V.S.B.ENGINEERING COLLEGE, KARUR

Department of Electronics and Communication Engineering

IBM NALAIYA THIRAN

LITERATURE SURVEY

TITLE : IoT Based Safety Gadget for Child Safety Monitoring and Notification

DOMAIN NAME : Internet of things

LEADER NAME : Sindhuja J

TEAM MEMBER NAME: Sangeetha R

Sarumathi J

Sooriya prabhaa S

MENTOR NAME : P Nabdhini

ABSTRACT

Child safety and tracking is a major concern as the more number of crimes on children are reported nowadays. With this motivation, a smart IoT device for child safety and tracking is developed to help the parents to locate and monitor their children. The system is developed using LinkIt ONE board programmed in embedded C and interfaced with temperature, heartbeat, touch sensors and also GPS, GSM & digital camera modules. The novelty of the work is that the system automatically alerts the parent/caretaker by sending SMS, when immediate attention is required for the child during emergency. The parameters such as touch, temperature & heartbeat of the child are used for parametric analysis and results are plotted for the same. The above system ensures the safety and tracking of children.

INTRODUCTION

Internet of Things (IoT) plays a major role in every day to day life. The major difference between IoT and embedded system is that a dedicated protocol/software is embedded in the chip in case of embedded system, whereas, IoT devices are smart devices, which are able to take decisions by sensing the environment around the device. The development of sensors technology, availability of internet connected devices; data analysis algorithms make IoT devices to act smart in emergency situations without human interventions. So, IoT devices are applied in different fields such as agriculture, medical, industrial, security and communication applications[1]. IoT systems are useful within a system to do deeper automation, analysis, and integration. IoT contributes to technology by advances in software, hardware and modern tools. It even uses existing and upcoming technology in the

fields of sensing, networking and robotics. IoT brings global changes by its advanced elements in the social, economic, and political impact of the users

LITERATURE SURVEY

The author describes [1] the parent can send a message to the GSM module, according to the message information the GSM module reply back with particular details of the children. The location can be seen on the Google map. When a particular child is facing an emergency situation, device button should be pressed so that the device captures the image along with the user information to the enrolled mobile numbers. The life of the child can be saved within no time.

The author describes [2]a wearable sensor badge is constructed from (hard) electronic components, which can sense perambulatory activities for context awareness. A wearable sensor jacket is used with latest techniques to form (soft) fabric. Stretch sensors are placed to measure upper limb and body movement. Worn as clothing, the sensors give the required information.

The author describes [3]] an analysis of skin resistance and body temperature was made. Body position is determined by a triple axis accelerometer. After acquiring raw data activity recognition is done and a specialized machine learning algorithm is employed in this process. Real-time data is achieved by sending sensor data to a Cloud Platform. Then the data is analysed using MATLAB. The jacket consists of different sensors for to detect the activity of the body

The author describes[4] there are two modules namely Wi-Fi and audio play back module. The details of the baby can be sent to parents through Wi-Fi module. The audio play back module produces the recorded sound different sensors are accelerometer sensor, cry sensor, temperature sensor gas sensor, flame sensor and PIR sensor. The embedded system consists of microcontroller; accelerometer detects the angular position and movement of the baby.

REFERENCES

[1] AkashMoodbidri, Hamid Shahnasser (Jan 2017) ‘Child safety wearable device’, International Journal for Research in Applied Science & Engineering Technology, Vol. 6 Issue II, IEEE, pp. 438- 444.

[2] Jonny Farringdon, Andrew J. Moore, Nancy Tilbury, James Church & Pieter Biemond .D (october 1999) ‘Wearable Sensor Badge & Sensor Jacket for Context Awareness’, International symposium on Wearable computers, ISWC 99 proceedings of the 3rd IEEE pp107.

[3] AnandJatti, MadhviKannan, Alisha,RMVijayalakshmi, P ShresthaSinha (May 20-21, 2016), ‘Design and Development of an IoT based wearable device for the Safety and Security of women and girl children’ IEEE International Conference On Recent Trends In Electronics Information Communication Technology, India, pp. 1108-1112

[4] Chitra, jewel jose, sandeep, shirinidhishetty, A. (2018) ‘smart safety jacket for smallbaby’ yenepoyainstittite of technology, moodbidr.