

A Novel Approach for Monitoring the Children

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Abstract

Child safety have become a major issue in the current society. Many children are being kidnapped or suffering from many issues. Nowadays many parents go to jobs and are unable to monitor their child while travelling from home to school and vice versa. This project discusses about the latest technology evolved in the signal processing. This project proposes a new technique to monitor the school going children's and it is used to prevent them from kidnapping and from other sort of unfortunates. This project includes Global System for Mobile communications (GSM) technology to send alert call to parents regarding their children. This system also facilitates the parents by a camera that allows them to see their children's wellbeing or location for few minutes as soon as the children press the camera button that is attached with the system. This project is based on Internet of Things (IOT).

Keywords; *child safety, location, kid, kidnapping, alert message, alert call, security, child.*

I. INTRODUCTION

The point of the venture is to screen the kids going from home to class by sharing the area to their folks each 5 min. This additionally empowers their folks to see their kid if the youngster faces any setback by utilizing the camera which will be begun when the kid presses the press button. This gadget likewise contains receiver which will be utilized to record the voice of the youngster when kid experiences any issue. This camera will record video and take photos of the individual who is on the contrary side of the youngster. Guardians can follow their kid when he/she goes in an off-base area. This framework utilizes GSM and GPS to send the area data to their folks. The area of the kids will be imparted to their folks by means of ordinary messages. In the event that the kid faces any disaster or peril, at that point the alarm message will be send to their folks or watchmen either as missed call or ordinary message. This likewise empowers security of the youngster to the guardians who are working in organizations.

II. LITERATURE SURVEY

This paper [1] clarifies about following the kid utilizing Wireless Local Area Network (LAN) and Bluetooth gadgets. Right now, signal for an emergency response is appended which can be squeezed by the child in the event that he/she faces any issues or adversity. At the point when the kid presses the emergency signal the message will be send to the parent's portable number. This message will be sent to an application which ought to be now introduced in the cell phones. When the parent gets the message utilizing the GPS, they can see the area of the kid.

This paper [2] clarifies about following the kid utilizing android terminal. Right now, child's area is sent to the parent's as Short Message Services (SMS) when they are at serious risk. This framework likewise communicates something specific alarm if the kid is crying. This framework doesn't require any system association as the ready data about the child is send as typical messages to the parents. Utilizing the GPS, the area can be

followed. The area will be sent to the guardians just if kid is in harm's way or if the child cries.

This paper [3] clarifies about how the framework consequently works and updates the area of the child with no cooperation by them. This framework by and large requires a communication administration to refresh the area of the kid to their folks. At the point when web availability isn't accessible the area update is sent as typical instant messages. This encourages the kid to refresh the area indoor where GPS association isn't accessible. It refreshes the area to the guardians without the knowledge of the child. As it does not require any internet connectivity parents can easily use and monitor the activities of the child using the normal message that they have received from the child.

III. THE PROPOSED SYSTEM

We propose a framework that guarantees the security of the youngster by giving the area update of the kid to their folks each 5 min. This framework helps the guardians or watchmen to follow the area of their kids if their youngster is in harm's way. This gadget can likewise be utilized to screen the exercises of the kid inside the school premises. Guardians can even know the exercises of their youngster in any event, during school hours. This gadget additionally records the voice of the kid if the kid faces any incident. This voice message will be sent to their folks with the goal that they can do the needful to ensure their youngster. This gadget contains a camera that helps the guardians or watchmen to see the exercises of their youngster. This recorded video will be sent to their guardians through messages. The area of the kid will be refreshed each 5 min to their folks so as to ensure the security of the kid to the guardians. This additionally contains a microchip that can be utilized to store the area data so that in the event that there is any sign issues happening, at that point the past area of the kid will be sent to the guardians once the gadget get signal.

IV. EXPERIMENTAL RESULTS

This gadget screens the exercises and offers the area of the kids with their folks or watchmen. This uses GSM to find and impart the area of the kids to the guardians. This gadget contains an amplifier that assists with recording the voice of the youngster if there should arise an occurrence of any disaster. These voice messages will be sent to their folks in the event of any crisis. This contains camera that records the video of the area where the kids is available. A press button is given that is utilized to initiate the camera. The control of the catch is finished by the kid. When the kid presses the button the catch camera will be actuated and it begins recording the video. It additionally catches the photographs and sends it to their folks or watchmen. On the off chance that the youngster faces any setback, at that point quickly an alarm message will be sent to the enrolled number of their folks. The ready data will be sent to their folks as ready call or ready messages with the goal that it will assist the guardians with rescuing their kid from threat.

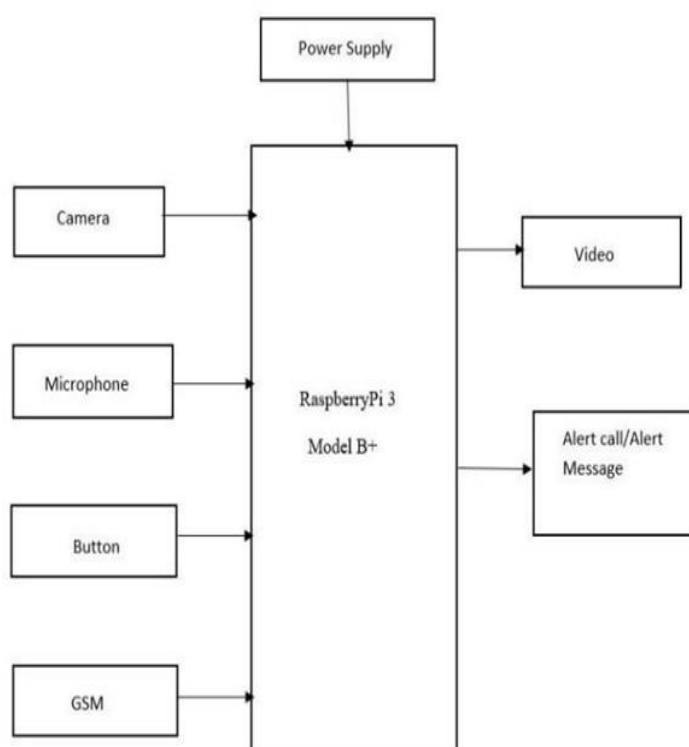


Fig 1 Block diagram of child tracking device

4.1 GSM (Global System Monitoring)

Global System Monitoring (GSM) is for the most part used to follow the present area of the child and send area of kid to their folks. This will screen the area of the kid persistently and send the update of the area of the kid to their folks each 5 min. This data is commonly sent as messages. In the event that the kid faces any issue or if the kid is in peril it will send a ready data either in the structure ready call or ready messages.



Fig 2 GSM module

4.2 RASPBERRYPI 3 MODEL B+

The Raspberry Pi 3 Model B+ is the most recent item in the Raspberry Pi 3 territory. It contains a refreshed 64-piece quad center processor running at 1.4GHZ with worked in metal warmth sink, double band 2.4GHZ and 5GHZ remote LAN, quicker Ethernet of around 300 mbps. It for the most part used to build the exhibition of the framework and to give quicker execution. This assists with giving the area data of the kid in a quicker and effective manner. This can likewise be utilized to refresh the area data constantly in an exceptionally compelling manner so as to guarantee the security of the child.



Fig 3. RaspberryPi 3 Model B+

4.3 GPS RECEIVER

Global Positioning System (GPS) is commonly used to find the present situation of the child. This collector will find the kid with precise latitude and

longitude. In the wake of finding the specific latitude and longitude it will send it to the enlisted parent's versatile number. This GPS collector can be utilized to follow the area in a quicker and effective way. Utilizing GPS beneficiary, the precise area of the child can be gotten to effectively.

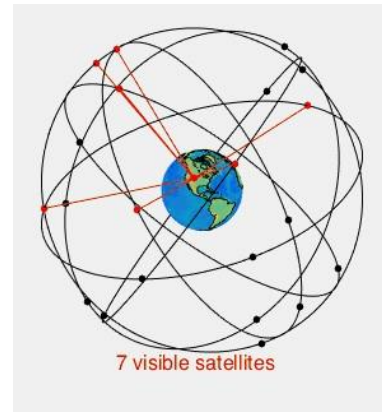


Fig 4 Satellite location tracking through GPS

4.4 CAMERA AND MICROPHONE

Camera is used to provide facility to the parents or guardians to monitor and view the activities of the children in the form of video. This will be activated by pressing the button attached to the device and this will be kept on for about 5min. This helps the parents to view the strangers who interact with their child. These videos will be sent to the parents through emails. Microphone is used to record the voice of the child and it will be sent to the parents in the form of alert message if the child faces any danger.

ERD EYE



Fig 5 Micro Camera



Fig 6 Microphone

V. RESULTS AND DISCUSSIONS

In the present age dealing with kid in a decent and wellbeing way is testing task for all the parent's as many of them go to work these days. So as to help such guardians who are going to employments this

framework can be utilized which will assist them with keeping track of their wards and furthermore screen their exercises. This gadget assists with distinguishing the child on the off chance that he/she is missed in a group by utilizing the alarm message that is sent to the guardians. This sends the area update as SMS with the goal that guardians can follow the area of their ward by utilizing GSM and GPS. These associations will give the specific scope and longitude area of the ward to their parents.



Fig 7 Acknowledgement from child and latitude and longitude location tracking

VI. CONCLUSION

The Android based constant answer for track the specific arrangement of the missed child is actualized utilizing Raspberry Pi B+. It gives a parent's to explore their ward effectively. This framework could oversee numerous kids effectively; give better security arrangement against suspicious people. Further it very well may be stretched out to act in numerous constant applications, for example, fixing it to ID card to the kid future work can be reached out by including highlights like camera and sending the image of the area to the parent's module or parent's versatile. This can likewise be reached out by giving voice sound account of the kid and sending it to the guardians if incase the kid is at serious risk. Utilizing GSM, the specific area of their ward can be recognized by the guardians which causes them to safeguard their youngster from any threat. This framework additionally ceaselessly refreshes the area of the child to the guardians so as to guarantee wellbeing and security of the kid.

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