

# BELKIN WEMO: A DIFFERENT USABILITY

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**Abstract**-We are experiencing an abundance of IOT middle-were solutions that provide connectivity for sensors and actual to the internet. To get a widespread adoption this middle-were solution referred to as platforms, have to meet the expectations of various players in the IOT ecosystem, including device providers, application developers, and end-users, among others. In the article we evaluate a representative sample of this platform, both proprietary and open sources on the basis of their ability to meet the expectations of different IOT users.

- The evolution is thus more focused on how ready and usable this platform or the place is for IOT. Ecosystem players, rather than on the peculiarities of the underlying technological layers.
- The gap analysis aim to highlight the differences of today's solution to improve their integration to tomorrow ecosystems.

**Keywords** –cloud networking, home automation system, wi-fi network

## 1. INTRODUCTION

Every day the modern people expect new device and new technology to simplify their day to day life. The innovators and researchers are always trying to find new things to satisfy the people. Belkin wemo and uber is a technology to make our lives easier and better.

Belkin wemo is such technology that enables users to control home electronics from anywhere. The product suit includes a switch motion sensor, insight switch, light switch, camera and app. The wemo switch can be plugged into any home outlet which they can be collected from an IOS or android smart phone running the wemo app through home wi-fi or mobile phone network.it is available in more than 130 countries around the world.

## 2. LITERATURE SURVEY

These could allow malicious attacks, such as flipping the switch at a very fast rate, which could damage certain device and even cause electrical fires. These vulnerability has been addressed by updated framework releases. Now let's see about sensor using in belkin wemo technology. r, or your child's backpack and you will be able to track whenever its home and when it's a way.

1. The first is water sensor, the wemo water which technology is most interesting sensor in the new collection. Attached it to any one water pipe in your home, and it monitors pressure changes and vibration that occurs throughout the plumbing and sends this data to an app on your phone.
2. The second is wemo window and door sensor. The wemo window and door sensor sticks into doors, windows, and anything else that opens and shuts. When the opens, the two magnetic halves separate triggering and alert in the wemo app.
3. The third is keychain sensor. The wemo keychain sensor is another way to telling when people or things are coming and going. Just attach it to your keychain, your pet's collar
4. The fourth is alarm sensor. The wemo sensor alarm listen for the sound of your smoke alarm, then let's you whenever its going off.
5. The fifth is motion sensor.

The wemo room motion sensor is a battery operated infrared model that detects heat signature.

And last is wi-fi to zig Bee Bridge. Wi-fi technology is ubiquitous, but it's too power hungry to be used for battery power devices. so belkin has turned to zig- bee chipsets for its various new sensors.

The wemo motion sensor can be placed anywhere as long as it can access the same wi-fi network as the wemo device it is intended to control. It can then turn on and off any of the wemo device connected to the wi-fi network as people pass by.

By using IFTTT (if this then that) technology. We can be controlled wemo devices. Wemo devices can also be controlled by voice through the Amazon Echo.

Switch, light switch, smart LED light bulb, net can wi-fi carry homeles smart air purifire use the product of belkin wemo technology.

Now lets see remote security vulner ability. Wemo switches are controlled through IP technology; thus, for a switch to be controlled from a remote location, it must be open to receive corrections from the internet. In journey 2013 it was revealed that the wemo had security flow in its upnp.

The implimentation that allow on unauthorised user to take control of a switch.

### 3. TECHNOLOGY USE IN WEMO

1. IFTTT Technology
2. Amazon Echo

### PRODUCTS

1. Switch
2. Switch motion
3. Insight switch
4. Light switch
5. Smart LED light bulb
6. Net cam wi-fi camera
7. Maker
8. Keychain sensor
9. Room motion sensor
10. Door and window sensor
11. . Alarm sensor

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**FIGURE 1. WEMO KEYCHAIN SENSOR**



### 5. SOME USEFUL PRODUCTS IN BELKIN WEMO TECHNOLOGY

#### 1. Smart Appliances

A smart appliances is defined in the literature as one which most importantly “uses electricity for its main power source, which has the capability to receive, interpret and act on a signal received from the utility, third party energy service provider or home energy managing device, and automatically adjust its operation depending on the both the signal’s content and setting from the consumer”. In addition of the embedded sensors, microprocessors may enable the smart appliances to collecting the information about its energy demand patterns, which can be transmitted across the HAN so that the users can view on a connected display, and/or used to optimize demand through algorithm that are built into the appliance or reside in the product cloud.

## 2. Smart Thermostats

In line with the definition used for smart hardware, a smart thermostat is defined as one that enables the power of the connected HVAC unit to be controlled using remote or rule-based mechanisms, such that the energy consumption used to heat and cool is modified to meet particular objectives. Some smart thermostats enable on-board rule based control whereby the user can set a variety of time

Points each day for a different set-point temperature, enabling energy to be saved by reducing the use of heating and cooling equipment at times of the day when it is not needed.

## 3. Smart lighting

relay to offer automated control functionality, such as scheduling, occupancy control, manage and daylight harvesting, into Smart lighting products are defined as those that incorporate sensors, microprocessor, and controllable switches or traditional lighting solutions; eliminating over limitations and unnecessary usage to reduce to reduce the lighting demand of building. These systems may also be the enable communication such that users can view and adjust control settings or energy patterns of the lights remotely. Many system support demand response programs, so that lights can be automatically dimmed or the turned off in response to a signal from the utility.

## 4. Smart Plugs

A smart plug is defined as a separate piece of hardware that serves as a proxy between the energy source and the energy-consuming device, which can control and/or provide feedback about the energy consuming device. Smart plugs include outlets, switches, power strips that enable users to control devices and appliances plugged into them. They enable control signals to be sent to connected appliances via remote commands or algorithms that are built into the device or reside in the product cloud. The figure of smart plug is given below:

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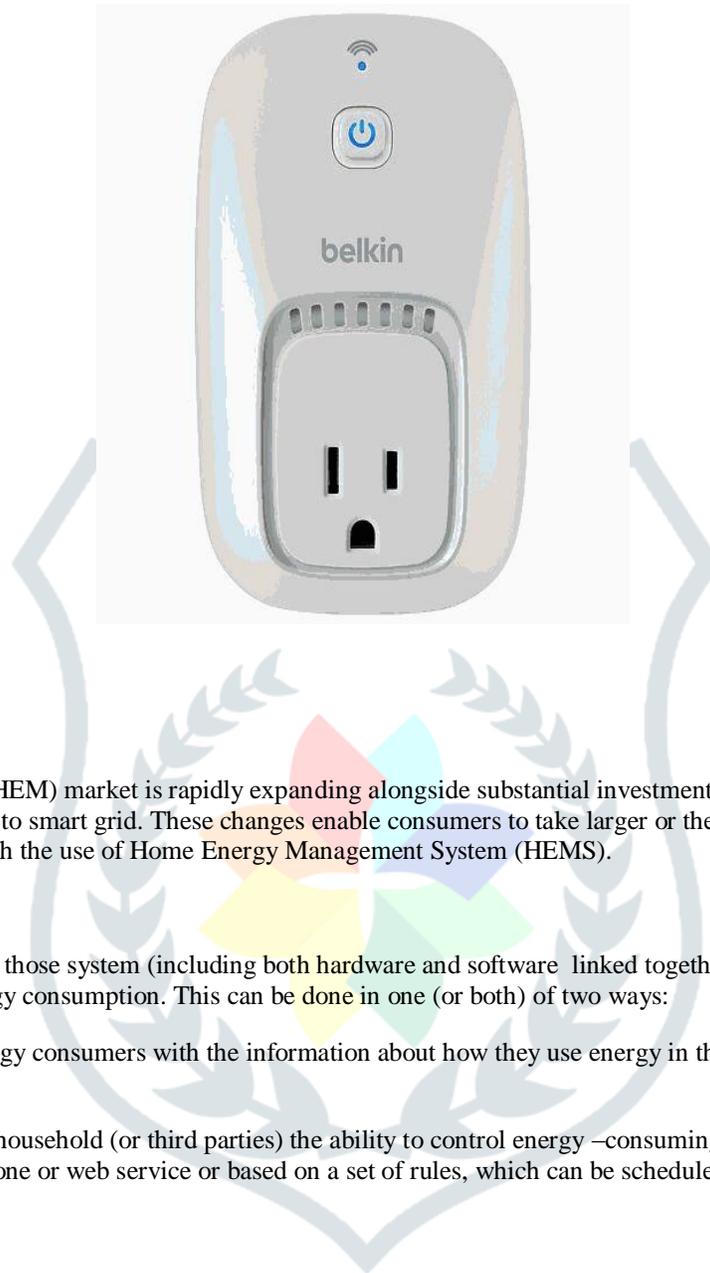
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FIGURE 2. SMART PLUG



## 6. EXECUTIVE SUMMARY

The home energy management (HEM) market is rapidly expanding alongside substantial investment to improve energy efficiency and upgrade electricity infrastructure to smart grid. These changes enable consumers to take larger or the greater control of their energy use, which can be enabled through the use of Home Energy Management System (HEMS).

### Defining HEM

HEMS can be broadly defined as those system (including both hardware and software linked together via a network) that enable households to manage their energy consumption. This can be done in one (or both) of two ways:

1. HEMS can provide energy consumers with the information about how they use energy in the home and/or prompts to modify consumption.
2. HEWS can provide the household (or third parties) the ability to control energy –consuming processes in the home, either remotely via a smart phone or web service or based on a set of rules, which can be scheduled or optimized based on user behavior.

## 7. CONCLUSION

Having defined and described Home Energy Management, reviewed the technology landscape, and assessed potential savings and adoption, we conclude with a brief discussion of how the market is evolving, key barriers (and ways to address them), and the potential role(s) of the utility in the HEMS market.

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