

BLUE EYES TECHNOLOGY

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Abstract:-- The Blue eyes technology is to develop a computational machine having sensory and perceptual ability like those of humans. The Blue Eyes technology system is a combination of a set of hardware and software systems. The hardware consists of a Central System Unit (CSU) and Data Acquisition Unit (DAU). Blue Eyes technology uses most modern cameras, microphones and advanced non-obtrusive sensing techniques to interact with humans and understand the emotions of human beings. The software helps to transfer the data or information from managers to the data analyzers. Animal survival depends on highly developed sensory abilities. Likewise, human recognition depends on highly developed abilities to perceive, integrate, and interpret visual, auditory, and touch information.

The BLUE EYES system checks above parameters against abnormal (e.g. a low level of blood oxygenation or a high pulse rate) or undesirable (e.g. a longer period of lowered visual attention) values and triggers user-defined alarms when necessary. The "BLUE EYES" technology aims at creating computational machines that have perceptual and sensory ability like those of human beings. The mobile device is integrated with Bluetooth module providing wireless interface between sensors worn by the operator and the central unit. ID cards assigned to each of the operators and adequate user profiles on the central unit side provide necessary data personalization so different people can use a single mobile device.

Keywords:-- BLUE EYES system, data acquisition unit, data personalization

I. INTRODUCTION

Blue eyes is a technology conducted by the research team IBM at its Almaden Research Center (ARC) in San Jose, California since 1997. Blue eyes technology makes a computer to understand and sense human feelings and behaviour and also enables the computer to react according to the sensed emotional levels.

All human beings have some perceptual capabilities the ability to understand each other's emotional level or feelings from their facial expressions.

II. DEFINITION

- ❖ Blue eyes aims at creating a computer that have the abilities to understand the perceptual powers of human being by recognizing their facial expressions and react accordingly to them .
- ❖ The computer can talk, listen or screech aloud!!With the help of speech recognition and facial recognition.
- ❖ The machine feels your presence; verifies your identity and starts interacting with you and even it will dial to your home at any urgent situations.
- ❖ This all is happening with this "BLUE EYES" technology.

III.OBJECTIVE

- ❖ To develop a computational machine having sensory and perceptual ability like those humans.
- ❖ The blue eyes technology system is a combination of a set of hardware and software systems.
- ❖ The hardware consists of a central system unit (CSU) and data acquisition unit (DAU).
- ❖ Microcontroller –ATMEL 89C52 is the heart of the data acquisition unit.

IV. 1. Mobile measuring device or Data Acquisition unit(DAU)

- ❖ The DAU used in the Blue Eyes technology is the mobile component of the system
- ❖ DAU is to gather the physiological information from sensors.

And forward to the CSU

The Data Acquisition Unit comprises several hardware modules

Atmel 89C52 Microcontroller –system core
 Bluetooth module (based on ROK 101008)
 HD44780-small LCD display
 24C16- I2c EEPROM (on a removable ID card)

MC145483-13 bit PCM code
JAZZ Multi sensor interface
Beeper and LED indicators, 6 AA batteries and
voltage level monitor

V. Central System Unit (CSU)

- ❖ CSU is the next squint of wireless –network
Connection in Blue eyes technology
- ❖ The CSU mainly contains code (PCM Code
commonly used for voice information transmission)
and a wireless Bluetooth module
- ❖ This CSU section is integrated to a personal
computer using USB, parallel and serial cable.
- ❖ The mini-jack socket is used for audio data
accessing.
- ❖ The program containing the operators personal ID is
amalgamating to the personal computer through the
serial and power ports.
- ❖ The microcontroller (Atmel-89C2051) inside the
unit handles the 12CEEPR0M – programming and
UART transmission.

VI. The software used in Blue Eyes technology

*The operator's physiological condition is continually supervised by this Blue Eyes technology software.

*The software will respond in real time according to the operator's condition.

This software helps to transfer the data or information from managers to the data analyzers.

Then it transfer the processed information from this data analyzers unit to the GUI controls and data analyzers.

The visualization module is in the off –line mode and it will continually fetch the information from database and also records the video audio and physiological parameters.