



## Mechanism to Provide Security for Women by GSM and GPS

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### Abstract:

This project describes about a smart security system for women. Women all over the world are facing much (dishonest and wrong) physical (teasing and threatening over and over again in a mean way). This buys (and owns) a fast speed due to lack of a good (secretly recording/watching people) system. Our project is a trip/business to resolve this problem. We are using two objects wrist band and sights to see/eyeglasses that are used in day to day life. The system looks like a band on the wrist incorporated with pressure switch as an input which when activates shows the result Screaming alarm and tear gas (machine/method/way) are (forced (on people)/caused an inconvenient situation) for self-defending purpose and send location and messages to the emergency contacts.

### I. Introduction:

An inserted (solid basic structure on which bigger things can be built) is a (like nothing else in the world) reason PC (solid basic structure on which bigger things can be built) that is meant to (sing, dance, act, etc., in front of people) little arrangements of assigned exercises. Installed (solid basic structures on which bigger things can be built) go back as ahead of schedule as the late 1960s where they used to control (related to electrical devices that make machines move) phone switches. The main absolutely clear inserted (solid basic structure on which bigger things can be built) was the Apollo Direction PC created by Charles Draper and his group. Later they discovered their way into the military, medicine/healing sciences and the (airplane-related things) and vehicle businesses/projects.

Today they are broadly used to fill different needs like: Network gear, for example, firewall, switch, switch, et cetera. Today in the current worldwide situation, the most important question (or investigation) in each young lady's mind, (thinking about/when one thinks about) the always rising small step forward/upward of issues on ladies encouragement (to fight) in later past is mostly about her wellbeing and security. The main idea commonly visiting each young lady is the point at which they will have the ability to move boldly in the city even in odd hours without stressing over their security. This paper proposes another point of view to use invention of new things for ladies security. "848 Indian Ladies Are Irritated, Attacked, Killed Each Day!!" That is a path past huge/extreme number! We propose a thought which changes the way everybody thinks about/believes ladies wellbeing. A day when media communicates more ladies' (things that were completed) instead of nagging, it's a deed completed! Since we (people) can't react appropriately in basic facts or conditions (that surround someone), the needed thing for a gadget which naturally faculties and saves (from the trash) the death is the wander of our thought in this trip/business.

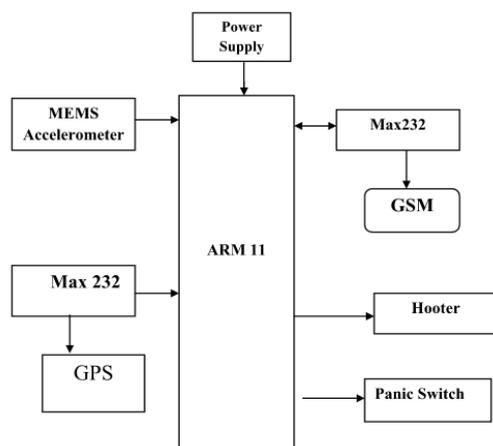
### II. Proposed Method:

We propose to have a gadget which is the making up (from an argument) of different gadgets, equipment includes a wearable "Brilliant band" which (in an always-trying way) speaks with Smart telephone through GPS and GSM. The application is customized and stacked with all the needed/demanded information with the use of sensors which incorporates Human conduct and responses to different facts or conditions (that surround someone) like outrage, fear (of a terrible future) and feelings of being worried and upset.

This creates a flag which is transmitted to the watching/ noticing/ celebrating/ obeying area which contains/makes up of raspberry pi module. We propose to own a tool that is that the (combination of different things together that work as one unit) of many devices, hardware includes of a wearable "Smart band" that forever communicates with (reasonable/showing good judgment) phone through GPS and GSM. the appliance is programmed and loaded with all the desired knowledge with the use of sensors which has Human behavior and reactions to completely different things like anger, concern and fear and stress. This creates a sign of sickness that is transmitted to the (participation in a custom/following rules) section that consists of raspberry pi module

**ADVANTAGES:**

- Safe and secured
- (very close to the truth or true number)
- Easy to put into use and low value way of doing things.



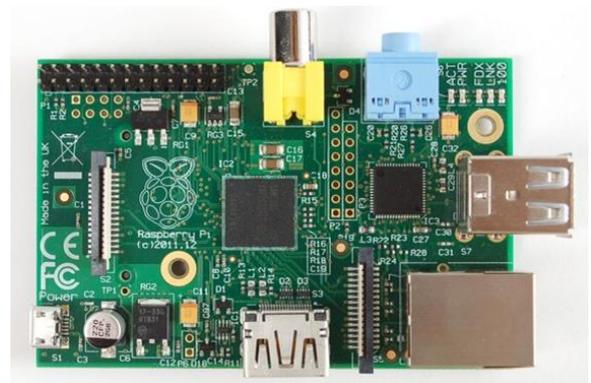
**Fig. Block diagram (Smart band section)**

**A.ARM MICROCONTROLLER:**

ARM could be a 32-bit reduced instruction set computer (RISC) processor (related to the beautiful design and construction of buildings, etc.) developed by the ARM Corporation. ARM processors possess a novel combination of options that produces ARM the best standard embedded design now/recently. First, ARM cores area unit terribly easy compared to most other choice general processors, which hints that

they'll be factory-made employing a (compared to other things) little range of transistors, fully use (for profit) lots of area on the chip for computer program clearly stated/particular macro cells. A typical ARM chip will contain many (off to the side) controllers, a digital signal processor, and a few amount of on-chip memory, together with Business partner in Nursing ARM core. Second, each ARM ISA and pipeline style area unit geared toward (making something as small as possible/treating something important as unimportant) energy use -- an extremely important demand in mobile embedded systems. Third, the ARM design is very modular: the only necessary element of Business partner in Nursing ARM processor is that the number pipeline; all different elements, together with stores (of secret things or data), MMU, floating purpose and different co-processors area unit facultative, which supplies lots of flexibility in building application-specific ARM-based processors. Finally, whereas being little and low-power, ARM processors give high performance for embedded computer programs.

**RASPBERRY PI BOARD**

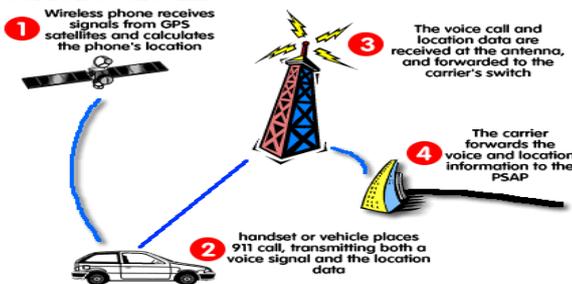


The Raspberry Pi could be a credit-card-sized single-board pc developed within the UK by the Raspberry Pi Foundation with the plan/purpose of (helping increase/showing in a good way) the teaching of basic applied science in colleges. The Raspberry Pi includes a Broadcom BCM2835 system on a chip (SoC), which has Business partner in Nursing ARM1176JZF-S 700 million cycles per second processor, Video Core IV GPU, and was (at first/before other things happened) shipped with 256 (million bytes) of RAM, later upgraded to 512 MB.

It doesn't clearly show/include a very important disc or solid-state drive, however uses Business partner in Nursing Mount Rushmore State card for booting and lengthy (or lengthened) storage.

**B. GPS RECEIVER:**

The Worldwide Positioning System (GPS) is a Worldwide (driving or flying a vehicle to somewhere/figuring out how to get somewhere) Satellite System (GNSS) created by the United States Department of Defense. It is the main completely practical GNSS on the planet. It uses a heavenly body of near 24 and 32 Medium Earth Orbit satellites that transmit exact microwave signals, which give power to GPS collectors to decide their present area, the time, and their speed. The GPS contains three sections: satellites circling the Earth; control and watching/noticing/ celebrating/ obeying stations on Earth; and the GPS collectors claimed by clients. GPS satellites communicate signals from space that are grabbed and told apart by GPS collectors. Every GPS receiver at that point gives (having height, width, and depth) area (scope, (how far east or west you are), and elevation) in addition to the time.

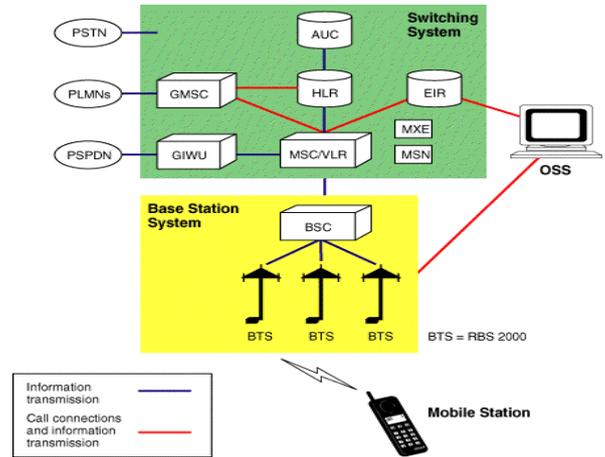


**Fig. GPS Network**

**C. GSM (GLOBAL SYSTEM FOR MOBILE COMMUNICATIONS)**

GSM (Worldwide System for Mobile interchanges) is a cell arrangement which hints that cell phones (connecting point/way of interacting with something) with it via hunting down cells in the prompt area. GSM systems work in four (many different kinds of people or things) (repeating event) ranges. Most GSM systems work in the 900 MHz or 1800 MHz groups. A few nations in the Americas use the 850 MHz and 1900 MHz groups on the grounds that the 900 and

1800 MHz (repeating event) groups were at that point selected/named.



**Fig. GSM Network**

**D. MEMS ACCELEROMETER:**

An acceleration-measuring device is a (made much smaller) scale (related to electrical devices that make machines move) gadget that measures speeding up strengths. These strengths might be static, almost the same as the consistent drive of gravity pulling at our feet, or they could be energetic/changing - caused by moving or vibrating the acceleration-measuring device. There are many sorts of acceleration-measuring devices created and showed in the writing. By far most depends on piezoelectric gems, yet they are too huge and to awkward. People tried to create something littler, that could build relevance and began looking in the field of microelectronics. They created MEMS (small scale (related to electrical devices that make machines move) (solid basic structures on which bigger things can be built)) acceleration-measuring devices.

**E. LINUX OPERATING SYSTEM:**

Linux or GNU/Linux is a free and open source programming working (solid basic structure on which bigger things can be built) for PCs. The working (solid basic structure on which bigger things can be built) is a gathering of the basic guidelines that tell the electronic parts of the PC what to do and how to function. Free and open source programming (FOSS) hints that

everybody has the opportunity to use it, perceive how it works, and changes it. A Linux-based (solid basic structure on which bigger things can be built) is a hidden/private Unix-like working (solid basic structure on which bigger things can be built). It guesses (based on what's known) quite a bit of its extremely important outline from standards built up in Unix in the middle of the 1980s. Such a (solid basic structure on which bigger things can be built) uses a solid part, the Linux portion, which handles prepare control, systems management, and fringe and document (solid basic structure on which bigger things can be built) get to. Gadget drivers are either incorporated honestly/easily with the piece or included as modules stacked while the (solid basic structure on which bigger things can be built) is running.

**F. QT EMBEDDED FRAME WORK:**

Qt is a cross-stage application system that is broadly used for creating application programming with a graphical UI (GUI) (in which cases Qt is named awidget toolbox), and furthermore used for creating non-GUI projects such ascommand-line devices and consoles for servers. Qt uses standard C++ yet makes broad use of a (like nothing else in the world) code generator (called the Meta Object Collector/maker, or moc) together with a few macros to improve the language. Qt can also be used as a part of a few other programming (different versions of a language) by means of language ties.

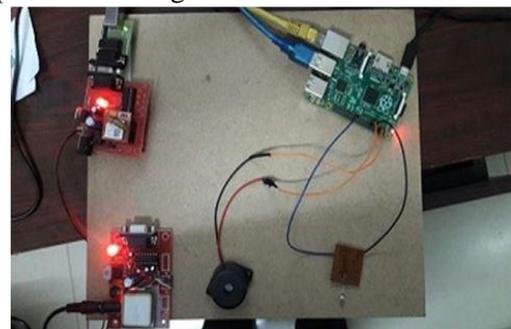
**III. WORKING PRINCIPLE:**

In this trip/business, we are giving the whole showing/representation on the proposed (solid basic structure on which bigger things can be built) design. Here we are using Raspberry Pi board as our stage. It has an ARM-11 SOC with coordinated (things that attach to computers) like USB, Ethernet and (one after the other) and so on. GPS module has four association pins, to be specific: Vcc, GND, TX and RX. It needs/demands a power input 5V 100mA ,which can be given using any reasonable supply source.. The GND stick of the GPS module and the GND stick of the RPi board (sixth stick) should be grounded appropriately. The RX stick of Pi, i.e the tenth GPIO

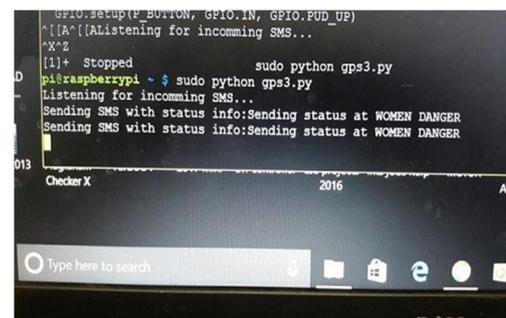
stick on the RPi board, should be connected with the TX stick of the GPS module. Once the association are made and the modules are fueled, secure/make sure of that the GPS module is kept in a place where the GPS has an absolutely clear view to the sky or possibly almost a window for solid flag (quality of deserving trust because of honesty, etc.). Embed a SIM card in to the GSM modem and make the appropriate associations as appeared in the figure. The transmission and gathering pins should be connected in a switch arrange and the ground pins must be shorted. At the point when our computer program begins running it at first check every one of the gadgets and valuable things which it needs are (easy to get to, use, or understand) or not. After that it check the association with the gadgets and offers control to the client.

**IV. RESULT:**

The proposed system was fully developed and tested to (show or prove) its (ability to actually be done) and effectiveness. The (pictures made by computers of their screens) of the smart home app developed has been presented in Figure



**Fig. Hardware implementation**



**Fig. Output representation in the terminal**



This type of an idea being the first of its kind plays an extremely important role towards securing/making sure of Women Safety in the fastest way possible automatically. The proposed design will deal with very important issues faced by women in the recent past and will help solve them through (related to computers and science) sound gadgets.

#### V. Applications:

- Used for safety and security of woman.
- Woman can travel any place at any time without any fear.

#### VI. Advantages:

- As ARM11 CPU is used, future change is done easily according to our need.
- Safe and secured
- (very close to the truth or true number)
- Easy to put into use and low cost way of doing things.

#### VII. FUTURE SCOPE:

- The cost of ARM11 is more that's why in future we can put into use this system using ARM CORTEX A8, Medium-sized dog bone etc as well as updated processors with high frequencies will work fine.
- As the storage space is also less in future we can also record these live streaming data by connecting external memory storage.
- We can complete our project using wireless technology.
- In future we can provide more security to data by using (turning messages into secret code), (changing secret codes into readable messages) ways of doing things.

#### VIII. CONCLUSION:

The project " Mechanism to Provide Security for Women by GSM and GPS" has been successfully designed and tested. It has been developed by (combining different things together so they work as one unit) features of all the hardware parts/pieces and software used and tested. Presence of every module has been reasoned out and placed carefully this way adding/giving to the best working of the unit.

Secondly, using highly advanced ARM 11 Processor board and with the help of growing technology the project has been successfully put into use.

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