

## **Energy Detection Analytical Model for Handoff Process to Support Mobile Cloud Computing Environment**

Mobile devices play an integral role in our day lives and have brought the revolutionary change in business, education, and entertainment. Moreover, the emergence of cloud computing technology greatly extended the significance of smart device. On the other hand, the smart devices experience the problem when obtaining the multiple cloud services during the handoff process. In this paper, we propose an energy detection (ED) analytical model for handoff process that calculates the energy consumption for each handoff process in the cloud computing environment. Our ED analytic model is developed to examine the consumed energy for different handoff processes in cloud computing. The model helps the mobile users to get prior information for the status of the mobile when executing the handoff process. To reconfirm the validity of ED analytical model, we have test programmed in NS2. The results demonstrate that the ED analytical model efficiently detects the energy consumption of mobile devices during the handoff process in cloud computing environment.