) and a Central system Unit (CSU). The mobile device is connected with Bluetooth module which provides wireless interface in between sensors worn by the operator and CSU. All operators have valid ID cards for security and sufficient user profile on central unit side which provide necessary personalization. This system consist of

1. Mobile measuring device(DAU)
2. Central System Unit (CSU)
3. The Hardware.

Blue eyes technology is a application of artificial intelligence, in short emotional computing and an eyes for today's world, today's technology, when major components of a human body such as hands won't work, a new technology tracks eye movement for computer operation. All perceptual capabilities are embedded in the gadgets using this technology.

III. SYSTEM OVERVIEW

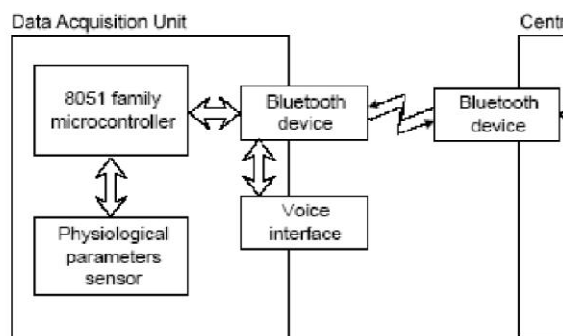


Figure 1: Overall System Diagram

The blue eyes technology get human emotions by extracting eye portion from captured image by using image processing techniques and compare with pre stored images in the database. This technology provides computer to talk, feel presence and listen with AI like face recognition, figure print and video calls etc. Blue eyes technology hardware contains following part;

3.1 Data Acquisition Unit

The mobile part of this system is Data Acquisition Unit. The main function of this unit is that it fetches the physiological data from sensor and send it to central system for further process. In order to complete the work, the device must manage Blue tooth connection which includes establishment of connection, authentication and terminations. Operator authentication is done by personnel ID cards and PIN code. The operator communicate with simple keyboard, a small LCD display and a beeper. The device is detecting exceptional situation if arises and notify it to operator. Data is transferred using a small headset which is connected to DAU. The DAU consist of several hardware module such as microcontroller, Bluetooth device, LCD display, EEPROM, Beeper, LED indicators, batteries and voltage level monitor.

3.2 Central System Unit

Central System Unit hardware is the second important parts of the wireless connection. It contain a Bluetooth module and PCM codec for voice data transmission. A USB cable are used to connect this module with PC. A simple

programming device is developed to program operators personnel ID cards. The programme is interfaced to a PC using ports. A microcontroller manages UART transmission and EEPROM programming [3].

IV. BLUE EYES TECHNOLOGY USES FOLLOWING TECHNOLOGY:

- 1. Emotional mouse:** It is the device used to access user's emotion like rage, terror, happiness, etc. It helps to get behaviour information and physiological information.
- 2. Artificial intelligent speech recognition:** In this technology input words are fetch through microphone and compare and matched with those words which are internally stored in computer.
- 3. Manual and gaze input:** Manual and gaze input also called magical point, this uses two magical pointing techniques liberal and conservative which are used to diminish the cursor movement needed for target selection.
- 4. Simple user interest tracker:** It helps in tracing the user's behaviour through multiple channels which are web browser, gaze application focus. By studying the user's behaviour simple user interest tracker finds and display relevant information.
- 5. The eye movement sensor:** This is a device used to observe or measure eye movement and eye position [4].

V. ADVANTAGES OF BLUE EYES TECHNOLOGY

- 1.** It helps in eye observation by recording and interpreting customer's movement.
- 2.** Blue eyes technology used for physiological and behavioural condition monitoring.
- 3.** This is used in video games, to make them more interactive and exciting.
- 4.** Blue eyes technology is most useful in flight control centre, captain bridges.

VI. CONCLUSION

Blue eyes technology simplify life by providing user-friendly facilities. This technology is very helpful in reducing the gap between the computer and human. The blue eyes technology meant to be a stress reliever. This is driven by the advanced technology of studying the facial expression for judgement of the intensity of stress handled. This can be used in different areas such a industry, transportation, military command centres or operation theatres.

REFERENCES

- [1].** [https:// marketbusinessnews.com](https://marketbusinessnews.com)
- [2].** Manishakumawat, Garimamathur, Nikita Susan Sahu, "Blue eye Technology", Apr2018/IRE Journals/Volume 1 issue 10/ISSn:2456-8880.
- [3].** Chandani Suryawanshi, T. Raju, "Blue eyes Technology", International Journal for Scientific Research & Development, Vol. 2, Issue 01, 2014.
- [4].** Kenneth Holmqvist, Marcus Nyström, Richard Andersson, Richard Anderson, Richard Dewhurst, Halszka Jarodzka and Joost Van de Weijer, Oxford University press, 2011.