Abstract

The development of mobile phone technology is growing rapidly and tends to be more affordable. The development can also be used in the preservation of traditional languages, especially in this case is the Javanese language. This is done by developing a Javanese mobile dictionary application based on J2ME. J2ME is a technology of Java application in mobile phones. With this dictionary, the Indonesian people can learn the Javanese language wherever and whenever they would like to learn. This is because the dictionary database is stored locally on mobile phones by using RMS (Record Management System).

By using web service technology, mobile applications can now synchronize with the server. Therefore, the database can be updated. The synchronization can be done by the client through sending the last timestamp data to the server. Then the server searches data that have newer timestamp on its database and sends them to the client. Finally, the client will synchronize the database locally.

This timestamp-based database synchronization was successfully implemented on J2ME platform as a client and PHP platform as a server. From the experiment result, the
factors that affect this synchronization’s process are the type of client connectivity (GPRS, EDGE, or 3G) and the mobile phone operating system. The faster type of client connectivity, then the synchronization process also faster. In addition, Java-based operating system mobile phone has faster database synchronization processing compared to other operating system.

**Keyword**: Javanese – Indonesian Dictionary, XML – RPC, synchronization, timestamp, J2ME.