# **Avoidance of Interrupt on Ascent of Various Technologies in Feminine Tracking System**

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Abstract. In recent accent women and girls safety are questioned to be in risk. Crime against them got increased not only in India, problem occurs in all over the world. Tracking systems are in need for an hour and plays a vital role towards women/ girls safety concern. Latest technologies and devices involves accurate live tracking with women still crimes against are in an increasing ratio. These crimes should be decreased by providing more protection measures on the safety of the women/ girls. Protection measuring dependency is completed towards tracking system via finding location, voice recognition, and video surveillance. Purpose of location capturing, tapping projection via video surveillance based on the common forms of tracking a person. Here jammer misleads the purpose of tracking to overcome this interruption current technologies is introduced and how this works in tracking system are discussed by considering the latest devices.

**Keywords;** Anti-jamming, GPS (Global Positioning System), GSM (Global System of Mobile Communication), Jammer, Video Surveillance

## 1. Introduction

Tracking system is entirely a preventive measure for capturing the live location of the individual. Monitoring the women on day to day basis or movement is not the easy process since it requires more live storage on server. This tracking system gives recording of the individual by data of the position and monitor them both indoor and outdoor environment. Location, image and video are the peak term of tracking women

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in an individual way. Location is tracked using GPS(Global Positioning System) satellite navigation, Communication is carried out through GSM(Global System for Mobile Communication), image is processed and covered by camera, and video surveillance is formatted through the camera projection in various tracking system or devices.

If a women got kidnapped and taken to different location or places, Live tracking takes place in a sequencial manner still the interruption may occur either by the kidnapper or by any rural area poor network connection in communicating data. In this scenario, there is another option to overcome the problem occurrence that is antijamming technique. This technique will pass on the third signal to process and overcome the reverse process in the new signal wire passing.



Fig 1.Tracking System - Sequencial communication

Two signal wires are passing while the interruption of jammer takes place. One is communication wiring and other one is interrupt of signal. To overcome this situation third wiring should be processed namely anti-jamming signal which stops the interrupt by reverse processing of data signal through the second signal using parallel recreation concept.

## 2. Literature Review

Two signal wires are passing while the interruption of jammer takes place. One is communication wiring and other one is interrupt of signal. To overcome this situation third wiring should be processed namely anti-jamming signal which stops the interrupt by reverse processing of data signal through the second signal using parallel recreation concept. The nature camera has distinguished the area and bearing of every individual in the space, as well as the place of the moving robot. The robot is then controlled to move and follow the individual's development in light of the individual's area and direction, copying the demonstration of moving camera following his/her face. [1]. Proposed plan will manage basic issues looked by woman and will assist with addressing them with innovatively sound hardware and thoughts. The value of this work is it not just gives wellbeing and it likewise gives security by implies of self-preservation system. The wrongdoing against the ladies can be currently finished up with the assistance of genuine framework execution of the proposed model [2].

This procedure further uses the picture also ready message to illuminate the family and police work force. In any case, this method is viable just with the accessibility of advanced cell to the casualty and the contact work force. Consequently, there is a scope for additional enhancements by utilizing GSM (Global System for Mobile Communication) and GPS(Global Positioning System) perspectives in the methodology [3]. The proposed women wellbeing gadget targets demonstrating total security to ladies in current situations. The finger impression is utilized as extraordinary identifier for the client so nobody can create a misleading problem and furthermore to guarantee that alert is brought distinctly up in pressure circumstances. The paper presents the model of a savvy gadget for women security, execution measurements must be considered for additional investigation to demonstrate its productivity [4].

Step by step innovation progression are made in everywhere the world to turn the enormous eyes towards modernized innovation with the six sense by obtaining the following common home this gadget would be developed with nano method [5]. The framework looks like an ordinary wearable gadget which when initiated, tracks the spot of the ladies utilizing Bluetooth low energy and sends crisis messages utilizing GSM (Global System for Mobile Communication), to contacts and the police control room. The proposed work shows an adaptable and interoperable blend of a gadget what's more application that will decorate and enable the residents and fill in as a multifunctional gadget [6].

The two apparatuses can give ladies' security freely. However it is normal that most extreme security will be guaranteed while utilizing the full framework together. The size of the shrewd band planned here is somewhat greater, so it very well may be somewhat hard for the client to wear the band. Later on, we will attempt to make the band easy to understand by utilizing 3D printing and nanotech [7]. This gadget is to be turned on ahead of time by women on the off chance that she is strolling on a desolate street or some dull rear entryway or any far off region. For this situation regardless of whether somebody hits the lady or the women tumbles down and get oblivious, she doesn't have

to do anything, the framework doesn't get her finger check in 1 moment and it consequently begins the double security included [8].

The paper presents the model of a savvy gadget for women wellbeing, execution measurements must be considered for additional examination to demonstrate its productivity. The proposed women wellbeing gadget targets demonstrating total security to ladies in current situations. The finger impression is utilized as special identifier for the client so nobody can create a phony problem and furthermore to guarantee that alert is brought uniquely up in pressure circumstances [9]. A smart band well being gadget that gets initiated tapping on the screen twice. Once actuated, it sends the GPS area to the predefined contacts and police control rooms. It additionally has heartbeat rate sensor and temperature sensor to measure the beat rate and internal heat level of the individual. The power sensor gets initiated when the gadget is tossed and it sends the current area of the person in question [10].

This work expresses the different utilization of splash system and shock instrument by self protection to the wrongdoer which thusly helps of great importance to deal with the circumstance of grabbing and provocation and after that signal will be checked. When the signal got checked data on the spot and hazard will be ship off the parent's portable number [11]. This system gives an alternate methodology on following ladies by double band and signal for an emergency response. When the signal for an emergency response is checked the message will be ship off the police headquarters and different numbers entered in default system. Battery-powered batteries are likewise given not to break the utilization of double band [12].

This global positioning framework assists with following the three distinct sensors yield particularly temperature sensor, movement sensor and heartbeat rate sensor at the hour of hazard alert consequently ships off the beneficiary individual by getting refreshes from the medical issue [13]. Mishap anticipation framework has been embedded in vehicle, when the driver began to feel sleeping the alert will beat and quickly a message and missed call is passed to the driver. By utilizing these different alarms, the driver and traveler in the vehicle is protected from getting mishap [14]. Bus tracking system is started with conspicuous appearance time forecast with inbuilt GPS, that catches appearance season of the transport and send something similar through SMS with appearance time and minutes of the transport with conspicuous impacts of following any individual in voyaging may be ladies or kids from any place they set up with transport go with the assistance of guide and GSM to give message to the individual and other individual connected with family like guardians or gatekeeper [15].

## 3. Methods and Materials

Tracking an individual would be the toughest thing in a lively basis but using GPS it become very easy and progressive. Now a day more number of tracking system is developed for woman, considering their safety and security on travelling day or night time. In this tracking environment, there are number of operating systems, different technologies to implements more functionality. These women tracking system consists of various operating system from small to big especially microprocessors, micro controllers, micro computer, mini-computer and inbuilt technologies such as GPS, GSM, camera, video, audio and wifi which are elaborated as follows

#### A. PIC (Peripheral Interface Controller)

PIC is a family of microcontroller derived from PIC 1650. Expansion of PIC is Peripheral Interface Controller and currently it is expanded as Programmable intelligent Computer. PIC devices are popular with both industrial developers and hobbyists due to their low cost, wide availability, large user base, an extensive collection of application notes, low cost or free development tools, serial programming and re-programmable flash-memory capability.



Fig 2 PIC Microcontroller

#### B. Arduino mega

This microcontroller is based on AT-Mega where 2560 is an updated version which has 54 digital I/O pins, 16 Analog inputs, USB connector, and a reset button. AT-Mega will support working by adding everything needed to run which will connects to the computer with USB cable, AC/ DC adapter and battery to start. In initial times of

tracking system, arduino was used by many people to develop kits or devices. Majorly used microcontroller of earlier tracking system or devices which is also less expensive with multiple usage of technologies integrated into single unit as one.



Fig 3 Arduino Mega

#### C. Raspberry pi s

Raspberry Pi is a progression of little single-board PCs created in the United Kingdom by the Raspberry Pi Foundation in relationship with Broadcom. It is broadly utilized in numerous areas, for example, for climate monitoring due to its minimal expense, measured quality, and open plan. It is normally utilized by PC and electronic specialists, because of its reception of HDMI and USB gadgets. The Raspberry Pi is the smash hit British computer. As of May 2021, a bigger number of than forty million sheets have been sold.

Most Personal Computers are made in a Sony plant in Pencoed, Wales while others are made in China and Japan. In this mini-computer, number of enabled devices would be made and progressed with sequencial tracking on a lively manner with all inbuilt technologies. This mini-computer after May 2021 changes the entire market of personal computer, people preferably purchased raspberry rather than any PC or laptop. Due to less expensive, compact to carry, and process easily by people with inbuilt technologies.



Fig 4 Raspberry pi

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#### D. GPS (Global Positioning System)

GPS tracks the location through direct satellite navigation. The GPS doesn't need the client to send any information, and it works autonomously of any telephonic or Internet gathering, however these innovations can improve the convenience of the GPS situating data. The GPS gives basic situating abilities to military, common, and business clients all over the planet. GPS works as a navigator in any tracking system. In women tracking system, GPS plays a vital role with this technology no tracking system is developed without GPS. Since it cover the live location finding and update the same in 5 seconds once using the values of both latitude and longitude through satellite.



Fig 5 Global Positioning System

## E. GSM (Global System for Mobile Communication)

The Global System for Mobile Communications (GSM) to depict the conventions for second-age (2G) advanced cell networks utilized by cell phones like cell phones and tablets. The GSM standard initially depicted an advanced, circuit-exchanged organization streamlined for full duplex voice communication. This extended after some time to incorporate information correspondences, first by circuit-exchanged vehicle, then, at that point, by parcel information transport through General Packet Radio Service (GPRS), and Enhanced Data Rates for GSM Evolution (EDGE). GSM directly would not send message and call rather it will send message once and GPRS will give missed call technology to the communication of the end user.



Fig 6 Global System for Mobile Communication

#### F. Camera & Video Surveillance

Surveillance cameras are accessible in a wide scope of styles and elements, and they are a typical part in a security framework. Web security frameworks or IP cameras utilize the Internet by systems administration to send and get information. They are genuinely simple to introduce and interface with your framework, and you can see live camera takes care of whenever with free portable applications for cell phones and tablets. IP cameras can be introduced in practically any area and can screen the inside as well as the outside of an office. Cameras can likewise be utilized to alarm security/assurance officials to react to dubious exercises or people.



Fig 7 Camera & Video Surveillance

## G. Voice Recognition

Voice or speaker acknowledgment is the capacity of a machine or program to get and decipher correspondence or to comprehend and complete spoken orders. Voice acknowledgment has acquired unmistakable quality and use with the ascent of AI and wise aides, like Amazon's Alexa, Apple's Siri and Microsoft's Cortana. In tracking system of women, voice recognition is used to detect sound from the tracking front end human. Audio recognition either processed with microphone and a small speaker in some voice processing devices.



Fig 8 Voice Recognition with Microphone

#### H. Wi-Fi (Wireless Fibre)

In adapting the local wireless fibre connection process of the communication from the kidnapped women to the other end person will take place. This wifi facilitates the GSM and GPRS to send the communication message and missed call using the internet signal in and around the tracking system. These are the most generally utilized PC networks on the planet, utilized all around the world in home and little office organizations to interface work area and PCs, PCs, cell phones, savvy TVs, printers, and shrewd speakers together and to a remote switch to associate them to the Internet, and in remote passageways out in the open spots like cafés, inns, libraries and air terminals to give the public Internet admittance to cell phones.



Fig 9 wifi module

## 4. Results and Discussion

Women tracking system majorly depends on location tracking, voice and video surveillance. If these technologies don't work while tracking women after kidnapping, progress of the women will also stop. Signal interruption will be mainly caused by signal jammer which stops the entire signal in and around the area where the offender or kidnapped victim stays. A jammer may seem like something out of a film, yet somebody may have one close to you at the present time! This is what it is and why you may require one, as well. It is terrifying time in the event that you are somebody who esteems security. This would never again realize who is checking out what you search and who they're offering that data to. With the approach of phones and robots, it has become hard to try and go outside without the potential existing that women are being recorded or watched.

Fortunately women are in a good company in your longing for security through protection. As of late, innovation like a Wifi jammer, drone jammers, mobile jammers and PDA jammers have hit the market by interrupting the signal of such tracking system associated among women. Jammers are a transmission obstructing gadget which communicates synchronized radio waves at a similar recurrence as a gadget like a wireless or robot to obscure its transmission.



Fig 10 Signal Jammer

Jammers are fundamentally used to deliver these gadgets pointless and are being utilized by organizations and people with expanding recurrence. A jammer is a gadget that blocks transmission or gathering of signs, normally by making some type of impedance at a similar recurrence goes that use. Thus, client will either lose the sign or experience a critical loss of sign quality. Once jammer is initiated GPS, Wifi, 3G and 4G signals will be blocked, so after this processing tracking system will not receive signal to pass on communication, provide location latitude and longitude value and sending sequencial video capturing.

Protection of GPS gets from jammers is finished by a gadget called as the interruption avoider "Null shearing". Null shearing takes into consideration transmission/gathering receiving wire cluster to coordinate zero [Null] and forest all for remote correspondence sticking. Remote beneficiaries with Anti-Jamming is potential conveying information within the sight of sticking obstruction containing communicating a first sign conveying the information from a transmitter to beneficiary at the expected pace of information stream, deciding at the recipient of the primary sign has been debased by the sticking points of interaction, sending an answer from the collector to the transmitter, showing that the main sign was ruined, receptive to the answer sending second sign conveying information from transmitter to the beneficiary without ease off information stream rate and handling. First and second sign at the collector is to recuperate the information.



Fig 11 Anti- Jamming Technique

In Fig 11, When the communication takes place from front end user(women) to the base station to communicate to the end user but the jammer is interrupting the communication channel by stopping the signal. In this interruption, the anti-jamming techniques nullify the shearing by including the relay from 1 to n and reverse the entire process. Then the null shearing – relay with pass the signal to base station(signal) and then pass the communication of location, image capturing and video detection to the receiver end person, it is either police control room or parents of the women.

## Conclusions

Tracking system would be a justifier for women and act as a preventive measure for kidnapping or any other crime against to them. If there is any interruption of signal at the crucial point of their kidnapping attempt, then the women will become the victim of the offender. This issue become highly risk factor for the women life. Every single woman tracking system framework which is under 24 hours reconnaissance would not work entirely constantly or any interference will be happened on known or obscure premise. To avoid and overcome such situation, three type enabling signal alike antijamming should be initiated. Feminine security and safety is completely depending on tracking system or devices which they are carrying. Reversing process of anti-jamming would act as a remedy for the women in the time of tracking system interruption. Finally it overcome the communication processing and work perfectly to alert the other end person on timely basis and save the women from before any bad happen to them.

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