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WIRELESS HOME SECURITY SYSTEMS

S. Saikumar, P.Edreena
U.G scholar, Asst. Professor
Department of CSE, Saveetha School of Engineering, Saveetha University, Chennai.

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Abstract:

The physical transport strategies employed in wireless communication take issue from wired communication. These variations have an effect on however a secure channel is established during a wireless setting. The purpose of this tutorial is to produce an summary of however a secure channel is ready up during a wireless setting that uses the 802.11 or WAP standards.The house automation becomes vital, as a result of it offers the user the comfyand easily for mistreatment the house devices. The implementation and style of wireless home automation management used 2 strategies, Wi-Fi technology and RF remote handheld to manage of the selective home devices with integral security and guarded System. The devices has been distributed in every area has its own board, these boards are connected to the desktop laptop computer (PC) through one port RS-232 viamicro controller. The software system consist s of Assembly language for programming microcontroller (AT89C51and AT89C2051) and visual basic language that use to speak between laptop and 2 boards, conjointly it use to style Graphical programme Interface (GUI) that involving all devices are(equired to show in Home laptop screen . The system islow value and versatile with the increasing kind of devices to be controlled. These square measure primarily applied in home appliances, banking and alternative security places.

Keywords: GSM: Global System for Mobile communication, WSN: Wireless Sensor Networks, RS-232 component, Security systems.

1) Introduction:

[1]Wireless and mobile networks are square measure speedily extending their capabilities. Additionally to their increasing information measure and since of their flexibility they're turning into the Communication infrastructure of alternative. Wireless Communication provides a user the aptitude of conducting commerce at anytime, with nearly

anyone, from anyplace, employing a mobile Communication channel. This mobile communication channel may be used as associate degree access method to the net. As wireless communication and the net become really practical, users can wish the communication channel to be secure and obtainable once required. For a message sent mistreatment this communication channel, the user expects assurance of:

- Authentication (the sender and receiver square measure world health organization they assert they are);
- Confidentiality (the message can't be understood except by the receiver); and
- Integrity (the message wasn't altered).

Here the remote system methodology has been enforced. In previous they enforced the security system mistreatment GSM and WSN technology with causing message alerts to mobiles.

2) Design & Implementation:

[2]Both GSM and WSN place a major role in remote system technology. It consists of host control system and several functioning modules are present in it along with software.

The host sends the message to the owner or Cost control centre about the working of the system.

[4]When an external interrupt occurs to the system the host detects it and sends the alarm message automatically to the control centre or owner's mobile phone.

A**) Power supply:**

The security system works continuous on the power supply. With the supply of power the system can detect the interrupts occurring in the system.

B) **Sensors**:

This security technology includes several types of Wireless sensors in it. Some of them are mobile phone with the help of GSM module.

Sound sensor which detects the sound when present in it.

Lock sensor checks whether the system or appliance is locked or unlocked each time.

Gas sensor is used to indicate whenever any raw gas was present in the appliance.

However, it also includes camera in some types which can record what is happening in the surroundings of the appliance.

[3] A GSM module is present in it which has several nodes in it. These nodes are meant for transmission of the alarm

message to the owner's mobile phone. An alarm was also implemented in the system for alerting purpose.

These all process is controlled by Microcontroller which is present in the middle. This controller controls all the operations of the components present in it. The detection and sending of message was also controlled by the controller. It follows a series of steps for applying the methodology.

3) Description:

[2] The description of this process is nothing but the series of steps determining the process of security. The various steps are: Firstly, the power supply supplies the power to the microcontroller for its function. The microcontroller works on the power supply and its function is to control the all other Parts of the project includes the fire sensor, lock sensor and gas sensor. These sensorsplays a major role in finding the leakages of the defects in the home appliances. In the case of lock sensor if any unauthorized person tries to unlock the safe or valuable properties where lock sensor was enabled and it alerts the owner that some malicious activity has been taken place with an alarm message. He can override that by using a remote control where he can start or stop the device activity so then he can restart it also. Where as in case of gas sensor, it finds the poisonous gas or effectable gas in the same by by alerting the user or owner by a message alert signal so he can easily determines the problem even he was not at that place. Fire sensor is another type used in this project. Its function is to detect the fire whenever it was taken place. It can easily finds the leakage of fire and rapidly sends alert message to the registered mobile number. [5] These all are controlled by the microcontroller and the trapping system is the major advantage of the project which is used to find the intruder who tried to unauthorize it.

4) Block diagram:

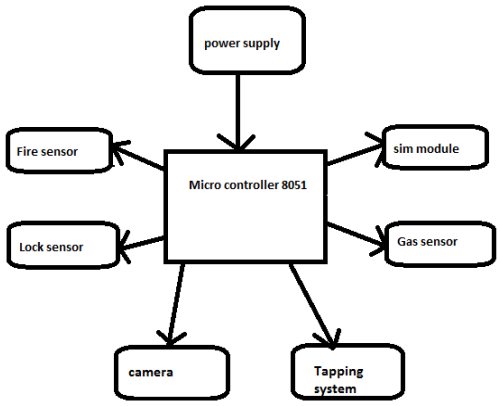

Fig:1-Block diagram for the proposed system.

The above figure:1 consists of power supply, micro controller,sim module, types of sensors, camera and tapping system.

The power supply supplies power to micro controller for its operation. The microcontroller controls the all parts of the project and is responsible for its function. The role of each sensor is described and they perform their function effectively. Camera is useful for recording purpose and the tapping systems are used for finding the unauthorized persons.

5) Conclusion:

[4] The remote system technology is the advancement feature in this project than compared to existing ones. The main objective of this project is to have a better security for home and its appliances and can control them from anywhere. The wireless sensors used here are most effective and can applicable for high ranges. Those function is always effective and applicable, the microcontroller is 8051 type and has high range of bits which are useful for better transferring. The basic idea is to have a better and effective security system with in our surroundings. In addition to this there are several new techniques are implemented in wireless security for better advancement.

6) References:

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