



**Special Edition**

NCASIT 2023, 29<sup>th</sup> April 2023

Department of Computer Engineering,

St. Vincent Pallotti College of Engineering & Technology, Nagpur,

## **IOT BASED WOMEN SECURITY DEVICE**

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**Abstract-**he world is becoming unsafe for women in all aspects. The crime against women are increasing at a higher rate. The employed women are feeling unsafe due to increasing crimes. This paper proposes a quick responding mechanism that helps women during trouble. When someone is going to harass, she can just press the button and the location information is sent as an SMS alert to few pre-defined numbers in terms of latitude and longitude. The controller used is A9G which includes GSM modem and GPS module It is interfaced with a push button . If the switch is pressed, the controller take the current location information from the GPS module and send those data to the predefined number using a GSM modem. The program is developed in 'Embedded C' language. The purpose of this project is to make a device to make women feel safe and quick approach for help.

**Introduction-** In today's 21<sup>st</sup> century it is very problematic and unsafe for any women to step out from their houses because the crimes against women in our country are increasing for eg. Harassment, abuse, violence etc., Many women are working in nightshifts. In places which are deserted or having less crowd women feels unsafe due to physical/ sexual abuse and a fear of violence. For these situations where women feel unsafe or are in danger we have made a device to safeguard women. This device uses a wireless sensor network which allows them to communicate to their close ones by sending them immediate help alert.

The microcontroller used in this is ESP8266 which is connected to A9G which includes GSM and GPS module it uses 'Embedded C' language. After pressing the Push button the GSM module will send the GPS location to the preferred Mobile Number through SMS.

**Goals and Objective-** The main purpose of our project is to provide safety to the women's from the dangerous zone. In this project we are providing facility to secure the women's by providing this kit. As the women feels insecure at that time she can press the button .GPS will calculate the latitude and longitude coordinates of that area. The controller read this value and send those data to the pre-defined number which is already saved in program.

**Method-**



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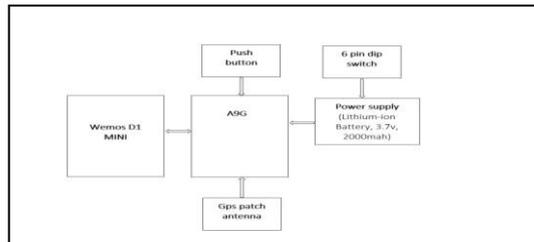
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**Design Overview:**

The Block Diagram of our proposed system is as shown below.

**Fig-1:** Block Diagram of Women Security System This System consist of following component which are listed below.



1. AI thinker A9G module
2. Wemos D1 Mini
3. 6Pin Dip Switch
4. Lithium-ion battery 3.7 V 2000 mah
5. Push Button

**A9G Module:**

Based on the RDA8955 chip, A9G is a comprehensive quad-band GSM/GPRS+GPS module. These functions can be used in a variety of applications, such as IoT, vehicle-mounted equipment, remote localization, and electric power environment monitoring. The device can have information transmission features like GPRS/GPS/SMS voice calls with just one mobile phone card. The A9G can also communicate with other devices via AT commands. Additionally, the module has 29 GPIOs and an integrated SDK.

Wemos D1 mini: A wireless 802.11 (WiFi) microcontroller development board in tiny is called the Wemos D1 mini. It converts the ESP8266 wireless microcontroller, which is extremely popular into a fully functional development board.

Push Button: When it is pressed then it will send GPS signal to the controller then controller will send the GPS co-ordinates GSM to the registered Number.

**Result-**

Fig 2 shows the hardware setup of system and Fig 3 shows the tracking location when user pressed the key that shows the final result.

Fig 2. Hardware setup of system





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**Applications-**

- For safety of women

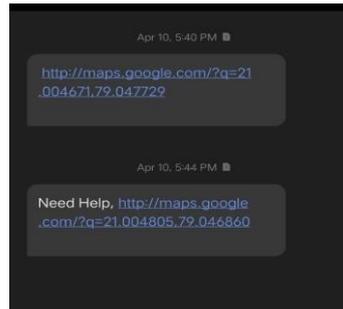


Fig 3. Tracking Location

- For child tracking during school hours
- Used in vehicle tracking and safety system
- Used for safety of elderly aged people

**Advantages-**

- Easy to carry
- Requires little or no maintenance
- Useful for all age groups or gender
- Compact and small in size
- Runs on battery requires no power source.

**Conclusion-**

The current requirement is for security and safety. The goal of this project is to create a device that is so small in size that it can benefit from a personal security system. The majority of the significant problems experienced by women will be addressed by this design, which will also make them feel secure. There is currently no other intended emergency technique, however existing technologies do offer the ability to track the location and send it to authorized or registered numbers. The suggested approach allows for observing the victim's latitude and longitude, which may then be followed using Google maps. This approach aids in lowering the rate of crimes against women.

Security for women is a crucial problem right now. With your assistance, we can put an end to these crimes.



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**Referances-**

[1] [https://www.academia.edu/36833967/WOMEN\\_SECURITY\\_SYSTEM\\_USING\\_GSM\\_AND\\_GPS](https://www.academia.edu/36833967/WOMEN_SECURITY_SYSTEM_USING_GSM_AND_GPS)

[2] [https://www.ripublication.com/irph/ijict\\_spl/ijictv4n8spl\\_01.pdf](https://www.ripublication.com/irph/ijict_spl/ijictv4n8spl_01.pdf)

[3] <https://ijret.org/volumes/2015v04/i17/IJRET20150417013.pdf>

**Future Scope-**

Device can further be modified with Camera for capturing image and recording videos also.