VISVESVARAYA TECHNOLOGICAL UNIVERSITY

BELGAUM

A Project Report on

"GSM BASED WIRELESS DISTRIBUTED ENERGY BILLING SYSTEM"

Submitted to Visvesvaraya Technological University, Belgaum in partial fulfillment of the requirements for the award of degree

Bachelor of Engineering

IN

Computer Science & Engineering.

APPROVED BY KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY, IIS, BANGALORE—560012.

By

Project Associates

Vaibhav.Padaki
USN: 2VD05CS052

Nikhil.Virupakshi
USN: 2VD05CS023

Under the Guidance of

Prof.Poornima.Raikar

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Karnataka Law Society's

Vishwanathrao Deshpande Rural Institute Of Technology

HALIYAL (UTTAR KANNADA) – 581329

Abstract

Embedded system is a specialized computer system that is part of a larger system or machine. Typically, an embedded system is housed on a single microcontroller board with the programs stored in ROM. Virtually all appliances that have a digital interface -- watches, microwaves, VCRs, cars -- utilize embedded systems.

GSM (Global System for Mobile communications) is an open, digital cellular technology used for transmitting mobile voice and data services. GSM differs from first generation wireless systems in that it uses digital technology and time division multiple access transmission methods. GSM is a circuit-switched system that divides each 200 kHz channel into eight 25 kHz time-slots. GSM supports data transfer speeds of up to 9.6 kbit/s, allowing the transmission of basic data services such as SMS (Short Message Service). Another major benefit is its international roaming capability, allowing users to access the same services when traveling abroad as at home. This gives consumers seamless and same number connectivity in more than 210 countries. GSM satellite roaming has also extended service access to areas where terrestrial coverage is not available.

Aim of our project is monitor the energy meter reading by digitally, wherein the energy meter is connected to our microcontroller via interfacing circuit. Microcontroller will count the meter rotation and calculate the energy by program and that data will be sent to PC/Server. This data arriving at I/O ports will be collected and the bill will be calculated for each customer in the Data Base, then this bill will be transmitted to respective cell phone of the customer by SMS (short message service). Here we are using GSM modem for messaging, our controller is communicating with GSM using serial communication.