A Survey On Threats and Challenges In Blue Eyes Technology

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Abstract :In the field of computational world Blue Eyes Technology is something interesting to play a role of human with the help of computer. The title BLUE stands for Bluetooth which defines wireless communication and EYES refers to the eye movement which helps us to see interesting and important information. This can able to identify the needs of user through the sensory abilities. This technology can able to monitor the user brain involvement and also his physical condition. The idea of blue eyes technology is to give computer the human power. This enable computers to work with humans as an intimate partners where humans can interact through a facial expression, speech etc.. It even understands the emergency situation of the user through the mouse or dials your friend and makes a connection.

Index Terms - Bluetooth, speech recognition, DAU, CSI.

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I. INTRODUCTION

Just imagine a world where there occurs a communication between a system and the human[10]. If you are in front of thcomputer it has the power to gather information about you and starts to communicate with you through the special
techniques like eye movement sensor, facial identification,speech identification, etc…

Blue eyes is nothing but a technology used to design an machine which can understand emotions, requirements, expressions and can able to analyze and satisfy user needs. To build such machine we use this technology named Blue Eyes. By adding more facility to computers by researchers will allow them to communicate like humans, analyze human presence, it can able to talk, listen or even guess your feelings[1]. Human observation depends primarily on the ability to understand, explain, and join audio-visuals and censoring information. BlueEyes system basically have two system data acquisition unit and a central analytical system[14]. Bluetooth module integrated with mobile device is used to provide wireless interface between sensors worn by the operator and the central unit. Blue eyes technology working process consist of two units like data acquisition unit and central system unit. Data Acquisition Unit is a Mobile part of the Blue eyes system is known as Data Acquisition System. This system is used to fetch the physiological data from the sensor and send it to the central system which is to be processed. Wireless Bluetooth connections (connection establishment, authentication and termination) must be maintained to fulfill this task. Personal ID cards and PIN codes used to provide operator's authorization. A simple 5-key keyboard, a small LCD display and a beeper is used to carry out communication with the operator. The device uses exceptional situation to notify the operator. A small headset, interfaced to the DAU with standard mini- jack plugs is used to transfer vo ice data. The second associate of the wireless connection is Central System hardware. A Bluetooth module and a PCM codec is contained in this Box which is used for voice data transmission. A parallel, serial and USB cable are used to provide interfacing between this module and PC[2]. The standard minijack sockets provide the accessibility of audio data. A simple programming device is being developed to program operator's unique ID. Serial and power source ports are being used to interface program to a PC.

II. REVIEW

[1](2016) provides two results of emotional sensory world. First, observation reveals the fact that different eye colors and their results in change in emotions. It changes without giving any information on shape and actual detected emotion. It is used to favorably recognize four different emotions of eyes. This developed methodology can be widespread to other activities. Second result were achieved for converging in good emotions using a mixture of features, shapes, colors based on eye points. After this favorable capturing of eye spots, it will help to tell about the state of a person and also helps to cheer up by playing songs or othersources.[2](2017) has explained that the nineties witnessed quantum leaps interface designing for improved man machine interactions. The blue eyes technology ensures a convenient way of simplifying the life by providing more delicate and user friendly facilities in computing devices. Now that we have proven the method, the next step is to improve the hardware. Instead of using cumbersome modules to gather information about the user, it will be better to use smaller and less intrusive units. Swati(2015) has given a result about the use of a miniature cmos camera integrated into the eye movement sensor will enable the system to calculate the point of gaze and observe what the operator is actually looking at. Introducing voice recognition algorithm will facilitate the communication between the operator and the central system and simplify authorization process. Despite considering in the report only the operators working in control rooms, her solution may well be applied to everyday life situations. These new possibilities can cover areas such as industry, transportation, military command centers or operation theatres. [3](2015) demonstrated the method hardware improvement. In case of using burdensome modules for gathering of information about the user, it will be better to use smaller and less encroached units. [4](2016) has given a commercial release which will help avoid potential threats resulting from human errors, such as weariness, oversight, tiredness or temporal indisposition. [7]The use of a miniature CMOS camera integrated into the eye movement sensor will enable the system to calculate the point of gaze and observe what the operator is actually looking at. Introducing voice recognition algorithm will facilitate the communication between the operator and the central system and simplify authorization process.

III. Threads and Challenges In Blue Eyes

Although Bluetooth is an energy efficient technology, it slowly drain the battery of your cell phone or other mobile device[8].When enabled, Bluetooth continually scans for signals, looking for new devices to connect with, but using energy in the process. We have to check

our device's settings that the Bluetooth is off when you're not using it[16].All wireless technologies have limits on how fast they can transmit data; generally, faster connections mean higher energy consumption. Because Bluetooth is intended to be very energy-efficient, it sends data relatively slowly. However, Bluetooth is not a substitute for faster technologies such as Wi-Fi and USB. The usage of sensor is costly and more complicated when compared with wired network. There are many types of sensor in which all lens subject to contamination and also very sensitive to extreme environmental changes and sensing range affected by color and reflectivity of target. By using emotional mouse it totally dependent on the computer and rapid increase in the technology. Through this technology it normally affects humans normal vision. Blue eyes faces some challenges like it can able to get snapshot in which a video stream will start and when a person set focus on face and press "Enter" then it will take a snapshot. Immediately returns one single image frame, from the video input object. Blue eyes can play songs according to matched mood.. Various sound file formats are supported, including wav, mp3 and aac. The played sound returns the sample rate in Hertz and the number of bits per sample used to encode the data in the file.

IV. Techniques used in blue eyes

A.Emotional Mouse

It obtains physiological data and emotional state such as pulse, pressure, skin temperature, heart rate etc… through the touch of user on mouse where different sensors (such as pressure sensor, heart rate sensor, GSR sensor, temperature sensor) are deployed inside it. Then it determines the personality of the user[2].

B. Manual And Gage Input

Cascading

A webcam is used to quickly determine the glints and pupils of the user under variable and real lightning conditions and wrap the cursor to every new object user looks at. Then user get control of the target by hand near the target or ignores it and search for next one[3].

C. Artificial Intelligent Speech Identification

The user talk to the computer through microphone and that talk get filtered and saved in Random Access Memory[12].The input words are scanned and matched against the internally stored words. Pattern matching is designed to look for the best fit because of variations in loudness, pitch, frequency difference, time gap, etc...The identification causes some action to be taken[13].

D. Simple User Interest Tracker

Blue eye enabled suitor become active when the user build an eye contact and regularly detect user area of interest and starts searching it. For exampleIf you are reading title, pops up the story in the browser window.

V. CONCLUSIONS

As a world is digitizing and we are moving towards robotic world, several human activities can be shrunk with emotion sensory world tool. The tool or system is fitted in robot with eye emotions which detects what is the demand and the action can be taken by robot accordingly[15]. This work can be extended to home appliances where it can perform various tasks within home through blue eye technology. We know how important your vision is to you and it is just as important to us[16]. We hope that the system in its commercial release will help to avoid potential threats resulting from human errors, such as weariness, oversight, tiredness or temporal indisposition[5]. Here we have demonstrated only the method of blue eyes, the next step is hardware improvement. The day when this technology will create its space into your house hold, making you more lazy is very near and it may even reach your hand held mobile device. In short Blue eye technology can be called as a technological prediction.

Table 1 Table Type Styles

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