

Electronic Tourist Guide in Malaysia By Using WAP Technology

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Universiti Utara Malaysia

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Electronic Tourist Guide in Malaysia By Using WAP Technology

A Thesis submitted to college Arts & Sciences in partial

Fulfillment of the requirement for the degree master

(Information Technology)

University Utara Malaysia

By

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The project aims to solve the problems that are facing tourists, through the use mobile or PDA for inquiry about tourist places.

1.1 PROBLEM STATEMENT

Tourism is a global process and one that has been characterized by many researchers in terms of the effects tourists have on the visited country, or the constraints applied to the experiences of tourists. So, an alternative to starting with "vast systems" is to follow what specific tourists do in specific settings, to focus on the views and approach of tourists themselves.

Most tourists are highly mobile, there is no single location at which tourists stay, and no single site where the range of activities that constitute tourism can be explored. However, in many situations it's hard to access Internet services. But the mobile phone is found with the majority of the users for this service. For these reasons, the tourists can be able to access the Internet services from their mobile devices anytime and anywhere.

Problems which tourists face in an unfamiliar place are what to do. Unlike paid employment, where tasks are often determined by an overall goal or by other people's plans, tourism is more open-ended. Tourism encompasses a broad range of activities such as sightseeing, relaxing, shopping, visiting friends and visiting family. However, whatever tourists do, they must at least make some sort of decision about what to do, usually in advance. This decision must take into account the time it takes to get to different places, as well as balancing the attraction of different sites.

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REFERENCES

- Alexander, A., Patrick, M. (2008). A Mobile Solution for Location Based Tourism Information in Rural Areas. Retrieved on 29 Oct 2008, from (http://_dmt.fh-joanneum.at/kd3/objects/application_pdf/enter2004_cairo_lyp_sht_nis_12pages.pdf)
- Abowd, Gregory D.; Atkeson Christopher G.; Hong, Jason; Long, Sue; Kooper, Rob; Pinkerton, Mike. (1997). Cyberguide a mobile context-aware tour guide. Baltzer/ACM Wireless Networks
- Andrews, Daniel; Starner, Thad. (October 2003). Using GPS to learn significant locations and predict movement across multiple users. Personal and Ubiquitous Computing, Vol. 7.5, Springer London Limited.
- Barry, B. (1988). Spiral model, retrieved on 11 Oct, from (<http://encyclopedia.thefreedictionary.com/Spiral%20model>).
- Bhattacharyya, D. (1997). Mediating India: An Analysis of a Guidebook. Annals of Tourism Research 24(2):371-389.
- Bisdikian C, Christensen J et al (2001). Enabling locationbased applications. WMC 01, Rome. ACM.
- Campbell, M. (2007). Identifying success factors of ICT in developing a learning community, Case study Charles Sturt University, Campus-Wide Information Systems Vol. 24 No. 1, pp. 17-26.
- Cheverst, Keith; Davies, Nigel; Mitchell, Keith; Friday, Adrian (2000); Experiences of developing and deploying a context-aware tourist guide: The Guide project. International Conference on Mobile Computing and Networking, Boston, ACM.
- Conference on Tourism and Communication Technologies (2003). Helsinki, Springer Computer Science, Heidelberg.
- 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.
- D. Barbara, D. (1999). Mobile Computing and Databases –Survey. IEEE Transactions on Knowledge and Data Engineering, 11(1) January/February (1999) 108–117.
- Dunham, M., et al. (1995). Mobile Computing and Databases: Anything New? SIGMOD Record, Special Section on Data Management Issues in Mobile Computing, 24(4): December (1995) 5–9.

Elliott, G. & Phillips, N. (2004). Mobile commerce and wireless computing system: Pearson Education Limited.

Fritsch D. (2001). Positionsbezogene Dienste: Mit Mehrwert angereicherte Geodaten. Geo- Informationssysteme, 9/2001.

Francica J. (2001). Location-Based Services Where Wireless Meets GIS. [WWW document], URL <http://www.geoplace.com/bg/2000/1000/1000spf.asp>.

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.

Heide Brucher (2003). Using Mobile Technology to Support eDemocracy retrieved 14ogs007from(<http://ieeexplore.ieee.org/iel5/8360/26341/01174324.pdf?arnumber=1174324>).

Hofmann-Wellenhof et al. (1997). GPS. Theory and Practice. 4. Edition. Vienna / New York: Springer Verlag.

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

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

Irene C.Y. MA and James Irvine. (2004). Wireless Networks 10, 71–81, Kluwer Academic Publishers. Manufactured in The Netherlands.

Jenny, H. (2008), Mobile solution for foreign-language tourists Business Day (South Africa) April 04, 2008.

Kees D. (2000). Selective Availability Turned off. In: Geoinformatics. Volume 3, Juli/August 2000. Emmeloord. Niederlande.

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

Korneliya Yordanova. (2007). Mobile learning and integration of advanced technologies in education. International Conference on Computer Systems and Technologies - CompSysTech'07.

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

- Kushchu and M. H. Kuscü (2003). Mobile government (m-government)
Retrieved 11 Sep 2008 from
<http://topics.developmentgateway.org/egovernment/rc/BrowseContent>.
- Larson, B., (2005). An Exploratory Look at Supermarket Shopping Paths. International Journal of Research in Marketing; 22, 2005; Elsevier B.V.
- Lim C. (2004). Multimodal-based mobile application: a development of prototypes for accessing students academic result at UUM, Malaysia.
- Ljungstrand P. (2001). Context-awareness and mobile phones. Personal and Ubiquitous Computing 5: 58-61 25.
- Maeda, T., Okamoto, T., Miura, T., Fukushima, Y., Asada, T. (2007). E-mail-based education environment using mobile phone communication, Advanced Learning Technologies, 2007. ICALT 2007. Seventh IEEE International Conference, pp427-429.
- Matthias Kloppmann et al. (2005) . WS-BPEL Extension for People - BPEL4People, 2005.
- Mitra, P., Samajpati, A., Sarkar, T., & Das, P. (2004). An SMS Based Rural Application for Agricultural Consultancy and Commodity Booking Service. Retrieved: July 21, 2008, from: <http://www.cse.nd.edu/~pmitra/files/CSI.pdf>
- Mobile Computing. WAP (2005). Retrieved Nov, 13, 2007 from (http://searchmobilecomputing.techtarget.com/sDefinition/0,,sid40_gci213337,00.html).
- Mobile communications (2007). Retrieve July 15, 2008. From www.inquirer.net/infotech/may2000wk1/info_5.htm.
- Muyinda, P. B. (2007). MLearning: pedagogical, technical and organizational hypes and realities, Campus-Wide Information Systems, Vol. 24 No. 2, pp. 97-104.
- Nijaz. (2000). Dynamic web-based application development. New York: Prentice hall.
- Nielsen, J. (1998). International Standard, Ergonomic Requirements for Office Work with Visual Display Terminals (VDTs). Switzerland: Int. Organization for Standardization Geneva.
- Nielson (2000). "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of

- Information Technology," *International Journal of Human-Computer Interaction*, vol. 7, pp. 57-70, 2000.
- Norbayah Mohd Suki and Norazah Mohd Suki (2007). Mobile phone usage for m-learning: comparing heavy and light mobile phone users, *Campus-Wide Information Systems*, Vol. 24 No. 5, pp. 355-365.
- Nor Shahriza Abdul Karim, Siti Hawa Darus and Ramlah Hussin (2006). Mobile phone applications in academic library services: a students' feedback survey, Vol. 23 No. 1, 2006. pp. 35-51 Gombak, Kuala Lumpur, Malaysia.
- Organization for the Advancement of Structured Information Standards (OASIS), (2004). Introduction to UDDI: Important Features and Functional Concepts. Whitepaper, 2004.
- Polylab (1998). WAP Architecture. Retrieved Feb, 30 April 1998, from (<http://polylab.sfu.ca/spacesystems/teach/wireless/wap/documents/SPECWAPArch19980430.pdf>).
- Pühretmair, F., Lang P., Tjoa, A. M., Wagner, R. R. (2001). The XML-KM Approach. XMLbased integration of tourism and GIS data for HTML and WAP clients, *Information and Communication Technologies in Tourism 2001* (2001) Sheldon P J., Wöber K W., Fesenmaier D R. (eds). Springer-Verlag, Wien NewYork, pp. 73-82.
- Raggam, J. et al. (1999): RSG in ERDAS IMAGINE. Remote Sensing Software Package Graz. Field Guide. RSG Release 3.23. JOANNEUM RESEARCH Forschungsgesellschaft mbH. Graz.
- Rubin, J (2004). *Handbook of Usability Testing: How to Plan, Design and Conduct Effective Tests*. London: John Wiley & Sons.2004.
- Schmidt-Belz, Barbara; Laamanen, Heimo; Poslad, Stefan; Zipf.(2003), Alexander; Location-based mobile tourist services – first user experiences. *International*
- Sheldon, P. J., Wöber K W., Fesenmaier, D. R. (eds) (2004). Springer-Verlag, Wien NewYork, pp. 83-92.
- Stallings. W, (2001). *Wireless Communications and Networks*, Prentice-Hall.
- Stuckman. P, Finck. H and Bahls .T, (June 2001). AWAP traffic model and its appliance for the performance analysis of WAP over GPRS, in: *Proceedings of 3G Wireless '01*, San Francisco, CA.

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

T. Andrews et al (2003). Business Process Execution Language for Web Services – Version 1.1, 2003.

Teng et al. (2007). Mobile G-portal supporting collaborative sharing and learning on geography fieldwork: An Empirical Study, JCDL'07, June 18–23, 2007, Vancouver, British Columbia, Canada..

The World Wide Web Consortium (2003). The Platform for Privacy Preferences 1.0 (P3P1.0) Specification. W3C Recommendation 16 April 2002. www.w3c.org/TR/P3P 26.

Zipf A., Malaka R. (2001). Developing Location Based Services for Tourism. The Service Providers' View, In Information and Communication Technologies in Tourism 2001.