

Smart Home Based On IOT

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Abstract— This paper present the design of “Smart Home Based On IOT”. The world ‘Smart’ has been used in various areas and is widely accepted to intelligence. Smart home services one of the represent technologies in IOT field. Smart home systems are controlled by smart phones. Smart home is an application of computing in which the home environment is monitored by intelligence to provide aware services and facilities, safety from fire alarm.

Keywords— Smart Home, Privacy and Security, Home automation.

INTRODUCTION

Smart home technology and intelligently gives you ultimate control over your home by automating the lighting system and security system. Smart home connect all the devices and application in your home, so they can communicate with each other. A smart home is one of the automation systems to provide the monitoring. Smart home may have controls for lighting, temperature, multi-media, and door operations. Smart homes comprise of devices that provide comfort, convenience, energy efficiency and enhance intelligent. This devices communicate and internet with each other and from connected ecosystem. Smart home ecosystem comprises of a set of connected gadgets with intelligence that help them executing the task. A Smart home, then, may be defined as a residence or a building with equipment which can be remotely controlled and operated from any location in the world by means of Smart Devices. Smart Homes comprise of Devices that provide comfort, security, convenience, energy efficiency and enhance intelligent living. The Devices communicate and interact with each other and form a connected ecosystem. Smart Home is usually understood as automated home but the actual capabilities are beyond automation. Smart Home ecosystem comprises of a set of connected gadgets with Intelligence that help them in executing the task and take necessary decisions.

- Comfort or ease of control
- Entertainment
- Security
- Lifestyle personalisation



LITERATURE SURVEY

This paper present a smart home technology has created a need for a comprehensive literature survey. This article review and goals of a smart home energy management systems, applications, and information about the manufacturing and its components in computer programming, home automation refers to the control of home applications and features by local networking by remote control. Smart home have been conducted over the last several decades they convey different ideas and function. Smart home are extending into different branches of focusing on the interest of researchers and users expectations.

Bluetooth based home automation system using cell phones : In Bluetooth based home automation system the home appliances are connected to devices. The connection is made via Bluetooth. The password protection is provided so only authorized user is allowed to access the appliances. The Bluetooth connection is established between board and phone for wireless communication. In this system the python script is used and it can install on any of the OS

environment, it is portable. One circuit is designed and implemented for receiving the feedback from the phone, which indicate the status of the device.

Cloud Based home automation system: Home Automation using cloud based system focuses on design and implementation of home gateway to collect data about data from home appliances. It is process using Map Reduce and use to implement tasks to Remote home Automation System is persistently developing its resilience by assimilating the current characteristics which gratify the rising interest of the people. This paper presents the design and development of home automation system that use the cloud computing as service.

PRIVACY AND SECURITY

- Controlled motion sensitive cameras.
- Capture and record video surveillance.

WORKING

Central Control is one Home-Automation system that controls everything in your home. It allows you, from a single source, to control your lights, thermostat, sprinklers, phone, washer, dryer and more.

Smart home automation used to be something we only dreamed about. Sci-fi movies have conjured up houses with built in AI- some being advanced enough to play a supporting character or even the hero. Home automation is a network of hardware, communication, and electronic interfaces that work to integrate everyday devices with one another via the Internet. Each device has sensors and is connected through WiFi, so you can manage them from your smartphone or tablet whether you're at home, or miles away.

There are three main elements of a home automation system: sensors, controllers, and actuators:

- ✓ Sensors can monitor changes in daylight, temperature, or motion detection. Home automation systems can then adjust those settings (and more) to your preferences.
- ✓ Controllers refer to the devices — personal computers, tablets or smartphones — used to send and receive messages about the status of automated features in your home.
- ✓ Actuators may be light switches, motors, or motorized valves that control the actual mechanism, or function, of a home automation system. They are programmed to be activated by a remote command from a controller.
- Smart homes work with fairly simple systems.
- Receivers detect a contain signal from the transmitter, that issues a command.
- As a smart security system.

- As a smart home automation system.

FEATURES

- Fire and carbon monoxide monitoring
- Remote lighting control
- Appliance control
- Home automation security systems and cameras
- Alarm systems
- Real-time text and email alerts

ADVANTAGES

- Easier to Lock & Unlock Doors
- Save Energy
- Know About Maintenance &Service
- Customize as per your Convenience
- Ease
- It's Smart
- Increase Property Value

DISADVANTAGES

- Cost
- Dependency on Internet
- Dependency on Professionals
- Electromagnetic Radiation
- Technology Learning Curve

CONCLUSIONS

IOT based “Smart home” a new age for technologies and can change our life and job to a more intelligent and modern stage. The research and application of components of IOT technologies and application made of IOT such as sea computing facilities and to more widely fields. Smart home, intelligent residential and more other application will appear in future.

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