ABSTRACT

Energy saving has attracted great attention as a global issue because of recent environmental problems. An energy saving system refers to a system that saves the energy consumed in a building or home, by cutting off the wasted electric power such as standby power. As a part of energy saving efforts, governments are operating policies that encourage the distribution of energy saving systems. Also, individual households are voluntarily installing energy saving systems to reduce electric power consumption. However, due to fixed system architecture, the existing systems have a disadvantage, lacking in scalability and usability. In addition, the existing systems bring up immense inconvenience as it returns to standby mode after automatic standby power cut-off.

In the earlier energy saving systems there exist several problems. The biggest problem of existing systems is their low extensibility and usability, because they are operated in a fixed form. For example, in terms of hardware, existing systems have the fixed roles of each socket, and there is no interconnection between these systems. Furthermore, they operate as a stand-alone system, according to predefined functions, or operate as a centralized system. Such a fixed structure makes it difficult for the system to be functionally updated, which lowers the extensibility and usability of the system.

Therefore, an intelligent energy saving system to solve these problems is proposed in this project work. The proposed system controls the power based on the three levels architecture hierarchical relationship among home appliances, behavioural model along with the relationship between user activity and home appliances for standby power reduction. And the third level depends upon