



**University Of Moratuwa
Sri Lanka**

ENABLING WIRELESS BANKING

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ABSTRACT

This dissertation presents the work carried out to design and develop a mobile-internet-based banking application for a commercial bank.

In today's fast-paced world, people require connectivity while mobile or when remotely located. Today, individuals expect their mobile devices to be more than just a means of verbal communication. Checking bank accounts, settling bills, making money transfers are some of the activities that individuals would require to perform through their mobile devices. These requirements have brought about many different technologies and solutions to individual needs.

One such technology is the Wireless Application Protocol (WAP), which makes the Internet available on mobile devices. Having the capability to provide the Internet services on a mobile device has brought about many possibilities for businesses.

The Commercial Bank of Ceylon is a pioneer bank in Sri Lanka which has decided to identify the feasibility of providing their services on a WAP based environment. This research project was carried out after identifying their requirements.

The Preliminary Study phase of this project identified and evaluated the technologies on which the application would be developed and deployed. Emulation tools, WML, WML Scripts, Java Servlets, JDBC, ODBC, the Commercial Bank's requirements and the WAP architecture were the main areas of study and evaluation during this phase.

The application was designed based on the requirements of the bank. It consisted the identification of the relevant entities, processes and data dictionary items. Based on this design, the application was developed using a set of Java servlets. These servlets generated the WML code to display information and accept user interaction on the mobile device. A system test was undertaken once the application was developed on a simulated environment. This simulated environment comprised of the software based mobile device, the web server and the WAP gateway. The back end of the application contained a Microsoft Access based environment replicating the same data structures as found on the bank's DB/2 database.

Finally, two deployment options of the developed solution were identified. The first option was to base the WAP gateway with the mobile operator. The second was where the bank could use an in house WAP gateway. These two deployment options were evaluated in terms of commercial as well as technical feasibility. The first option was tested successfully on a real environment made available by the mobile operator, Dialog GSM in Sri Lanka.

This research project shows that WAP based wireless banking is viable and also it makes a case for any bank or financial institution to adopt this technology in the future.