Web-Base Help Desk System For Telecenter

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ABSTRACT

Help Desk System is an integral part of many organizations that must support products or services. In the complex help desk environment, analysts with varying skill levels rely on their expertise as well as systems, tools, and repositories to answer a range of problems. Telecentre (TC) often needs support to address problems faced in their daily routine, and it is expensive to call or ask for visits from the stakeholders. Hence, the study will propose a web based Help Desk System for the telecentre to provide administrator with the appropriate details relevant to their requirements. The study will follow the Spiral development model.

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CHAPTER ONE

INTRODUCTION

1.1 Background

Web-based applications are becoming very regular in our daily life, it is hard to go a day without using them (Web, 2009). These applications range from simple to complex ones, where thousands of dollars in revenue are generated. Developing, testing and quality assuring these applications become a challenging job (Abdesselam, 2000).

It is important for a business to manage and provide useful details to customers over its web applications. Help desk system is an integral part of many organizations to support products and services. In the complex helpdesk environment, analysts with varying skill levels rely on their expertise as well as systems, tools, and repositories to answer a range of problems that customers or client's phone in (Kemal & Birgit, 2000).

Telecenter or TC has been established to support and provide the rural area with the access to the internet applications. The uneven global distribution of access to the

The contents of the thesis is for internal user only

References

Abdesselam, R. (2000). Guidelines for Improving the Development of Web-Based Applications. Proceedings of the Fourth International Workshop on Web Site Evolution (WSE'02). IEEE.

ACC (1997). Statement on Universal Access to Basic Communication and Information Services. Quoted in ITU: World Telecommunication Development Report, p. 10.

Alexandre. R.J. F. (2009). Lecturer notes of Requirements. Retrieved 24 September, 2009 from http://www-scf.usc.edu/~csci201g/requirements.pdf

Anderson, P. (2009). What is Web 2.0? Ideas, technologies and implications for education. JISC Technology& Standards Watch. Retrieved June 3, 2009.

Andrew M Dearden. (1994). Interacting with a Case Memory.IEEE.

Boehm, B. W. (1988). A spiral model of software development and enhancement. Computer Volume 21, Issue 5, May 1988 Page(s):61 - 72. Digital Object Identifier 10.1109/2.59. IEEE.

Boehm, B & Bose, P. (1994). A collaborative spiral software process model based on Theory W. Software Process, 1994. 'Applying the Software Process', Proceedings., Third International Conference on the 10-11 Oct. 1994 Page(s):59 - 68. Digital Object Identifier 10.1109/SPCON.1994.344423. IEEE.

Brian, E., Pamela, S., & Sarah, W. (2007). The Economic Impact of Telemedicine Capability in a Rural Hospital. From (www.ruralhealthworks.org).

Chien-Hung Liu, Kung, D.C, Pei Hsia & Chih-Tung Hsu(2000);Structural testing of Web applications Software Reliability Engineering, Page(s):84 - 96.IEEE

Chung, S. & Yun-Sik Lee. (2003). "Modeling Web applications using Java and XML related technologies." System Sciences, 2003. Proceedings of the 36th Annual Hawaii International Conference: 1-10.

Cockburn, Alistair, "Structuring Use Cases with Goals", Journal of Object-Oriented Programming, Sep-Oct, 1997 and Nov-Dec, 1997. Also available on http://members.aol.com/acockburn/papers/usecases.htm

Di Lucca, G.A, Di Penta, M, Antoniol, G & Casazza, G(2001). An approach for reverse engineering of web-based applications Reverse Engineering, Page(s):231 - 240. IEEE

Effexis Software. UML Sequence Diagram Tutorial. Retrieved 24 September, 2009 from http://www.sequencediagrameditor.com/uml/sequence-diagram.htm

Elbaum, S.; Rothermel, G.; Karre, S. & Fisher II, M. (2005).Leveraging user-session data to support Web application testing. IEEE.

Enzer.M. (2008). Glossary of Internet Terms. Retrieved 5 Jun 2009. From http://www.matisse.net/files/glossary.html.

Eom.K. (2003). A design and implementation of wireless sensor gateway for efficient querying and managing through World Wide Web. Consumer Electronics, IEEE Transactions, 2003: p. 1090 – 1097

George, C., & Scerri, J. (2007). User-Generated Content Online: Legitimate power or the Wild West? BELETa: annual conference Hertfordshire.

IBM website. UML Specification. V1.3 Alpha R5, March 1999 .Retrieved 24 September, 2009 from http://www.rational.com/uml/index.jtmpl.

ILO (2001). International Labour Organization. World Employment Report.

Kemal, A., & Birgit, H. (2000).Knowledge-Based Support in Help-Desk Environments. 1520-9202/00/IEEE.

Khairul, M. (2009). Interviewed with the Community Center Manager on Sept 5,2009.

Knight, A., & Dai, N. (2002). Objects and the Web. IEEE Software. pp.51-59. IEEE.

Kriegsman, M.; Barletta, R(1993) Building a case-based help desk application.IEEE

Laufer, K. (2005).A hike through post-EJB J2EE Web application architecture. IEEE.

Lee.U. December 6, 2001. HomeSite 5.Web developer's virtual library. Retrieved 24 October, 2009 from http://www.wdvl.com/Reviews/HTML/HomeSite5/

Li Li; Xiaojun Fang & Li Wei. (2008). Enhancing the robustness of Digimarc digital watermarking plug-ins in photoshop. Communication Technology, 2008. ICCT 2008. 11th IEEE International Conference on 10-12 Nov. 2008 Page(s):757 - 760. Digital Object Identifier 10.1109/ICCT.2008.4716238 .IEEE.

Li Zhang. (2008).Requirement engineering for Web applications. IEEE.

Liu Wei & Li Hai. (2007). SAR Processing System Based on Plug-Ins Architecture. The Eighth International Conference on Electronic Measurement and Instruments. IEEE.

Martin, W. & McKeown, S. (1993). The Potential of Information and Telecommunications Technologies for Rural Development. Information Society, Vol. 9, No. 2, p. 145.

Morteza, Z., Hamed, R., & Forough, S. (2008). A two-level Automatic Help Desk Based on a New Statistical Approach. The Third International Conference on Internet and Web Applications and Services. 978-0-7695-3163-2/08 $25.00, IEEE.

Muloz, (2008). Ugabytes Technical Support Center: Telecenters stand to benefit, October 23,2008 at 6:62 am refered Jule 19,2009 from http://telecentrecommunity.ning.com/profiles/blogs/2086278:BlogPost:8040

Naoya Ikeda, Yoshitaka Fujiwara and Hideki Yoshida. (2007). Extracting feeling information from voice. SICE annual conference.

Rajan, S.P.; Tkachuk, O.; Prasad, M.; Ghosh, I.; Goel, N. & Uehara, T. (2009).WEAVE: WEb Applications Validation Environment. IEEE.

Ricca, F.& Tonella, P.(2005);Anomaly detection in Web applications: a review of already conducted case studies Software Maintenance and Reengineering. Page(s):385 - 394 IEEE

Roy, T., & Richard, N. (2002). Principled Design of the Modern Web Architecture. ACM Transactions on Internet Technology, Vol. 2, No. 2, Pages 115–150.

Ruffo, G.; Schifanella, R.; Sereno, M. & Politi, R.(2004).WALTy: a user behavior tailored tool for evaluating Web application performance. IEEE.

Santos, J.M., J.; Martins, J.C.;, Instrumentation remote control through internet with PHP. Virtual Environments, Human-Computer Interfaces and Measurement Systems, 2008. VECIMS 2008. IEEE Conference, 2008: p. 41 – 44

Schmandt, J., Frederick, W., Robert, H., & Sharon, S. (1999). Telecommunications and Rural Development: A Study of Business and Public Service Applications. Austin: University of Texas at Austin.

Shaizan, H. & Li, F. (2003) Utilizing IGV Approach In Evaluating the Usability of Web Sites, Journal of Information and Communication Technology,2(2), 25-40

Singh, S.& Slous, R. (1998). Accelerating Adobe Photoshop with reconfigurable logic FPGAs for Custom Computing Machines, 1998. Proceedings. IEEE Symposium on 15-17 April 1998 Page(s):236 – 244. Digital Object Identifier 10.1109/FPGA.1998.707901.IEEE.

Sonneck, G. & Mueck, T.(2003).Optimization of Web applications by graph transformations. IEEE.

Soraj, H. (2002). Exploring the Philosophical Terrain of the Digital Divide.

Taguchi, M.; Suzuki, T. & Tokuda, T. (2003).A visual approach for generating server page type Web applications based on template method. IEEE.

Thurman.D.A, Tracy.J.S, and Mitchell.C.M. (1997). Design of an intelligent Web-based help desk system.IEEE.

UN. (1997).UN ACC Statement on Universal Access to Basic Communication and Information Services. Quoted in ITU: World Telecommunication Development Report, p. 10.

Viravan, C. (1997). Lessons learned from applying the spiral model in the software requirements analysis phase. Requirements Engineering, 1997., Proceedings of the Third IEEE International Symposium on 6-10 Jan. 1997 Page(s):40

Wei Huang; Ru Li; Maple, C.; Hongji Yang; Foskett, D.& Cleaver, V.(2008).Web Application Development Lifecycle for Small Medium-Sized Enterprises (SMEs) (Short Paper) . IEEE.

Wolff, J.G. (1989). The management of risk in system development: Project SP and the New Spiral Model. Software Engineering Journal Volume 4, Issue 3, Page(s):134 - 142 .IEEE.

World Bank Development Report (1999). Knowledge for Development. The World Bank, Washington DC.

Yamamichi. N, Ozeki. T, Yokochi. K & Tanaka. T. (1996). The evaluation of new software developing process based on a spiral modeling. Global Telecommunications Conference, 1996. GLOBECOM '96. 'Communications: The Key to Global Prosperity Volume 3, 18-22 Nov. 1996 Page(s):2007 - 2012 vol.3. Digital Object Identifier 10.1109/GLOCOM.1996.591987

Yan;, J.W.Y.Z.S.X.Y., A Web-based Examination System Based on PHP+MySQL. Engineering in Medicine and Biology Society, 2005. IEEE-EMBS 2005. 27th Annual International Conference, 2005 p. 2882 – 2885

Zhang Hui; Zhang Zhen& Zhu Junwu.(2008). SI4WAC: A Semantic-Based Infrastructure for Web Application Cooperation. IEEE.