Anti-Abortion And Babaies Monitoring System

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ABSTRACT

A 2011 census shows that India has fewer and fewer girls, mostly because unborn female babies are being killed at a very high rate .many pregnant women abort their unborn child as soon as they find out it is a girl. In 1961 there were 976 girls for every 1000 boys under the age of seven.50 year later statistics shows that this figure has dropped to 914 girls. So to stop the sex-selective abortion we have to developed abortion tracking system, it may enough to stop the abortion of girls. The anti-abortion system includes two units a hospital unit and server unit .the pregnant women has to be registered using fingerprint connected to software which is linked to server PC via GSM. Thus progress of all babies of pregnant women monitored by regulatory authority. So no killing of female fetus and no illegal abortion.

Keywords-Hospital Unit, Server Unit, GSM, Finger Print Module

1. INTRODUCTION

Human Rights organization re accusing the govt.of not doing enough to stop the abortion of girls. Abortion is legal in India up to the 12th week of Pregnancy but the sex of child can be determined only much later .In the past clinics that can determine the sex of baby through ultrasound examination have emerged. Some of them offer package prices for tests and immediate abortions if they show that girl is on the way. A 2011 Census shows that girl is on fewer and fewer girls, mostly because of unborn female babies are being killed at a very high rate.

In 1961 there were 976 girls for every 1,000 boys under the age of seven.50 year's later statistics shows that this figure has dropped to 914 girls. Only china has an even lower ratio of boys to girls. Many pregnant women abort their unborn child as soon as they find out it is a girl.56 percent of Indian Districts have child sex-ratio of less than 915.Spreading to areas where sex-selective abortions were know to be negligible. Estimate of sex-selective abortions from 1980 to 2010 ranging from 4.2-12.1 million. The conditional Sex –ratio of the second birth when first born was girl fell from 906 per 1000 boys in 1990 to 836 per 1000 boys in 2005,a decline of 0.52% per year. This trend was also found to be significant after doing a linear regression analysis (P=0.002)[1].so these serious problem of abortion of girls can be stop to great extent by using anti-abortion tracking system so that no illegal abortions and especially no killing of female fetus which is a major concern in India today.
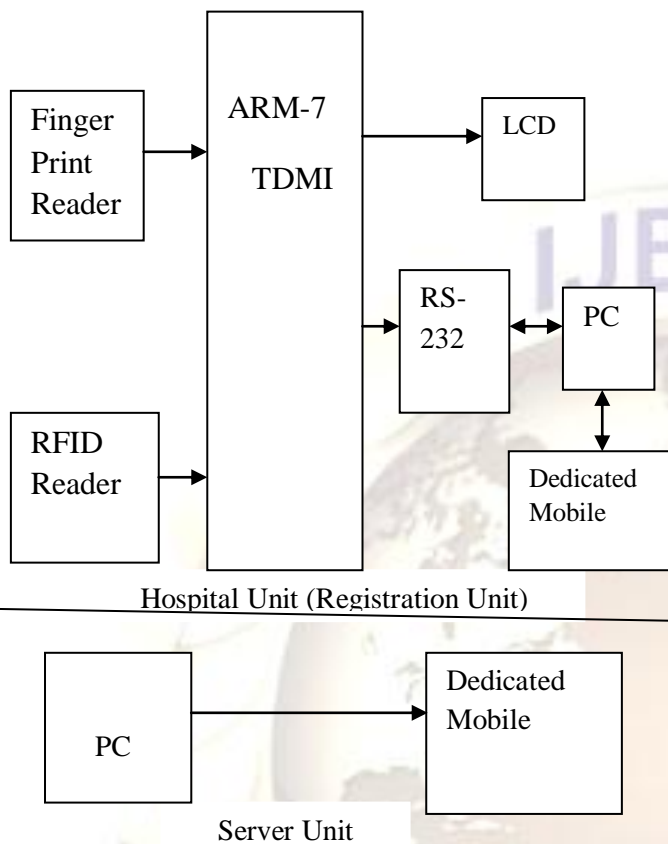
It includes two units' hospital unit and Server unit. The pregnant women have to be registered in first month of pregnancy using a fingerprint connected to software which is linked to a server PC via GSM. The pregnant women details are filled in the software and her fingerprint template also registered. This information is then sent to server unit which will store this information in its database. If pregnant women not registered then hospital not accepts such cases as they are consider illegal. in this way regulatory authority can monitor the progress of all the babies of pregnant women in $3^{rd},6^{th}$ and 9th month. So there are no illegal abortions and especially no killing of female fetus which is a major concern in India today.

2. SYSTEM ARCHITECTURE

The Pregnant Women comes to the hospital for their registration in the first month of pregnancy using finger print reader connected o software which is linked to server PC via GSM. The Pregnant women and her husband details name, permanent address etc are filled in the software. All these information then send to serve unit. The server unit will store this information n its database .after that whenever pregnant women comes for check up or sonography in $3^{rd},6^{th}$ and 9th month then she has to first press the fingerprint on the fingerprint module. The ARM Microcontroller sends the SMS with fingerprint template to server. The server then compare that fingerprint template with one's stored in its database. If the fingerprint matches then remaining information sent to the hospital unit indicating that these pregnant women registered. All hospital has to accept only registered pregnancy cases .unregistered cases will be considered illegal. In the 1st, 3rd and 9th month of pregnancy all the hospitals compulsory report the sonography results to the server. So that regulatory authorities can monitor progress of all babies and after the birth of baby up to five years it is compulsory to all hospitals to report server about the development of babies. If those pregnant women didn't visit to any hospital for check up in between 3rd to 9th month then a message will be delivered to police station situated closer to permanent residence of that

particular women. So that police can visit to her home and do the enquiry. In this way all the pregnancy cases are registered and monitored by a regular authority. So there will not any illegal abortions.

Figer 1: Babies Monitoring System

3. HARDWARE DESIGN
3.1 MicrocontrollerLPC2138
TheLPC2131/2132/2134/2136/2138 Microcontrollers are based on a 32/16 bit ARM7TDMI-S CPU with real-time emulation and embedded trace support that combines the microcontroller with 32 kB, 64 kB, 128kB, 256kB and 512 kB of embedded high speed Flash memory. A 128-bit wide memory interface and unique accelerator architecture enable 32-bit code execution at maximum clock rate. For critical code size applications, the alternative 16-bit Thumb mode reduces code by more than 30 % with minimal performance penalty. Up to nine edge or level sensitive external interrupt pins available. 60 MHz maximum CPU clock available from programmable on-chip PLL with settling time of 100ms. On-chip integrated oscillator operates with external crystal in range of 1 MHz to 30 MHz and with external oscillator up to 50 MHz Power saving modes include idle and Power-down. It is a fully static CMOS implementation of the ARM which allows the clock to be stopped in any part of the cycle with

extremely low residual power consumption and no loss state. It is a 32-bit RISC Processor core, 37 pieces of 32-it integer registers, pipelined (ARM7-3 stage), Von Neumann-type bus structure, AHB interface, ARM core has 7 modes of operation(User,FIQ,IRQ,Supervisor,Abortmode,System,Undefined).Performance-1.30 MIPS Dhrystone 2.1benchmark in typical 0.1 micro m process[6]

3.2 The ARA-ME-01fingerprint module
It is high performance fingerprint module. Easy restructure, powerful functions, compatible with PC and multiple-functions in one module: Fingerprint enrollment, image process, characters acquisition, fingerprint template creation, Fingerprint template storage, fingerprint compare (1: 1, 1: N), fingerprint delete.

This Module can work with different devices based on UAWRT such as PC, SCM and so on. Only easy circuits and fingerprint module can enhance your product into fingerprint authentication power. It is widely used by electronics business, information security, access control, identity authentication and other security Industry. Communication port UART (Universal Asynchronous Serial Port), 9600bps t0 115200bps (option), start with 1 bit, stop with 1 bit, no check bit. Communication protocol Module stays in slave mode, and host can direct the module work by different command. All the command of the host and response of the module and data transfer are in standard data pack. Host must pack and analyze the command and the data in standard format

3.3 Fingerprint Module performance
Table 1. Finger Print Module Performance

Sensor	AES 2510
Image	255*288
Figures	Good
Resolution	500 DPI
VCC	+5V
Finger Print Capacity	120(Max 1024 Finger prints)

3.4 GSM AT Commands
Call command
1. Step1-ATD<enter the no.>
   Step2-<press enter>
   -above command is use for dialing the no.
2. Step1-ATA
   Step2- <press enter>
   -Above command is for answering the calls then RING text appear continuously on HyperTerminal
3. Step1-ATH
   Step2- <press enter>

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   -Above command is for terminating the call.
4. Step1-AT+CLIP=1
   Step2- <press enter>
   -Above instruction enables the caller no.

Sms command
1. To read sms automatic to terminal

AT+CMGF=1 //Initializing GSM for text mode operation.
AT+CNMI=1, 2, 0, 0, 0// Initializing for Automatic sensing the sms
2. To send sms
Step1-AT+CMGS="enter mo. No."
Step2-press enters.
Step3-enter the text.
Step4-press Ctrl+z
3. For acknowledge the SMS (if not acknowledge the SMS, sms server will resend sms repeatedly till it get acknowledgement)
Step1-At+CNMA
Step2- Enter.

4. SOFTWARE USED
4.1 Embedded C
Programming in C makes the embedded systems more reliable and efficient. C code written for a specific micro controller can easily be transferred to systems using Different micro controllers of different vendors without little or no modification. It can be reused, easy to maintain and easy to debug and extend. Most micro controllers have available C compilers [2]. Writing in C simplifies code development for large code Projects. It is easier and requires less Time consuming writing in C language than assembly. C is mid-level, lots of good C programmers are Available easily, and C compilers are available. C can be used on 8, 16,32and 64-bits processors. Embedded C remains a very popular language for micro-controller developers due to the code efficiency and reduced overhead and development time.

4.2 PC Software Visual Basic 6.0
Visual Basic implements graphical user interface that allows the use of graphics for different applications. I t provides visual interactive windows with user, like Dialogue box for (color, font ...), Input box, and Output box. Also it is able to create menu to simplify user application. It uses integrated development environment (IDE) which is easier for the user to minimize code writing. All visual programs follow the same concepts; therefore the user will become more familiar with visual approach for other visual languages. It provides Input box and Output box as interactive windows with user. It is able to connect to Internet, and to call Explorer.

5. CONCLUSION
Due to Anti-abortion system the Progress of all babies of pregnant women can be monitored by regulatory authority and so that no illegal abortions and especially no killing of female fetus which is a major concern in India today.

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