

TOPIC

Smart ATM Surveillance System

ABSTRACT

This project proposes a smart system based on embedded technology and incorporates various sensors to continuously monitor its surroundings for suspicious activities like physical attack, fraud and theft that might harm the ATM and people nearby and also provide a maintenance system and controlling system for CCTV cameras, power supply, ATM machine, and AC.

This project is to provide security and safety measures that can be implemented to prevent such raids and failures in the ATM by proper surveillance. The proposed system employs proactive measures to counteract the burglary attempt, here the sensors of the system act as first line of defence.

Here we can detect the break-in and instigate the protective actions which will deter the burglars from continuing with their attack, thereby successfully thwarting the attack. The proactive measures that are employed in the system are the siren, notification to officials using GSM.

By stopping the attack, the ATM is prevented from bearing any more harm caused due to the attack. The system continuously monitors its surroundings by sensing temperature changes, force, and orientation of the ATM using the sensors.

INTRODUCTION

The Idea of Designing and Implementation of Smart ATM surveillance system is born with the observation in our real-life incidents happening around us. Automated Teller Machines (ATM) today have become areas of target due to their easy and readily available cash at everyone's convenience. The attacks on ATM's are steadily rising.

This is a serious problem for law enforcement and banking sectors. So, there has to be a system developed and put into place that will make sure the ATM is safeguarded and also gives customers the confidence when using the ATM.

This project deals with prevention of ATM theft from physical attacks and to monitoring the overall atm system using this smart technology, so to overcome the drawback found in existing technology in our society.

Whenever attack occurs, Vibration sensor is used here which senses vibration produced from ATM machine. Once the vibration is sensed the beep sound will occur from the buzzer. Camera is always in processing and sending video continuous to the PC and it will be saved in computer.

This system also provides:

- CCTV camera visual breaking alarm detection
- Power supply monitoring and controlling.
- Air conditioning (AC) monitoring

EXISTING SYSTEM

Currently to provide protection to the ATM and to the customers using it, there are CCTV security cameras and emergency sirens. Other measures that are being researched includes a system that implements a low cost standalone embedded webserver, Machine to Machine (M2M) and RFID to implement an anti-theft system.

PROPOSED SYSTEM

The proposed system employs proactive measures to counteract the burglary attempt, here the sensors of the system act as first line of defence and detects the break-in and instigates the protective actions which will deter the burglars from continuing with their attack, thereby successfully thwarting the attack.

The proactive measures that are employed in the system are the siren, notification to officials using GSM. Once any of the sensors are triggered the blaring siren and the visual alert will deter the intruder and cause him to abandon the plot. By stopping the attack, the ATM is prevented from bearing any more harm caused due to the attack.

CHARACTERISTICS OF THE SYSTEM

- Continuous monitoring of the sensors in the system so that any burglary attempt is detected.
- Informing the controller that the sensors have been triggered and necessary safety actions are due.
- Siren: The controller then activates the alarm system through the driver to dissuade the burglary attempt.
- Warning: The controller then sends an SMS alert and call alert to officials informing the break in happening.
- Shutter locking: The controller then activates the motor locking down the kiosk and the culprits are locked inside.

BLOCK DIAGRAM

