

**DESIGN AND DEVELOPMENT OF A GSM BASED
OPERATED LOCKER SYSTEM**

THESIS

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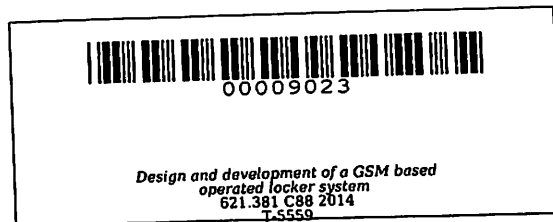
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DESIGN AND DEVELOPMENT OF A GSM BASED OPERATED LOCKER SYSTEM

Undergraduate Thesis
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ABSTRACT

CRUZ, ANNA JENICA G. and PERNITO, EDELYN S., “Design and Development of a GSM-based Operated Locker System.” Design Project. Bachelor of Science in Computer Engineering. Cavite State University. Indang, Cavite. May 2014. Adviser: Ms. Marivic G. Dizon.

The GSM-based operated locker system was designed and developed to provide an alternative way of securing and monitoring the locker system even with owners' absence. The design greatly considered the use of a mobile phone to make operate the locker system. The project design was composed of the system unit, a locker unit and powered by a 220 AC power supply.

The designed locker was focused on giving security at the time it was rented. The locker has a of system unit which is composed of Zilog microcontroller board, the brain of the whole system which was capable of reading, interpreting and instructing commands to the locker unit system, GSM module which is the transceiver. This module is responsible for receiving the message transferred wirelessly via mobile phone.

The design project was setup and evaluated at the Engineering Science Building of College and Information Technology. During the evaluation, the adviser, technical critic and the panelists examined the device. Pilot testing were performed in the evaluation. First, was the renting process using the GSM, followed by putting a password to the keypad, and the payment process.

Results of testing and evaluation showed that the system was able to send and receive text messages and notifications, accept and reject valid and invalid coins, as well as perform the tasks in controlling the locker successfully.

The most significant recommendation was to have a database for daily monitoring report of usage, profit, and logged password to be used by the administrator. The total cost of the design was P23, 050.

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Design and Development of a GSM-based Operated Locker System

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INTRODUCTION

Technology has advanced so much in the last decade or two that it has made life more efficient and comfortable. The comfort of being able to take control of devices from one particular location has become imperative as it saves a lot of time and effort. Security is a growing need throughout the world, and lack of security can result in great damage. Many solutions are available for all levels of access control—from highly restricted areas such as banks, or laboratories to less restricted areas such as luggage counter or classrooms.

Burglary cases have recently increased in the society with most cases occurring during the absence of the occupants of the home and owner of a property. Lockers can keep stuff by using lock and key for security. However, if the key is lost, there is no guarantee that his/her belongings can be retrieved. With the help of technology today, it is possible to have an automated locker that can be accessed through Global System for Mobile communication and password as the key.