Auto Work Status Monitoring and Information Up-Loader System Textile Industry

Mrs. S. S. Tamboli [1], Ms.Manasi Shinde[2], Ms.Nikita Suryavanshi[3], Ms.Swaliya Sutar[4]

Assistant Professor, Department of Electronics And Telecommunication of Annasaheb Dange College of Engineering and Technology, Ashta, Maharashtra, India
Student1, Department of Electronics And Telecommunication ofAnnasaheb Dange College of Engineering and Technology, Ashta, Maharashtra, India
Student2, Department of Electronics and Telecommunication of Annasaheb Dange College of Engineering and Technology, Ashta, Maharashtra, India
Student3, Department of Electronics and Telecommunication of Annasaheb Dange College of Engineering and Technology, Ashta, Maharashtra, India

---***---

Abstract: The textile and clothing industries form a major part of manufacturing production, employment and trade in many developing countries. This paper presents an overview auto work status monitoring and information up-loading. We develop and implemented the procedure that will give the accurate measurement as well as it will keep the record of how much cloth produced by the machine. The server will maintain the record of the produced cloth of each worker along with the information containing day, date, time ,worker name , Employee code, the length of produced cloth,. Etc. The main purpose of the system is to maintain record of each worker working on the machine.

Keywords—Microcontroller,Zig-bee,keypad,LCD display

1. INTRODUCTION:

Now a day's electronics is playing a vital role in almost all industries. Due to the rapid developments in electronics, the working style is improved. Cloth manufacturing is one of the major industries which fulfill our basic need.

In case textile industry in Maharashtra at Ichalkaranji city which called as Manchester city, Where the way handling many a task are done by manually in that measurement of cloth is one of important task and is usually done by person/manually, many time it may cause of inaccuracy or time consuming with doubtful records of good produced by particular machine etc.

2. RESEARCH METHODLOGY

2.1: Problem Identified:

Ichalkaranji is a city in Kolhapur district in the Indian state of Maharashtra. It is governed by a municipal council. Ichalkaranji is in western India about 425 kilometers southeast of Mumbai.

The city of Ichalkaranji assumes a place amongst the cities having highest per capital income in the country. We visited to several textile industries in Ichalkaranji. In textile industry recently system is used for measuring of cloth length done by manually. In this measuring system occurs some problems such that inaccuracy, incorrect information given to manager. So we found that there is requirement of measurement and auto recording of the produced cloth on server.

2.2: Proposed Work

Initially, we studied current methods of measuring cloth length in cotton industry. We detected verify the problems such that inaccuracy, incorrect information given to manager. So we found that there is requirement of measurement and auto recording of the produced cloth on server. According to that we are going to design and develop a novel method for length measurement of cotton by proximity sensor and microcontroller.

It is a advance method the performance of the each worker will be recorded in the system.
The system should be able to interface with existing cloth manufacturing machine. Performance of the system developed will be studied to make corrections required meeting the requirements of the sponsoring agency

3. BLOCK DIAGRAM:

The 230 volt AC supply is given to the step down transformer because microcontroller support to 5 volt only. After that AC voltage is converted in to DC voltage by using rectifier. Then fixed DC voltage is regulated by using voltage regulator. Here we get fixed 5 volt DC supply. This DC supply is given to the LCD display, microcontroller and MAX 232 IC.
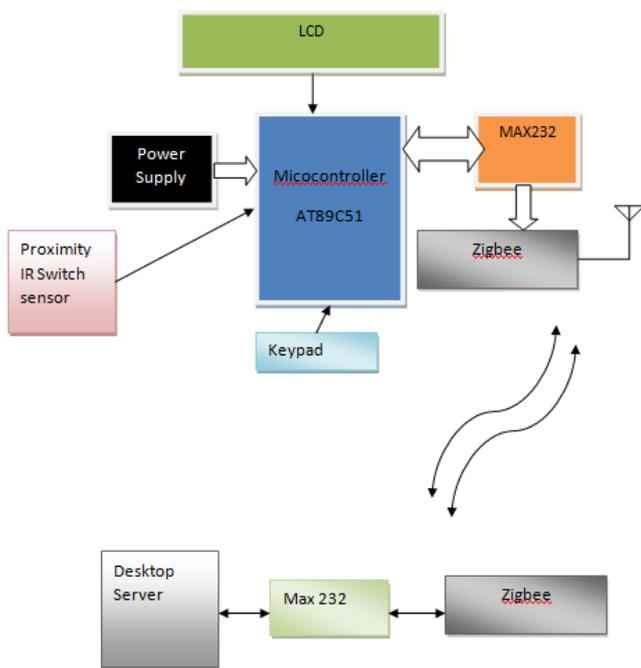
Fig.1: Block diagram

4. DESIGN OF SYSTEM:

The microcontroller, LCD display, is world's most popular technology. ZigBee is based on the Institute of Electrical and Electronics Engineers Standards Association's 802.15 specification. It operates on the IEEE 802.15.4 physical radio specification and in unlicensed radio frequency bands, including 2.4 GHz, 900 MHz and 868 MHz. The specifications are maintained and updated by the ZigBee Alliance.

4.1 Hardware Implementation

In this system, power supply is used to provide the power to the whole circuitry like sensor, transformer, resistors, DC motor, LCD, zig-bee are the main components used for designing. In this proposed system, we have used microcontroller, The MAX 232 chip is used to interfacing the different component.

When power supply is given to the DC motor, it starts rotating and sensor begins to count the pulses. When worker enters his code, it saved to server and server maintains record.

4.2 Software Implementation:

For Software Implementation we have used the software "Keil uVision4". In Software Implementation, The main part is programming of the microcontroller and Interfacing of each device like LCD Display, Keypad, sensor, Transformer with microcontroller. Once the power

supply is given hardware circuit is get initialized. The microcontroller monitors the reading sensor.

This reading is given to controller and transmitted to server using zig-bee. The data base is saved to "M S Access". We have implemented GUI using "Microsoft Visual Basics"
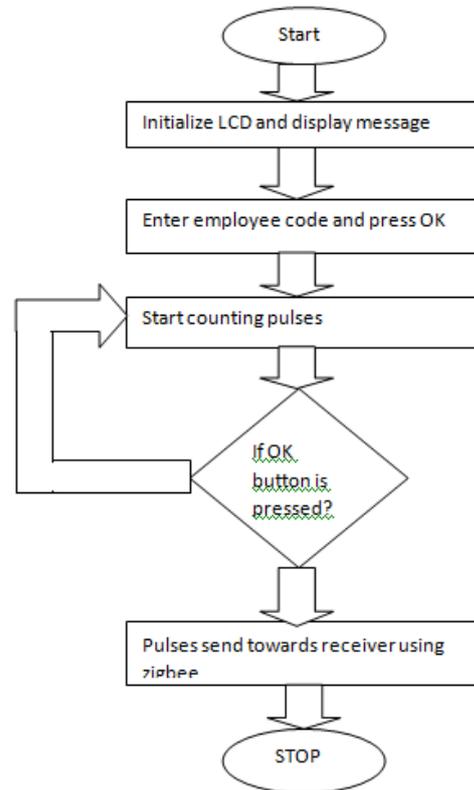
4.3 Flow Chart:

Fig2. Program flow

4.4 Components of Hardware in System:

The components of hardware implementation are as follows:

4.4.1 IR Proximity Sensor
Proximity Sensor are used to detect objects and obstacles in front of sensor. Sensor keeps transmitting modulated infrared light and when any object comes near, it is detected by the sensor by monitoring the reflected light from the object.

4.4.2 ZigBee

Zig-Bee is based on the Institute of Electrical and Electronics Engineers Standards Association's 802.15 specification. It operates on the IEEE 802.15.4 physical radio specification and in unlicensed radio frequency bands, including 2.4 GHz,

900 MHz and 868 MHz. The specifications are maintained and updated by the ZigBee Alliance.
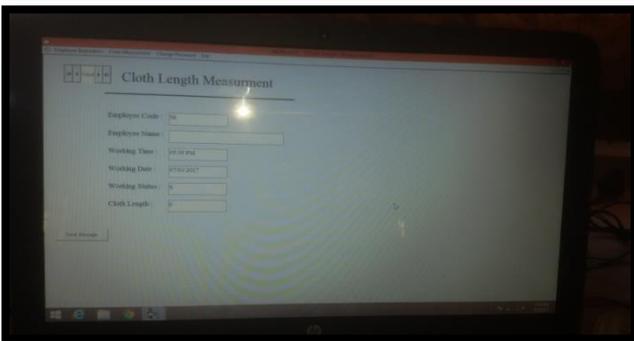
5.4.3 Power supply

Power supply is main component of the circuit. Power supply is provided to microcontroller and other device from direct ac lines through rectifier and filter.

5.4.4 Microcontroller

In this system, microcontroller is used. IC 89C51 is used.

6. RESULT:

7. CONCLUSIONS:

At end of day the system will inform to manager how much goods produced by the machine with whole day information available at the server. The server will maintain the record of the produced cloth of each worker along with the information containing day, date, time, worker name , Employee code, the length of produced cloth, etc. The server create the reports of daily production and also the total production data will be send to the owner on daily basis.

REFERENCES

[1] Nayan Gupta, Deepali Shukla, "Design of Embedded based automated meter reading system for real time processing", Electrical Electronics and Computer Science(SCEECS) .

[2] W.D.A.S. Rodrigo, H.K.I.S.Lakmal "A Prepaid Energy Meter Using GPRS/GSM Technology For Improved Metering and Billing" International Journal of Computer Science and Electronics Engineering(IJCSEE) Volume 4, Issue 2, ISSN 2320-4026, 2016

[3] "Prepaid and Postpaid Energy Meter for Billing System Using Microcontroller and GSM" International Research Journal of Engineering and Technology (IRJET) ISSN 2395-0056,Volume 3, Issue 2, 2016, Website www.irjet.net

[4] R. Dhananjayan, E. Shanthi "Smart Energy Meter with Instant Billing and Payment" International Journal of Innovative Research in Computer and Communication Enginnering (ISO 3297-2007) Volume 2, Issue 1, March 2014, Website www.ijircce.com

[5] Tanmoy Maity, Partha Sarathi Das, "Intelligent online measurement and management of energy meter data throug advanced wireless network".

[6] 8051 Microcontroller: An Applications Based Introduction
by David Calcutt, Frederick Cowan, and Hassan Parchizadeh

[7] C and the 8051
by Tom Schultz

[8] How to use Keil 8051 C Compiler
by Kim Hyoung tae

[9] The 8051 Microcontroller: Hardware, Software, and Interfacing
by James Stewart

[10] The 8051 Microcontroller and Embedded Systems,2nd Edition by Muhammad Ali Mazidi, Janice Mazidi, RolinMcKinlay

BIOGRAPHIES

1. Mrs. Tamboli S. S.: Assistant Professor, Electronic and Telecommunication Department of Annasaheb Dange College of Engineering and Technology, Ashta, Maharashtra, India. M.E.(Electronics), Area of Specialization-Signal Processing, Image Processing.

2. Ms. Shinde Manasi G.: Appeared B.E at Electronic and Telecommunication Department of Annasaheb Dange College of Engineering and Technology ,Ashta, Maharashtra, India.

3. Ms. Suryawanshi Nikita N. : Appeared B.E at Electronic and Telecommunication Department of Annasaheb Dange College of Engineering and Technology ,Ashta, Maharashtra, India.

4. Ms. Sutar Swaliya S.: Appeared B.E at Electronic and Telecommunication Department of Annasaheb Dange College of Engineering and Technology ,Ashta, Maharashtra, India.