# Survey on Home Security System

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*Abstract: Security plays a key role to keep our data secured so that no other unauthorized person could access. Nowadays at every point of time we need security system for protecting our valuable datas and even our property. In this paper we are going to discuss about commonly used home security systems mainly about the wireless alarm and fingerprint door lock and CCTV camera. There are other methods like verifying authentication through password, RFID. But these methods are most efficient and reliable. To provide perfect security to home and our family and to make the work easier this project is taking help of bio-metric . Unauthorized access is prohibited by these three systems that is first: designing a lock that stores the fingerprint of one or more authorized users and after scanning the fingerprint the code should be typed .Here the cord can be changed when desired. And when an unauthorized person tries to unlock the door it gets locked and immediately a message has been sent to the authorized owner through mobiles. The second: Alarm security system, in which the wireless alarm is the best because they can be installed in any location even where there are no electrical access and they have their own battery. This is used in place of the entry of an unauthorized person or burgler into our residential areas. Third : CCTV camera .It is the most commonly used technique now a days and the perfect one is "Eurovigil 1 view HD 800 1p bullet" it functions by capturing the videos that has occurred through which we can identify the person clearly who is involved in the crime .*

*Keywords: Radio-frequency identification (RFID), Closed-circuit television (CCTV)*

## I. INTRODUCTION

Security is of primary concern and in this busy competitive world,human cannot find ways to provide security to his confidental belongings manually. Security gets more significant in recent years .Instead he finds an alternative which can provide a full fledged security as well as automized.In the ubiquitious network society, where individuals can easily access their information at anytime and anywhere ,people also faced with the risk that others can easily access the same thing at anytime and at anywhere. Today,home security systems do more than just protect a home from intruders. Many a number of home security systems have been invented now but not all can give a better security. It is our duty to analyse the best security systems inorder to protect our home and datas.

**BACKGROUND:**

Various attempts had been made for providing security for all domiciles,complete security has not yet been discovered.

### 1. LOCK AND KEY SYSTEM:

First step towards security was lock and key system. Security protocol followed in this technique was "single key for a single lock",. Initially ,this system was considered to provide atmost security . But this belief was soon proved wrong by the fact that multiple keys can be easily made for a single lock. Hence this system is an outdated system to provide security.

### 2. PASSWORD AUTHENTICATION:

Next level of security used is password as an authenticating tool. The working procedure of this system is that it stores password of the authenticated users for the purpose of validation. And ofcourse Keyless door locks have become popular among the hometowns in recent years.Systems using password authentication provides considerable security to the users as it acts as a secret of authenticated users that is the password for the particular lock is known only by the authenticated users alone. But there is also a pitfall in this system .In this system if incorrect codes or passwords are entered to many number of times , it is nonetheless possible that the door gets opened and the intruder may be able to gain access to your home. And also if you forget the password to access your keyless entry system ,then you will be locked out. This is also one among the hundreds of attempts made for providing security and also proved to be an outdated system.

### 3.ATHENTICATION BY RFID CARD :

Next level of technological devolpement for providing securitiy was authentication by RFID card . This system enriched the level of securitiy . Access granted only for the users whose RFID code matches with the authorized

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code .The system also has disadvantage of duplication of RFID card and anyone who possess this card can unlock the door .

## II. FINGERPRINT INDENTIFICATION DOOR LOCK

Fingerprints are made of a series of ridges and furrows that are present on the skin of our palms and soles and have a core around which patterns like swirls, loops, or arches are curved to ensure that each fingerprint is unique. That is everyone has unique and immutable fingerprints. This creates a unique identification for everyone. Minutiae and patterns are very important in the analysis of fingerprints since no two finger have been proven to be identical. Fingerprint door lock incorporates the proven technology. in the fingerprint scanner it scans the fingerprints of users and are used for ensuring authentication. Fingerprint is more accurate and cost effective method and duplication is virtually impossible. The procedure followed in this system is that first the images of the fingerprint of the authorized ones will be stored in the module with a unique id.Inorder to open the door, the authorized person need to scan his fingerprint images. After the scanning has been completed ,user has to enter the passwords to open the locker with the help of the keypad on the locker. After entering the password ,if it matches, then the result will be displayed on the display screen. Option for changing the password is also available. Though it is quite expensive in terms of initial investment ,this type of door locks is cost effective in long run and it is user friendly.



ALARM SECURITY

Security alarm is a system designed to detect intrusion – unauthorized entry – into a building or other area. Security alarms are used in home for protection against burglary or property damage .Some alarm systems provide a single purpose of burglary protection; combination systems provides both fire and intrusion protection. Systems range from small, self-contained noisemakers, to complicated, multiarea systems with computer monitoring and control. It may even include two-way voice which allows communication between the panel and Monitoring station. Though there are many types of alarm systems like monitored ,unmonitored, wireless, electric current home alarms ,wireless security alarm plays a vital role and is more efficient. A wireless security system uses radio waves rather than wires or cables to communicate between the control panel, sensors and cameras.the reason behind stating that wireless alarms are best efficient is that the system using wireless components (sensors), and your broadband Internet connection to transmit a signal to your monitoring station.A wireless system that uses a cellular (wireless) signal to transmit data to your monitoring station.A wireless system with a cellular connection and web based alerts (interactive monitoring) that lets you monitor and manage your system from the Internet.The wireless systems can be purchased in any nearby local hardware stores and it is easy to be installed. There is also no monitoring fees. It can be much expensive but is most secured system.

**CLOSED CIRCUIT TELEVISION CAMERAS**



The CCTV camera system is the use of video cameras to transmit a signal to a specific, limited set of monitors. It differs from broadcast television in which the signal is not openly transmitted, though it may employ point to point wireless links. CCTV is often used for surveillance in areas which need security, such as banks, casinos, and airports or military installations. for home security purpose it can take video about any thing that is happening around when we are not at home . Now a days most of the homes have installed the CCTV cameras for the security purpose but it is necessary to install the best among all the different type of CCTV cams . "Eurovigil 1 view HD 800 1p bullet " is the most efficient and worthy one among the other types of cameras. The features of this camera are:

1. ¼ progressive scan CMOS
2. Up to 1 megapixel resolution
3. Digital WDR
4. 3D DNR
5. 30 Meters IR range
6. IP66

### III. CONCLUSION:

Security has become a major issue in our developing world .Hence It is necessary to provide security to our homes in order to safeguard our datas . The above mentioned systems ensure to provide atmost security when compared with other objects  like lock and key and RFID and digital doors .

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