

# Design and Construction of Smart Communication System



## Abstract

GSM (Global System for Mobile Communications) – an open, digital cellular technology, first deployed in Finland in December 1991 is the most widely used wireless digital communication technology. As of 2017, it has become the global standard for mobile communications – with over 90% market share, operating in over 219 countries and territories. Digital advertisements have become popular nowadays as shopping malls, super markets, airports use digital display boards. From every small institution to big organization, messages are displayed on digital boards. Over the last two decades the use of cell phones has been rapidly increasing. Mobile phones and the related technologies have become one of the most important things in this modern era. This drastic use of mobile phones gave the interesting idea of sending and receiving messages and the displaying them on digital board. The SMS (Short Message Service) facility in mobile handset enables us to send and receive messages all around the world by virtue of International roaming feature. The main aim of this project is to replace the conventional notice boards by wireless digital displays driven by GSM technology. The authenticated user on the sending end sends SMS (notice to be displayed on the board) using his mobile handset to the SIM card loaded in the GSM module (attached to the wireless notice board), which receives the message and passes it to the microcontroller in the arduino UNO for storage and then displays the received SMS on the wireless digital board. The SIM card at the receiving end in the GSM (SIM900) module receives only those messages whose initial character is # and final is '\*'. The device can be used anywhere irrespective of the place of deployment provided mobile network connectivity is available

Arduino to interface the Microcontroller with the RFID In this paper, the idea of GSM based display using Arduino Technology has been presented. Our main aim is to reduce paper work and time. In this paper we have tried to implement our system in such a way that, the GSM module which is located at Digital notice board receives the message from authorized user and displays on notice board which is situated at remote location and at the same time this message is also sent to different user's mobile numbers that are stored in microcontroller memory. So circulation of important messages or notice takes place within very short span of time to respective mobile numbers.

Keywords-GSM Module, LCD Display, Arduino.

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