IoT Based Women Safety Device using ARM7
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Abstract:
Purpose of the project is to provide security for woman. In case of emergency situations woman will press an emergency button which will activates the GPS for location tracking and a SMS is sent to the police and family members of woman along with time.

Keywords: Women Safety, ARM7, IOT.

I. INTRODUCTION
Now a day’s attacks on woman is increasing day by day and in the case of where she can’t take a mobile and dial up to police or other family members, our proposal will be very much helpful in such cases in not only informing about attacks but also in giving the exact location of the women to nearby police station for necessary action. Women will be provided with a equipment which is not visible to others the equipment consists of GPS (Global Positioning System) module by which we can get the geographical location and these location values are displayed on the LCD (Liquid Crystal Display). In the case of any emergency conditions she can press a button once then the location information will be tracked and sent to police and family members so that she will be protected in proper time

II. METHODOLOGY
Figure 1 represents the methodology used in our paper. The device can be activated by just merely pressing the emergency button once. This device gets activated and the alarm starts ringing and also sends instant location with a message to the police and concerned family members. Figure 2 shows how the device looks like and when the emergency button is clicked, the device sends the message with instant location message to the police but we used any 3 random phone numbers as this is just a demo. The location is located using GPS module. The GSM Modem (sim 900) can accept any GSM network operator SIM card and act just like a mobile phone. The plus point of using this modem will be that you can use its RS232 port to communicate and develop embedded applications.

III. HARDWARE & SOFTWARE USED

<table>
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<tr>
<th>Hardware Requirements</th>
<th>Software Requirements</th>
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<tr>
<td>Micro Controller LPC2148</td>
<td>Embedded C</td>
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<tr>
<td>Power Supply</td>
<td>KEIL UV4</td>
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<td>GPS module</td>
<td>Avr isp flash</td>
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<td>Emergency switch</td>
<td>Express PCB</td>
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<td>LCD</td>
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<td>GSM modem</td>
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IV. PROPOSED SYSTEM
Figure 3 represents the circuit diagram of the device which we proposed in this paper. Using the ARM controller the device is designed in which the GSM, GPS is connected. The whole device just runs with total of 12v in which 5v are enough for the ARM to process. Figure 2 above represents the prototype of the device which we initially made and can be miniaturized in future for real time use. In this system, an alarm is also used and GSM module send the location to group of people (Here we used just 3 people working in this project)

V. BLOCK DIAGRAM

![Figure 1. Structure of the device](image1)

![Figure 2. Device after activation](image2)
VI. CONCLUSION

Our primary goal of this project is to ensure every woman in our society to feel safe and secured. According to the survey in India 53% of working women are not feeling secure. Figure 5. Output – message alert from the device when triggered. Women Safety Device and Application-FEMME Vol 9 (10) | March 2016 | www.indjst.org Indian Journal of Science and Technology 6 Figure 6. Storing numbers, Figure 7. Output message sent from hardware, safe - Women is working in night shift (Bangalore-56%, Chennai-28%, Hyderabad-35%, Mumbai-26%). In Overall 86% of working women in India, women facing hurdles are high in Delhi, Mumbai, Hyderabad, Kolkata and Pune comparatively to other places. FEMME can play a major role by providing women a safe environment in all situations for example (detecting hidden camera, physical threatened, harassed, robbery, stalked). Implementing real time application and a device, we can solve the problems to an extent. With further research and innovation, this project is used as a small wearable device like watch, pendant etc.

VII. REFERENCES


[7]. Gowri S, Anandha Mala GS. Efficacious IR system for investigation in textual data. Indian Journal of Science and Technology. 2015 Jun; 8(12):1–7