

## Abstract

Billing scheme is needed to obtain revenue from internet access service for public purposes. One of the biggest problems in the public internet access in wireless fidelity (Wi-Fi) network is the access control to the users. Access control is being used to determine who are granted to use the services.

This Final Project will design and implement billing system for internet access service in Wi-Fi network. In order to be able to build the Wi-Fi billing system, it needs protocol that enable the system to do authentication, authorization, and accounting (AAA). *Remote Authentication Dial-In User Service* (RADIUS) protocol is a protocol that provide framework for authentication, authorization, and accounting. Accounting process enables system to retrieve information about user's activities in using Wi-Fi services to generate for billing purpose.

The result of this Final Project is that service users able to watch the usage of the Wi-Fi internet access service based on characteristic of billing scheme that offered. From the implementation that had been done, it shows that on the billing scheme based on data volume that had been downloaded that data that been stored on RADIUS is bigger than the actual data. Meanwhile, the signal strength is related to the delay of the service delivery.

**Keywords:** Wi-Fi, authentication, authorization, accounting, RADIUS