

GSM BASED AUTOMATED ENERGY METER READING FOR ELECTRICITY BILL PROCESSING

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Designing and implementing commercial systems based on Wireless communication technology has been an enormous area of interest among many researchers and developers. In a country like Sri Lanka the task of collecting meter reading data related to energy consumption of each and every consumer is a monotonous job. Thus, this paper proposes design and implementation of a Global System Mobile (GSM) based Automated Energy Meter Reading System (AMR) that aims to reduce this monotonous work by automating the process of collecting data from consumer's electricity meter. The integration of the embedded Microcontroller (Energy Measurement System) and GSM modem provides the meter reading system with some automatic functions that are predefined. The AMR continuously monitor the energy meter and send the data to the energy provider using the GSM modem as well as send alerts to the consumer via SMS and Email regarding the energy consumption of a particular energy meter unit. In case of failure of payment of dues by a consumer the energy provider can disconnect the power supply of consumer from the energy station. With this automation, a software application with database management system has been proposed in this project to facilitate the bill generation and transmission of data via SMS and Email at the server end.

Keywords: AMR (Automatic Meter Reading), GSM (Global System Mobile), SMS (Short Message Service), Microcontroller