THE EFFECTIVENESS OF USING E-MARKETING TO PROMOTE PRODUCT ON SALE FOR SUPERMARKET

FADI YASSIN SALEM AL-JAWAZNEH

UNIVERSITI UTARA MALAYSIA

THE EFFECTIVENESS OF USING E-MARKETING TO PROMOTE PRODUCT ON SALE FOR SUPERMARKET

A Thesis Submitted to College Arts & Sciences in Partial

Fulfillment of the Requirement for the Degree Master

(Information Technology)

University Utara Malaysia

BY:

FADI YASSIN SALEM AL-JAWAZNEH



KOLEJ SASTERA DAN SAINS (College of Arts and Sciences) Universiti Utara Malaysia

PERAKUAN KERJA KERTAS PROJEK (Certificate of Project Paper)

Saya, yang bertandatangan, memperakukan bahawa (I, the undersigned, certify that)

FADI YASSIN SALEM AL-JAWAZNEH (802046)

calon untuk Ijazah (candidate for the degree of) MSc. (Information Technology)

telah mengemukakan kertas projek yang bertajuk (has presented his/her project paper of the following title)

THE EFFECTIVENESS OF USING E-MARKETING TO PROMOTE PRODUCT ON SALE FOR SUPERMARKET

seperti yang tercatat di muka surat tajuk dan kulit kertas projek (as it appears on the title page and front cover of project paper)

bahawa kertas projek tersebut boleh diterima dari segi bentuk serta kandungan dan meliputi bidang ilmu dengan memuaskan.

(that the project paper acceptable in form and content, and that a satisfactory knowledge of the field is covered by the project paper).

Nama Penyelia Utama (Name of Main Supervisor):	MR. ADI AFFANDI BIN AHMAD
Tandatangan (Signature) :	A-lef
Tarikh (Date) :	17 MAY 2009

PERMISSION TO USE

In presenting this thesis of the requirements for a Master of Science in Information Technology (MSc. IT) from University Utara Malaysia, I agree that the University library may make it freely available for inspection. I further agree that permission for copying of this thesis in any manner, in whole or in part, for scholarly purposes may be granted by my supervisor or in their absence, by the Dean of College of Art and Sciences. It is understood that any copying or publication or use of this thesis or parts thereof for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to University Utara Malaysia for any scholarly use which may be made of any material from my thesis.

Request for permission to copy or make other use of materials in this thesis, in whole or in part, should be addressed to:

Dean of College of Art and Sciences

University Utara Malaysia

06010 - Sintok

Kedah Darul Aman.

Abstract

In these days most supermarkets acknowledge the importance of SMS marketing and web in reaching and interacting with their customers. However, there is much discussion regarding the effectiveness when it comes to SMS marketing, this study helped the customers and sellers and willing to accept, reading and using SMS messages: effective is SMS marketing compared to traditional marketing communications. The goal of this study is to investigate the effectiveness of SMS promotion compared to traditional ways in marketing for different aspects and on the other hand, to develop prototype by using web and SMS technology to apply this system and extent consumers are willing to accept commercial messages on their mobile phone, since the effectiveness of SMS marketing highly depends on this willing. The results of this research indicate that the use of the web and SMS for the benefit of the seller and the buyer in all aspects instead using traditional ways in promotion.

By the Name of Allah, the Most Gracious and the Most Merciful

Acknowledgement

Firstly, I would like to express my deepest sense of gratitude to my supervisors **Adi Affandi Ahmad**, for patient guidance, encouragement, understanding, and excellent advice throughout this study.

I am deeply and forever indebted to the people in my life that touched my heart and gave me strength to move forward to something better. The people who inspire me to breathe, who encourage me to understand who I am, and who believe in me when no one else does. I dedicate this study to the mountain that bore all the storms and conditions for help my mother and my brothers and my sisters, to my brother **Dr. Fu'ad Yassin Al-Jawazneh** and Source of my light and my life to my mother **Um Fu'ad** and my brothers **Fahad (Abu Yassin)**, **Forsan**, **Muath Dr. Safi**, **Ahmad**, **Yassin** and my sisters and to all my family in Jordan.

Finally, am also thankful to all my colleagues and friends especially from the Faculty of Information Technology for their help and support, with whom I shared pleasant times.

PERMISSION OF USE ABSTRACT ACKNOWLEDMENT TABLE OF CONTENTS LIST OF TABLE LIST OF FIGURES LIST OF REFERENCES LIST OF APENDDEX TABLE OF CONTENTS		I III IV VI VII VII
	PTER 1 INTRODUCTION	
1.1	Introduction 1.1.1 Problem Statement	1
		5
	1.1.2 Research Question1.1.3 Objectives	6 6
	1.1.4 Scope of Study	6
1.2	Significance of Study	7
1.3	Conclusion	8
1.4	Thesis Outline	9
СНА	PTER 2 LITERATURE REVIEW	
2.1	Introduction	10
2.2	WEB and WAP Definition	11
2.3	The WAP Protocol Stack	12
2.4	Mobile Phone in Communities	14
2.5	Mobile Phone in Malaysia	14
2.6	The Rapid Growth of The Mobile Phone	15
2.7	Mobile in Marketing	16
2.8	The Impact Of The Use Of E-Marketing On The Economy	18
2.9	SMS in Mobile Business	18
2.10	Usefulness Mobile Device in the Marketing	19
	2.10.1 Advantage of this Method	20
	2.10.2 The Benefits of This Method	20
2.11	Mobile Services with Tourism Guide	21
2.12	Mobile Applications with Transportation	22
2.13	Mobile with Other Applications	23
2.14	Conclusion	24

CHAPTER 3 RESEARCH METHODOLOGY

3.1	Introduction	2:
	3.1.1 Awareness of problem	20
	3.1.2 Suggestion	20
	3.1.3 Development	2
	3.1.4 Evaluation	2
	3.1.5 Conclusion	28
3.2	Conclusion	29
СНА	APTER 4 ANALYSIS AND DESIGN	
4.1	Introduction	30
4.2	Functional and Non-Functional Requirement	
	4.2.1 Functional Requirement	3
	4.2.2 Non-Functional Requirement	32
4.3	Use Case Diagram	34
4.4	Use Case Specification	
	4.4.1 Use Case Specification for Login	35
	4.4.2 Use Case Specification for The Manage customer	36
	4.4.3 Use Case Specification for The Manage Promotion	37
	4.4.4 Use Case Specification for Send Notifies Message	38
	4.4.5 Use Case Specification for Manage Message	39
	4.4.6 Use Case Specification for View Promotion	40
4.5	Sequence Diagram	
	4.5.1 Sequence Diagram for Login	4]
	4.5.2 Sequence Diagram for Manage Customer	42
	4.5.3 Sequence Diagram for Manage Promotion	43
	4.5.4 Sequence Diagram for Delete Promotion	44
	4.5.5 Sequence Diagram for View Promotion	44
	4.5.6 Sequence Diagram For Notifies Message	45
4.6	Class Diagram	46
4.7	Development	
	4.7.1 Online Promotion System Architecture	47
	4.7.2 Hypertext Preprocessor	48

4.8	System Test	
	4.8.1 Login Page	49
	4.8.2 Add New Promotion Page	49
	4.8.3 Edit Promotion Page	50
	4.8.4 Send SMS Page	50
	4.8.5 Add New Customer	51
	4.8.6 Edit Customer	51
	4.8.7 Edit Account	52
	4.8.8 SMS on customer mobile	52
	4.8.9 WAP screen	53
СНА	PTER 5: DISCUSSION AND EVALUATION	
5.1	Introduction	54
5.2	Usability Testing Result	54
5.3	Conclusion	57
СНА	PTER 6: CONCLUSION	
6.1	Introduction	58
6.2	Conclusion of This Study	58
6.3	Study of Contribution	59
6.4	Problems and Limitation	59
6.5	Future Works	60
6.6	Conclusion	60
LIST	OF TABLES	
Table	2.1 Handphone users by nationality in Malaysia	14
Table	25.1 Demographics data for Gender	55
Table	e 5.2 Demographics data for age	55
Table	25.3 Demographics data for marital status	55
Table	25.4 The descriptive statistic for all the questions	56

LIST OF FIGURES

LIST OF APPENDIX		68
LIST OF REFERENCES		61
riguic 3.1	The Question High rigicement	37
Figure 5.1	The Question High Agreement	57
Figure 4.24	SMS on customer mobile	53
Figure 4.23	WAP screen	52
Figure 4.22	Edit Account	52
Figure 4.20	Edit Customer	51
Figure 4.19	Add New Customer	51
Figure 4.19	SMS Control	50
Figure 4.17	Edit Promotion Page	50
Figure 4.17	Add New Promotion Page	49
Figure 4.16	Login Page	49
Figure 4.15	WEP/SMS Architecture	47
Figure 4.14	Class Diagram For The Proposed System	46
Figure 4.13	Sequence Diagram For Notifies Message	45
Figure 4.12	Sequence Diagram For View Promotion	44
Figure 4.11	Sequence Diagram For Delete Promotion	44
Figure 4.10	Sequence Diagram For Add New Promotion	43
Figure 4.9	Sequence Diagram For Manage Customer	42
Figure 4.8	Sequence Diagram For Login	41
Figure 4.7	Use Case Specification View Promotion	40
Figure 4.6	Use Case Specification For Mange Message	39
Figure 4.5	Use Case Specification For Send Notifies Message	38
Figure 4.4	Use Case Specification For Manage Promotion	37
Figure 4.3	Use Case Specification For Manage customer	36
Figure 4.2	Use Case Specification For Login	35
Figure 4.1	Use Case Diagram For The Proposed System	34
Figure 3.1	General Methodology Of Design Research	25
Figure 2.1	WAP Protocol Stack	12

CHAPTER ONE

INTRODUCTION

1.1 INTRODUCTION

Marketing is set of institutions and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large (Lib, 2007). The term developed from the original meaning which referred literally to going to market, as in shopping, or going to a market to sell goods or services. Marketing as satisfying needs and wants through an exchange process (Kotler, 2000).

E-marketing, has become a far more powerful means of marketing in the world, there is also the cheapest of all solutions to the marketing of electronic and affordable now, we can double our sales and competition from the largest companies in our low costs (Burns & Bush, 2000). Target segment, which the public is willing and able to deliver advertising messages to target the customer's home, sitting in his home by his cell phone using SMS messages can also be an announcement of the product on sales or prices of new messages.

The contents of the thesis is for internal user only

7 REFERENCES

Abowd, D., Atkeson G., Hong, J. & Long, S. (1997). Cyberguide a mobile context-aware tour guide. Baltzer/ACM Wireless Networks.

Ashok J. (2008). How will life change in the future mobile information society, another Opportunity for developing economies, Chennai, India, retrieved on 22 March 2009, by TeNeT Group.

Baehr, C. (2007). Web Development: A Visual-Spatial Approach. Columbus:Prentice hall.

Barbara, D. (1999). Mobile Computing and Databases –Survey. IEEE. Transactions on Knowledge and Data Engineering, 11(1) January/February (1999) 108–117.

Barker, D., (2000) Requirements Modeling Technology: A Vision for Better, Faster, and Cheaper Systems. Computer Society. Retrieved: Feb 23, 2009. From: http://www.ittc.ku.edu/Projects/rosetta/downloads/barker-viuf00.pdf.IEEE

Bhattacharyya, D. (1997). Mediating India: An Analysis of a Guidebook. Annals of Tourism Research 24(2):371-389.

Bauer, H.H., Reichardt, T., Barnes, S.J. and Neumann, M.M. (2005). Driving Consumer Acceptance of Mobile Marketing: A Theoretical Framework and Empirical Study. Journal of Electronic Commerce Research 6 (3), 181-192.

Bentley, L. D.,& Dittman, K. C. (2001). System Analysis and Design Methods (5th ed.) Mc-Graw Hill: Boston.

Bhavnani, A., Chiu, R., Janakiram, S., Silarszky, P., & Bhatia, D. (2008). The Role of Mobile Phones in Sustainable Rural Poverty Reduction. ICT policy division global information and communications department (GICT).

Burns, A. & Bush, R. (2000) Marketing Research, 2nd Edition. Prentice Hall.

Cellular (2006) Global Mobile Customer Base Exceeds 2.6 Billion. Retrieved on: April 11, 2009. from: http://www.cellular-news.com/story/20930.php

Cheverst, K., Davies, N., Mitchell, K., & Friday, A. (2000). Experiences of developing and deploying a context-aware tourist guide: The Guide project. International Conference on Mobile Computing and Networking, Boston, ACM.

Craig, A. & John, D., (2004) Creating Web Services Using Asp.Net, CCSC: Rocky Mountain Conference

Darrell, B. (2008) Requirements modeling technology a vision for better, faster, and cheaper systems. Retrieved on: march 11, 2009. from: www.apl.jhu.edu/classes/notes/schappelle/704/requirementsmodeling.pdf.

Davies N., Mitchell K., Cheverst K. & Blair G. (1998). Developing context sensitive tourist Guide. In: Proceedings First Workshop on Human Computer Interaction with Mobile Devices.

Davis, (1989) Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *International Journal of Human-Computer Interaction*, vol. 7, pp. 57-70.

Dell, M. (2008). The Impact of Ecommerce on the World Economy In The New Millennium- Commerce Evolution On Modern Life. retrived on: March 23, from: http://www.articlesbase.com/Internet-marketing-articles/-of-ecommerce-on-the-world-economy-in-the-new-millennium-commerce-evolution-on-modern-life-628019.html

Dhann, S. (2001) Referencing: The Harvard referencing system Stockholm: School of Information and Communication, Department of Media Technology and Graphics Arts.

Ducoffe, & Robert, H. "Advertising Value and Advertising on the Web. Journal of Advertising Research". Vol. 36, No. 5, pp. 21-35, September/October 1996.

Dunham, M., et al. (1995). Mobile Computing and Databases: Anything New? SIGMOD Record, Special Section on Data Management Issues in Mobile Computing, 24(4): 5–9.

Durie, R. (2005) Marketing Guide"SME". Retrieved on: March 2, 2009. From: http://www.aiia.com.au/docs/guides/SME%20Marketing%20Guide%202006.pdf

Elalfy, E. (2005) A General Look at Building Applications for Mobile Devices. Distributed Systems Online. Retrieved on: March 24, 2009. from: http://csdl2.computer.org/comp/mags/ds/2005/09/o9005.pdf. IEEE.

Esato, (2006) Billion Mobile Phone Users in the World. Retrieved on: March 22, 2009 from:http://www.esato.com/news/article.php/id=1365).

Haig, M. (2002) Mobile marketing: The message revolution, cracking insight into how to really get personal with you customers. 2002.

Heide B. (2003). Using Mobile Technology to Support eDemocracy retrieved on March14,2009.from:(http://ieeexplore.ieee.org/iel5/8360/26341/01174324.pdf?arnumbe r=117324

Hanson, W. (1999) Principles of Internet marketing. South-Western College Publishing Company.

Goto, K., & Kambayashi, Y. (2002). A New Passenger Support System for Public

Transport using Mobile Database Access. Proceedings of the 28th International Conference on Very Large Data Bases (VLDB 2002) (2002) 908–919.

IBM (2006). Websphere process server. From (http://www-06.ibm.com/software/integration/wps/).

Imielinski, T. & Badrinath, B.(2005). Mobile Wireless Computing - Challenge in Data Management, Communications of the ACM, 37(10) (1994) 18–28.

Introduction to Microsoft .Net Platform. (2008) Microsoft Internet Explorer, Accessed on Jan 12, 2009. From: http://www.asp101.com/articles/nakul/intronet/default.asp

Kavassalis, P. et al., (2003). Mobile Permission Marketing: Framing the Market Inquiry. International Journal of Electronic Commerce 8 (1), 55-79

Kirsten, (2009) SMS Marketing: Effective Way to Reach Target Users. Retrieved on March23,2009.From:website:http://www.streetdirectory.com/travel_guide/154697/mark eting/sms marketing effective way to reach target users.html

Koichi G. & Yahiko K., (2003) Integration of Electronic Tickets and Personal Guide System for Public Transport using Mobile Terminals, June 9-12, 2003, ACM.

Kushchu. & Kuscu, M. H. (2003) Mobile government (m-government) retrieved11Sep2008fromhttp://topics.developmentgateway.org/egovernment/rc/Browse Content.

Kotler, P. (2000) Business the ultimate resource, marketing management. city publishing house.p.924.

Kramer, R., & Modsching, M. (2005). Development and evaluation of a context-driven, mobile tourist guide. International Journal of Pervasive Computing and Communication (JPCC).

Leppaniemi, M. (2008) Mobile marketing Communications in Consumer markets. Retrieved on: march 16, 2009. from: http://herkules.oulu.fi/isbn9789514288159/isbn9789514288159.pdf

MCMC (2007). Facts & Figures, Statistics & Records. Retrieved April 25, 2009. From: http://www.skmm.gov.my/facts_figures/stats/index.asp

Michael, A. & Salter, B. (2006) Mobile Marketing, Achieving Competitive Advantage through Wireless technology. BH, P.25 – 40.

Naismith, L., Lonsdale, P., Vavoula, G., & Sharples, M. (2004) Literature Review in Mobile Technologies and Learning: Future lab Series. Retrieved on: Jan 1, 2009, from:http://www.futurelab.org.uk/resources/documents/lit reviews/Mobile Review.pdf.

Nielsen, J. (1993) Usability engineering, Academic Press Limited, London, UKM Porteous.

Organization for the Advancement of Structured Information Standards (OASIS), (2004). Introduction to UDDI: Important Features and Functional Concepts. Whitepaper.

Patric, L. (2004). Guidelines to Design a Web Page. Canada: Wrox Press.

Paul, D., (2006) Fundamentals VB.NET retrieved on: Jan 1, 2005 from http://pdsa.com/Download/eBook/Preview 57.pdf.

Raffaele, B., Marco, C. & Enrico, G., (2005) Mesh Networks: Commodity Multihop Ad Hoc Networks. IEEE Communications Magazine, 43(3):123–131, Sep, 2008.

Ravden, S. & Johnson, G. (1989). Evaluating usability of human computer interfaces: a Practical method, Ellis Horwood Ltd., Chichester, UK.

Requirements Modeling. (2008) Retrieved On: Feb 3, 2009, from: www.ittc.ku.edu/Projects/rosetta/downloads/barker-viuf00.pdf.

Robbins, J. N. (2006). HTML & XHTML, 3rd Edition. Sebastopol: O'Reilly. Rogers, M. (1983). Diffusion of innovations. 3rd Edition. New York.

Skolar, D. & Trachtenberg, A., PHP Cookbook.p.168-215.retrived on: Jan 11.2009.from: http://www.oracle.com/technology/tech/php/pdf/ch08.pdf

Scholz, H. (2008) SMS Marketing Para Pequenasy medianas empresas. Retrieved on: April 1, 2009.from: http://www.mobile-zeitgeist.com/es/2008/01/26/sms-marketing-fuer-kleine-und-mittelstaendische-unternehmen/

Singelee, D., & Preneel, B. (2005). The Wireless Application Protocol. International Journal of Network Security, 1(3), 161–165. Retrieved on: Feb 20, 2009. From:http://ijns.femto.com.tw/contents/ijns-v1-n3/ijns-2005-v1-n3-p161-165.pdf

Soriano, C. (2005) WAP and WML. For STR, recto. Tribiani.

Svanas D. (2001). Context-aware technology: a phenomenological perspective. Human-Computer Interaction 16: 379–400.

Tanakinjal, H. G., Deans, R.K. & Gray, B. (2007). Management of Permission-Based Mobile Marketing Diffusion. International Journal of Business and Management, Vol. 2, No. 6, pp. 52-59. Retrieved on March 4.2009. from: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1083839

Vaishnavi, V. & Kuechler, B. (2007) Design research in Information Systems. Retrieved on: Jan 19, 2009. From: http://www.isworld.org/Researchdesign/drisISworld.htm.

Wang, S. H. & Wang, H. (2005) A location-based business service model for mobile commerce.nternational Journal of Mobile Communications, Volume 3 no:4,p:339-349. Retrieved on: March 3,2009.from: http://inderscience.metapress.com/link.asp?id=gr59dtwluel3mg3p

WAP Forum, (2001) WAP Architecture. Wireless Application Protocol Architecture Specification.WAP-210-WAPArch-20010712. Retrieved on: Jan 25, 2009, from http://www.openmobilealliance.org/tech/affiliates/wap/wap-210-waparch-20010712a.pdf.

WAP Forum. (2000). Wireless Application Protocol White Paper. Retrieved on: Jan 16, 2009. from http://www.wapforum.org/what/WAP_white_pages.pdf

Wireless Application Protocol (2008), retrieved on: March 1, 2009. From: http://en.wikipedia.org/wiki/Wireless_Application_Protocol.

Zerzelidis, A., & Wellings, A. (2005). Requirements for a Real-Time .NET Framework, Feb 2005, ACM.