

## Abstract

Nowadays, mobile devices become an alternative for users of technology. In addition to having more value in terms of mobility, users are getting spoiled with the development of today's mobile devices are becoming more sophisticated even less competitive with desktop devices. Mobile database is a database system environment that was born because of the increasingly widespread use of mobile devices. In short, the device has its own DBMS to store data and be able to move where. In the mobile database concepts, relationships built is client-server, which means it will remain there a back-end database as a server. Therefore it takes a synchronization process. However, in the utilization of mobile data base in the mobile environment is still reap many obstacles, such as bandwidth consumption, performance and energy of mobile devices is limited.

In this thesis are discussed briefly about the concept of mobile data base will be simulated as well as the influence of semantic caching strategy that was estimated to be one solution to the problem of bandwidth consumption in the process of synchronization in mobile database environments.

**Key words:** mobility, mobile database, client-server, synchronization, bandwidth, semantic caching,