

BLUE EYES TECHNOLOGY

Kirupa.S,
B.Sc Student,
Department of CSA & SS,
Sri Krishna Arts and Science College,
Coimbatore,Tamilnadu,India.

Usha Nandhini.S,
B.Sc IT,
Department of CSA & SS,
Sri Krishna Arts and Science College,
Coimbatore,Tamilnadu,India.

Abstract: Blue eyes technology is used to make a computer to understand the human feelings and behavior. It enables the computer to react according to the human emotional level. The goal of blue eyes technology is to react according to the human emotional level. Blue eyes – the system is developed to be the solution for monitoring and recording the operators brain level and their physiological conditions. Human error is one of the most frequent causes for the ecological disaster. The reason is that the monitoring systems concerns with the state of process whereas the human contribution is left unsupervised. It is crucial to assure that the human brain is actively involved in the whole work time period. Now let us go deep about the blue eyes technology.

Keywords: Blue eyes technology, mobile measuring device, central system unit, hardware.

I.INTRODUCTION

Blue eyes technology was conducted by the IBM at ALMADEN RESEARCH CENTER (ARC) in San Jose, California in 1997. Blue eyes technology is used to make the computer to understand the human feelings and behavior who is working with the computer. It enables the computer to react according to the sensed emotional levels. The main goal of blue eyes technology is to give human power and ability to the computer to make that computer to naturally interact with the human beings as we interact with each other. All human beings have some capabilities, the ability to understand others emotions or feeling from their facial expressions. Blue eyes technology is used in creating the computer to understand the human emotional level and feelings of the user who operates the computer by recognizing their facial expression. It is used to react according to them.

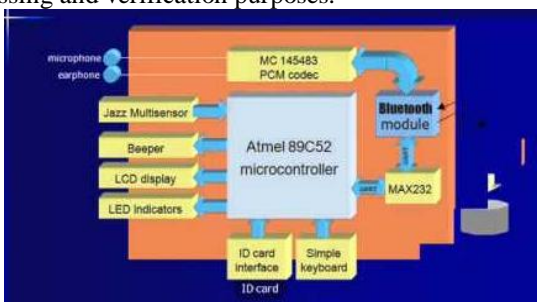
The objective of blue eyes technology is that developing the computational machine that have the sensory and perceptual ability like human beings.

Blue eyes technology consists of

1. Mobile measuring device or Data Acquisition Unit (DAU)
2. Central System Unit (CSU)
3. The Hardware. [1]

II.MOBILE MEASURING DEVICE OR DATA ACQUISITION UNIT (DAU)

The DAU is the mobile component of blue eyes technology. The function of DAU is to gather the physiological from the sensors. It forwards the information to the CSU for the processing and verification purposes.

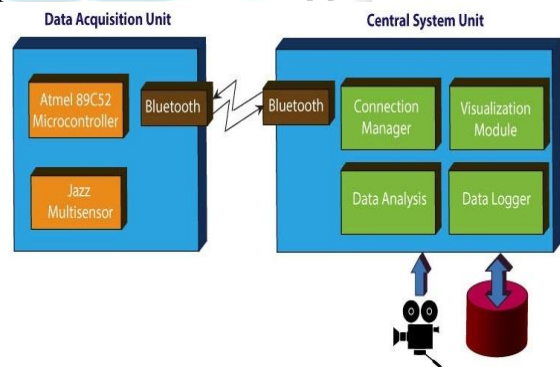


The blue tooth module provides the wireless interface between the user and Central System Unit (CSU) having the sensors. PIN codes and ID cards are assigned to the operator for authentication purpose.[1]

The task of mobile DAU is to maintain the Bluetooth connections to get the information from the sensor and sending it over the wireless connection.[2]

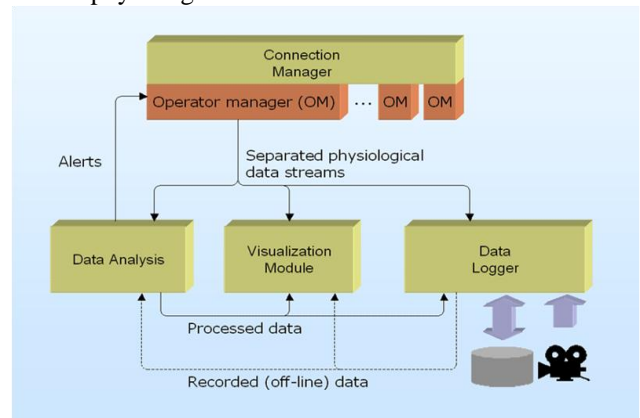
III.CENTRAL SYSTEM UNIT (CSU)

The CSU maintains the other side of Bluetooth connection and treats the incoming sensor data and performs the online data analysis. It records the conclusion for further exploration and provides the visual interface.[2]



➤ SOFTWARE

The main task of blue eyes software is to look after the user's physiological condition.



To assure the user's condition change, some software of blue eyes technology will perform treat the incoming data, analyze the data and alarm triggering. The system core transfers the flow of data between the other systems.[3]

➤ **BASIC IDEA BEHIND BLUE EYES TECHNOLOGY:**

1. It uses the video cameras and microphones to identify the user's action through sensory ability.
2. It checks the eye movement, heart beat rate, blood oxygenation against abnormal and undesirable values. It triggers the user defined alarms when necessary.
3. It requires the personal area network that connects all the operators and the supervising systems.
4. Operators sense the state of controlled systems and supervising systems look after the user's physiological conditions.
5. The use of CMOS camera will enable the system to calculate the point of gaze and it will observe what the operator is actually looking at.[4]

➤ **ETYMOLOGY OF BLUE EYES TECHNOLOGY:**

The blue in the term Blue eyes meant for the reliable wireless connection and the eyes because of the eye movement that enables us to obtain the lots of interesting and important information. As the idea is to monitor the user's physiological condition the eye movement is noticed carefully.[4]

➤ **NEED FOR THE BLUE EYES TECHNOLOGY:**

1. Human error is still one of the most frequent causes for the ecological disaster because the human contribution for the work is left unsupervised.
2. The control instruments have automated it to the large extent, thus the human operator becomes passive observer.
3. It results in the weariness and the vigilance drop, but the user needs to be active.
4. The user may not notice the changes of ecological consequences that is the threat for human beings.
5. Thus it is very important that the users brain should be actively involved in the whole work time period.

➤ **BENEFITS OF THE BLUE EYES TECHNOLOGY:**

1. Visual eye monitoring
2. Physiological condition monitoring
3. Operator's voice and overall view of the control room

➤ **BLUE EYES SYSTEM CAN BE APPLIED IN WORKING ENVIRONMENT REQUIRING:**

1. Power plant control rooms
2. Flight control centers
3. Professional drivers.[4]

➤ **APPLICATIONS OF BLUE EYES TECHNOLOGY:**

1. It is used in automobile industries. (eg: cars)
2. It is used in video games.
3. It is used to create "Face Responsive Display" and "Perceptive Environment".
4. Blue eyes technology is used in providing security and controlling the machines.[5]

➤ **ADVANTAGES OF THE BLUE EYES TECHNOLOGY:**

The advantages of the blue eyes technology involves:

1. More natural mental model for the user
2. Faster than manual pointing

3. Improved speed and ease of use
4. Practical accuracy level

➤ **DISADVANTAGES OF BLUE EYES TECHNOLOGY:**

1. Liberal approach is distracted when the user is reading.
2. It cannot start until the cursor appears.

➤ **LIMITATIONS OF BLUE EYES TECHNOLOGY:**

1. Target is not selected if not the threshold appears.
2. Target is selected if it stares at without the user's intention.[5]

IV. REFERENCES

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