Energy Saving System for Set-top Boxes with Passive Standby Mode

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***Abstract*— Set-top boxes are widely deployed because of digital broadcasting, channel availability, high quality video, and other functionalities. Many set-top boxes do not have energy-efficient standby mode. To reduce standby power of set-top boxes, set-top boxes with energy-efficient passive standby mode have been developed. However, previously proposed methods of utilizing passive standby mode have energy efficiency and user inconvenience problems. In this paper, an energy saving system for set-top boxes with passive standby mode is proposed to fully utilize passive standby mode. The history of TV/STB power-on/off events is analysed to predict usage pattern. The system switches a set-top box to passive standby mode or active standby mode based on the prediction.**

***Keyword*—Electricity consumption, set-top box, power management, standby power reduction, intelligent energy saving system**

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