ABSTRACT

The classic web applications usually need a lot of bandwidth to provide the rich user interfaces. Since Ajax was introduced, it has reduced the web server load and the data transfer to/from users' computers (Sanjaya, 2007). By using Ajax, only a specific part in the web page can be requested to the web server (Lin, 2008). However, it still cannot provide the real time data updating. The common approach to provide the real time data updating uses a timer to request a new data from the web server periodically (Kletsch, 2008; Chen, 2008). But, the requests sometimes do not get any new data. If the interval time to renew the data is too long, the data updating will come to the client late and some data received by the client may be lost.

The proposed approach to solve the problem is creating an Ajax application which can receive a signal from the web server. The received signal will trigger the web application to renew the data from the web server. By limiting of requests to the web server only if a new data in the web server arises, as a consequence the traffic between the web server and the client can be reducible. The efficiency of web traffic will be measured by two matrices, the successful receptive percentage of the web application request to the web server and the bandwidth consumption of web application.

In this research, an innovation of Green Ajax will be proposed. The idea of low bandwidth and low resource consumption are introduced. Mozilla Firefox and Firebug will be employed as the tools to measure the experimental results. The experiments test not only infrequent update applications, but also frequent update application and fuzzy-based application. From the experiments, Green Ajax is expected to be a suitable approach for the interactive web based applications.