Internet of Things (IOT) :Applications in Home and Building Automation

Marwa Mohammed Nabawey Hassan
Department of Electronic Engineering
Hamm-Lippstadt university of applied sciences
marwa-mohammed-nabawey.hassan@stud.hshl.de

***Abstract*—The shift from the digital revolution to the fourth Industrial revolution, named Industry 4.0, allows us to utilize modern intelligent technologies such as the Internet of things. That increases the automation process through homes and buildings, aimed to reduce the direct human intervention, which causes reshaping in our ways of life. In addition, The integration of IoT technology in houses and buildings offered a variety of services and comfort by controlling and monitoring the building's lights, temperature, and humidity remotely according to the users' needs and profiles. Furthermore, home appliances have been affected by these developments, allowing the users' to connect them to the Internet to provide and exchange information. This seminar paper presents such IoT applications that can be considered a base of smart homes and buildings.**

***Index Terms*—IOT , smart home ,smart buildings**

I. Introduction

II. IOT Applications

Application Domains
1-Society
2-Enviornment
3-Industial

[1] [2]

III. Home Automation

Early home automation & now & IOT home appliances METHODOLOGIES Basic Block Diagram of Home Automation.....smart-home controller ?? Alexa ,siri?!
use case

A. Smart Plugs

A smart home plug is an electric device that can be plugged into an ordinary outlet. It provides outlets for other electronic devices, e.g., lamps and fans. It is often designed to connect to the wireless home network so that a user can install an app on her smart device, e.g., smartphone, and control the electronic device plugged into the smart plug over the Internet.

IV. Building Automation

Early control systems & today control and automation
IOT change

Building automation model

A. smart buldings

V. Conclusions and Future Work

References

[1] P. V. Dudhe, N. V. Kadam, R. M. Hushangabade and M. S. Deshmukh, "Internet of Things (IOT): An overview and its applications," 2017 International Conference on Energy, Communication, Data Analytics and Soft Computing (ICECDS), 2017, pp. 2650-2653, doi: 10.1109/ICECDS.2017.8389935..

[2] Porkodi, R., Bhuvaneswari, V. (2014, March). The internet of things (IOT) applications and communication enabling technology standards: An overview. In 2014 International conference on intelligent computing applications (pp. 324-329). IEEE.