Automated Mobile Money Transfer System for Sri Lanka

Sujani Wijesundera

MSIT/05/10042

Faculty of Information Technology

University of Moratuwa

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Declaration

I declare that this dissertation does not incorporate, without acknowledgment, any material previously submitted for a Degree or a Diploma in any University and to the best of my knowledge and belief, it does not contain any material previously published or written by another person or myself except where due reference is made in the text. I also hereby give consent for my dissertation, if accepted, to be made available for photocopying and for interlibrary loans, and for the title and summary to be made available to outside organization.

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Name of Student Signature of Student

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Date

Supervised by

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Name of Supervisor(s) Signature of Supervisor(s)

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Date

to

My Loving Mother

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Abstract

Traditional method of transferring money (money order) with small amounts is normally slow and costly in Sri Lanka. Banks also demand substantial fees to transfer money from one account to another account. Apart from that there are hardly any branches in some rural areas. Also most of money receivers may not have their own bank accounts. Therefore it is very useful to have a fast and cost effective money transfer method for Sri Lanka.

The fear of using Credit Cards has prevented many a potential customer to shop using credit cards. Credit Card fraud has caused apprehension among customers. Therefore it is essential to have a secure and fast method to pay without using credit card or cash.
Developing market economies have benefited hugely from mobile telephony bringing a communications revolution to the masses.

Therefore mobile devices could be used to transfer money easily. This would be more secure and cost effective when compare with the existing money transferring methods in Sri Lanka.

The purpose of this project is to show the usefulness of such a system for Sri Lanka and implement a prototype for person to person mobile money transferring and to handle cashless payments using mobile devices, mainly for goods purchasing.

To complete the whole system it had to develop the mobile operator sub system, bank sub system and retailer sub system. Basically it had to develop every business user who connects with the system.

This system contains main modules like SMS send/receiving module, client server module, web module etc. In the SMS module it has been used a 3G modem to send and receive SMSs. It has been used one of the open source java API called JSMEngine to develop this module. TCP/IP Client-Server technology used to connect bank and mobile

provider. Web interface module implemented for retailer, to check the customer validity and status. Other web modules are used to check customer validity and report generation.

Thesis is organized as Abstract and with eight chapters. Also include with references and Appendix A, B, C and Appendix D. Appendices contain design diagrams and user interface diagrams.

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Terms, Acronyms

Terms

- M-cash: Mobile cash. Transfer cash from one user to another.

Acronyms

- PIN: Personal Identification Number
- SMS: Short Message Service
- J2ME: Java 2 Micro Edition.
- SMSC: Short Message Service Center.
- SMPP: Short Message Peer to Peer
- GUI: Graphical User Interface.
- ATM: Automated Teller Machine
- UML: Unified Modeling Language
- AJAX: Asynchronies Javascript And XML
- XML: Extensible Markup Language
- JSP: Java Server Pages
- HTML: Hyper Text Markup Language.
- VPN: Virtual Private Network
- HTTP: Hypertext Transfer Protocol.
- GSM: Global System for Mobile communication.
- PDU: Protocol Data Unit.
- EL: Expression Language.
- CSS: Cascade Style Sheet.
- UI: User Interface.
- URL: Unified Resource Locator.
- PDA: Personal Digital Assistant.
- J2ME: Java 2 Platform, Micro Edition.
- GPRS: General Packet Radio Service.