MODELING MOBILE PAYMENT PROCESS FLOW FOR BUYING E-BOOK

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MODELING MOBILE PAYMENT PROCESS FLOW FOR BUYING E-BOOK

A dissertation submitted to the Faculty of Information Technology in partial
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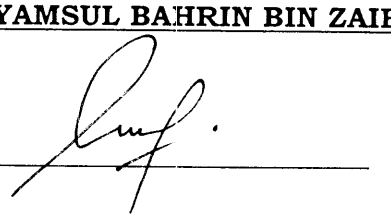
(Signature) : 

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ABSTRAK

Mobile Payment (M-Payment) adalah satu kaedah pembayaran bagi pembelian produk atau servis yang menggunakan peranti mudah alih seperti telefon bimbit, PDA atau *tablet PC* sebagai medium pembayaran. Kaedah *M-Payment* telah digunakan secara meluas bagi pembelian nada dering, permainan bagi telefon bimbit, berita dan makluman saham. Walaubagaimanapun penggunaan *M-Payment* untuk membeli buku elektronik *(e-Books)* masih belum lagi wujud.

Oleh itu, projek ini telah dilaksanakan bagi mengenalpasti kesesuaian mengadaptasikan *M-Payment* sebagai kaedah pembayaran bagi pembelian produk e-Books. Projek ini akan menumpukan kaedah pembayaran *M-Payment* melalui telefon bimbit kerana popularity telefon bimbit dikalangan penuntut universiti berbanding PDA atau *tablet PC*, tambahan pula harga telefon bimbit adalah jauh lebih murah berbanding PDA atau *tablet PC* dan mampu dimiliki.

Model aliran proses yang mengambil kira ketiga-tiga entiti utama iaitu pembeli, syarikat telekomunikasi dan pengantara (*Merchant*) telah dibangunkan, model aliran proses ini akan memudahkan pengaplikasian kaedah *M-Payment* bagi pembelian *e-Books*.

Kemampuan telefon bimbit melayari internet telah melahirkan satu lagi kaedah pemasaran produk *e-Books*, iaitu melalui laman WAP. Oleh itu Ciri-ciri laman WAP bagi penjualan produk *e-Books* telah dikenalpasti dengan menggunakan laman web eInfoC sebagai kajian kes. Dua prototaip iaitu WAP prototaip dan web prototaip juga telah dibangunkan berdasarkan aliran proses yang telah dicadangkan, prototaip-prototaip ini telah dibangunkan dengan tujuan mengaplikasikan aliran proses yang telah dicadangkan.

ABSTRACT

Mobile payment (M-Payment) is a payment method that is carried out via mobile devices such as PDA, tablet PC or mobile phone. The M-Payment method is widely employed for buying ring tones, games and stock alerts or news, however the use of M-Payment method for buying electronic books (e-Books) is not yet available.

This project aims to study the suitability of adopting M-Payment method for buying e-Books, with emphasis on the mobile phone as the wireless device, due to the popularity of mobile phone usage among students and the affordable price of owning a mobile phone compared to PDA or tablet PC.

A diagrammatic process flow model that includes all the major entities which are Buyers, Telco and Merchant was developed. The process flow model will served as a pictorial representation of the processes involved and also as a guidance in implementing the M-Payment system in buying e-Books.

The capabilities of mobile phone to browse internet through WAP site has open up a new marketing channel where e-Books providers can now market their products via WAP site. Therefore the project has identified the features of e-Books WAP site based on the proposed process flow and the eInfoC web site as case study. Finally two prototypes which are WAP prototype and web prototype were developed to demonstrate the proposed process flow.

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LIST OF ABBREVIATIONS

ASP	Active Server Page
CP	Content Provider
CPA	Content Provider Access
DET	Delivery Entity Terminal
E-Book	Electronic Book
eP	e-Book Provider
E-Commerce	Electronic Commerce
ERD	Entity Relationship Diagram
GIF	Graphic Interchange Format
GPRS	Global Packet Radio Service
GPS	Global Positioning System
GSM	Global System for Mobile Communication
HTML	Hypertext Markup Language
HTTP	Hypertext Transfer Protocol
IP	Internet Protocol
IIS	Internet Information Server
JPEG	Joint Photographic Expert Group
Kbps	Kilobits per second
Mbps	Megabits per second
MC	Message Centre
MMS	Multimedia Messaging Service
MSC	Mobile Switching Centre
MO	Mobile Originated Short Message Service Transfer
MT	Mobile Terminated Short Message Service Transfer

M-Payment	Mobile Payment
MPP	Mobile Payment Provider
MPS	Mobile Payment System
PDA	Personal Digital Assistance
PNG	Portable Network Graphics
P-SMS	Premium Short Message Service
SIM	Subscriber Identification Module
SMS	Short Message Service
TCP	Transmission Transfer Protocol
TTP	Trusted Third Party
UUM	Universiti Utara Malaysia
UMTS	Universal Mobile Telephone System
URL	Uniform Resource Locator
VPN	Virtual Private Network
WAP	Wireless Application Protocol
WAE	Wireless Application Environment
WSP	Wireless Session Protocol
WTP	Wireless transaction Protocol
WTLS	Wireless Transport Layer Security
WDP	Wireless Datagram Protocol
WBMP	Wireless Bitmap
WML	Wireless Markup Language
XML	Extensible Markup Language
XML MP	Extensible Markup Language Mobile Profile

CHAPTER 1

INTRODUCTION

1.1 Background

Mobile phone has revolutionized our life, from the way we communicate to the way we conduct business. The mobility of mobile phone make it easier for user to make a call from almost anywhere and anytime. The price of mobile phone can range from as low as RM80.00 to as high as RM5000.00. The enormous benefit and low price tag make it available to almost every level of consumer.

The Malaysian Communications and Multimedia Commission reported that in 2005, there are 16.551 millions mobile phone subscribers in Malaysia from its 26.13 millions populations compared to only 2.150 million mobile phone subscribers in 1998 with 22.18 millions populations, that is on average 63.3 mobile phone subscribers for every 100 inhabitants for the year 2005 (MCMC.gov, 2005). Another study reported that 180.6 million phones were sold world wide this year from January to March, while the Gartner predicts that total of 750 million phones will be sold worldwide this year (Sayer, 2005).

Mobile Payment (M-Payment) is the use of mobile devices such as mobile phone, PDA (Personal Digital Assistance), tablet PC or mobile computer to make payment for purchasing goods and services. M-Payment can be performed through any of the existing wireless network whether Wireless LAN (IEEE 802.11 protocol), Bluetooth, Infrared (IrDa) or cellular networks such as GSM, GPRS or 3G (Cervera, 2002; Antovski and Gusev, 2003; Kalliola, 2005).

The contents of the thesis is for internal user only

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