

IOT base Smart Home Appliances by using Cloud Intelligent Tetris Switch

ABSTRACT

To enhance the convenience of life, Internet of things today is a famous research topic. However, different home appliances provide different functions and services. Hence, in this research, the IOT base Smart Home Appliances by using Cloud Intelligent Tetris Switch is proposed which including the *Cloud Intelligent Tetris Switch*, *Cloud Home as a Service (HaaS) Server*, and *IOT based Appliances*. The *Cloud Intelligent Tetris Switch* is proposed to achieve the power control and local data exchanging. In addition, the dynamic extendable module is embedded. The *IOT based Appliances* provide the service of identification. Similar to the EPC network, the corresponding home appliance description data with RFID unique number can be obtained from the Internet and manufacture. The *Cloud Home as a Service (HaaS) Server* is proposed to provide the user interface for client users, storage all the information or data corresponding to the specific house, and query the function information of individual home appliance.

EXISTING SYSTEM

Internet of things today is a famous research topic. To enhance the convenience of life, connecting most sensors and appliances can be a good solution. By using the central home server, people can use the Wi-Fi or Bluetooth connection to control the home appliances. Suppose that all the home appliances are connected to the network and already on demand identified by the central home server, all the states of the appliances can be monitored remotely. However, not all current home appliances can be connected to the network. Most of the appliances are turn on/off based on the mechanical switch. In addition, different home appliances provide different functions and services. Hence, how to connect these different home appliances to the network for remote control becomes an important issue. Currently, the extension cord with manual switches (or sockets) is popular and generally used. In addition to the mechanical switch of individual home appliance, the manual mechanical switch can be used to enable the specific socket for home appliance using. In other words, there are two phases for appliance controlling:

- 1) The switch of extension power cord for power providing,
 - 2) The switch for function activation of the appliance.
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If the home appliance is controlled and monitored, it means that the appliance is powered on and already connected to the network. In opposition, to save the power and reduce the cost, the appliance should be turn off if it is not used. Since most of current appliances today are not equipped the intelligent power module, to directly turn on or power on the appliance via using wire or wireless signal is too difficult. In addition to the power, different appliances provide different services. In the other hand, the corresponding function commands will be needed for each appliance. Considering the current appliances used, to query the service functions from these appliances is almost impossible. These appliances cannot reply the queries to the central home server automatically. In other words, for the home central server, to dynamically identify each home appliance for executing the specific function or service is not possible.

DRAWBACKS

- It is expensive.
- Security problems are more.

PROPOSED SYSTEM

In this paper, the IOT base Smart Home Appliances by using Cloud Intelligent Tetris Switch is proposed which including the *Cloud Intelligent Tetris Switch*, *Cloud Home as a Service (HaaS) Server*, and *IOT based Appliances*. The *Cloud Intelligent Tetris Switch* is proposed to achieve the power control and local data exchanging. In addition, the dynamic extendable module is embedded. The *IOT based Appliances* provide the service of identification. Similar to the EPC network, the corresponding home appliance description data with RFID unique number can be obtained from the Internet and manufacture. The *Cloud Home as a Service (HaaS) Server* is proposed to provide the user interface for client users, storage all the information or data corresponding to the specific house, and query the function information of individual home appliance.

ADVANTAGES

- It is convinient to use.
- It is secure.

SYSTEM REQUIREMENTS

H/W System Configuration:-

- Processor - Pentium –IV
- RAM - 4 GB (min)
- Hard Disk - 20 GB
- Key Board - Standard Windows Keyboard
- Mouse - Two or Three Button Mouse
- Monitor - SVGA

S/W System Configuration:-

- Operating System : Windows 7 or 8 32 bit
- Application Server : Tomcat5.0/6.X
- Programming Language : Java
- Java Version : JDK 1.6 and above