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Child Safety Wearable Device

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Abstract: *This paper discusses the concept of wearable device for child safety. The purpose of this device is to help parents to locate their children with ease. Right now there are many wearable devices in market which help to monitor the daily activity of child and also use to find child using WIFI and Bluetooth which is unreliable source of medium between children and parents. The main highlight of this project is to have an SMS text enable communication between children and parent by using GSM and GPS Module. GPS is use to track the location and GSM Module is used for communication from one end to another end. The parent can send the text with specific keyword such as LOCATION, TEMPERATURE, DISTRESS SIGNAL, BUZZER .*
The wearable device will revert with text containing the real time accurate location of the children and also provide the surrounding temperature. The secondary measure implemented was using buzzer present on the wearable device which is activated by the parents via SMS and Text should display the SOS signal brightly and sound an alarm and help by the surrounding people.

Keywords: *Child Safety, Wearable, Portable.*

I. Introduction

The key aspect of this project that lost child can be helped by the people around the child. This can play a vital role in the child's safety until reunited with the parents. Most of the wearable devices available for children in the market are focused on providing the activity and physical status and environmental condition etc. of the child to the parents via Bluetooth and WIFI but these are very unreliable source to transfer the information because they are limited in range. WIFI has a limited range of 50metres and Bluetooth has a limited range of 10metres.

II. Ease Of Use

We have made software for parents they didn't have to write anything just press the button which directly give the location of child and else.

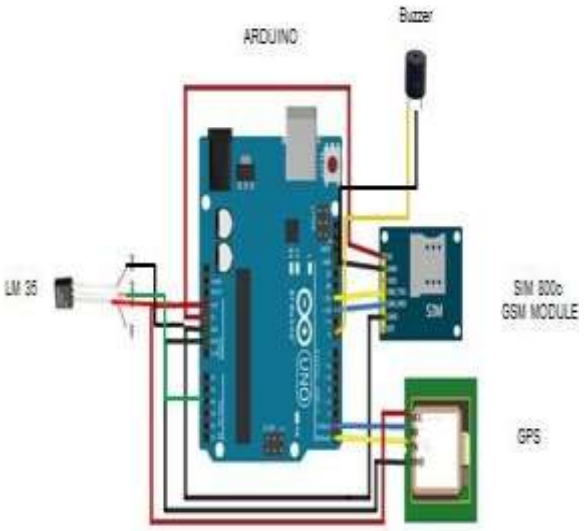
A. Maintaining the Integrity of the Specification

Our child safety device specifications are as follows.

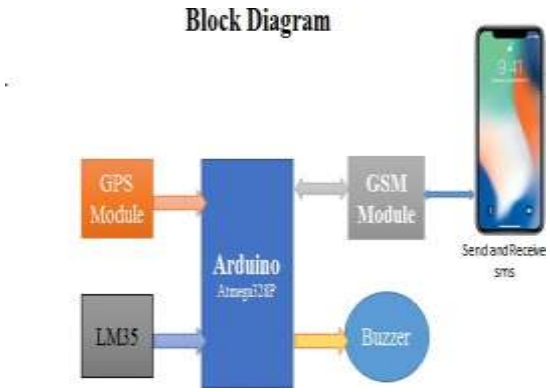
1. To track the LOCATION
2. Indicate the distress signal
3. Indicate the child surrounding temperatures
4. The child also helped by near by spectator due to presence of buzzer.

III. System Design And Architectures

A. Circuit Diagram



B. Block Diagram



C. Abbreviations and Acronyms

LOCATION	- LOC
TEMPERATURE	- TEMP
BUZZER	- BUZZ
GLOBAL POSITIONING SYSTEM	- GPS
GLOBAL SYSTEM FOR MOBILE	- GSM

D. Units

We are using TEMPERATURE in degree Celsius (°C)

IV. Conclusion

This device is also act as smart IOT device. It gives real time location, temperature and buzzer for their child safety.

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References

[1]. AakashMoodbidri, Hamid Shahnasser, "Child safety wearablez device," in IEEE Xplore , June 2017

[2]. B. Dorsemaine, 1. P. Gaulier, 1. P. Wary, N. Kheir and P. Urien, "Internet of Things: A Definition and Taxonomy," Next Generation Mobile Applications, Services and Technologies, 2015 9th International Conference on, Cambridge, 2015, pp. 72- 77.

[3]. H. Moustafa, H. Kenn, K. Sayrafian, W. Scanlon and Y. Zhang, "Mobile wearable communications [Guest Editorial]," in IEEE Wireless Communications, vol. 22, no. 1, pp. lO-l1, February 2015

[4]. S. Nasrin and P. 1. Radcliffe, "Novel protocol enables DIY home automation," Telecommunication Networks and Applications Conference (ATNAC), 2014 Australasian, Southbank, VIC, 2014, pp. 212-216

[5]. F. A. Silva, "Industrial Wireless Sensor Networks: Applications, Protocols, and Standards [Book News]," in IEEE Industrial Electronics Magazine, vol. 8, no. 4, pp. 67-68, Dec. 2014