**Abstract :**

This project is about design and implementation of a mobile embedded system to monitor and record key parameters of a distribution transformer like load currents, oil level and ambient temperature. The idea of on-line monitoring system integrates a Global Service Mobile (GSM) Modem, with a standalone Arduino and different sensors. The obtained parameters are processed and recorded in the system memory. If any abnormality or an emergency situation occurs the system sends SMS (short message service) messages to the mobile phones containing information about the abnormality according to some predefined instructions programmed in the Arduino. This mobile system will help the transformers to operate smoothly and identify problems before any catastrophic failure. A powerful GSM networking is designed to send data from a network to other network for proper corrective action at the earliest. Any change in parameters of transmission is sensed to protect the entire transmission and distribution. The performance of prototype model developed is tested at laboratory for monitoring various parameters like transformer Over voltage and Under Voltage, Over current and Under current, Over temperature, Over Distance, etc.

**Block Diagram:**

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