IMPROVING THE DOCUMENTATION OF USER'S REQUIREMENTS FOR E-SERVICE SYSTEMS USING SERVICE RESPONSIBILITY TABLE

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This dissertation is dedicated to my late father and my mother for her endless support and encouragement.

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ABSTRACT

Popularity of the internet has caused an increase in the demand and usage of e-service systems. E-Service is defined as acts or performances that are delivered through electronic devices and networks to help people complete tasks, solve problems, or conduct transactions. The nature of e-service poses challenges in analyzing and developing the e-service systems. In recent years, UML as a tool used for analyzing systems has been criticized by several researchers and practitioners for its complexity and lack of comprehension. This has caused difficulties in using UML to analyse e-service system. As a result of this, Service Responsibility Tables (SRT) has been proposed to be used for analyzing e-service systems. Service responsibility tables is a light weight analysis tool was developed based on the concept of service value chain framework, which focuses on the activities and responsibilities of both service providers and customers based on the broad observation that service tends to be co-produced by service producers and service consumers. This research investigates the usability of SRTs as an informal language and light weight analysis tool for analyzing e-service systems, using Graduate Studies Management System (GSMS) as a case study and presents the evaluation of the tool by the users. Furthermore, the research proposed a heuristics approach for transforming the SRTs into activity diagrams and sequence diagram. From the evaluations, we found that the proposed heuristic approach could increase the involvement of users in requirements determination process and hence improve the documentation of users' requirements for e-service systems.

ABSTRAK

Populariti internet telah menyebabkan peningkatan dalam permintaan dan penggunaan sistem e-perkhidmatan. E-Perkhidmatan ditakrifkan sebagai tindakan atau persembahan yang dihantar melalui alat-alat elektronik dan rangkaian untuk membantu orang tugas-tugas yang lengkap, menyelesaikan masalah, atau transaksi yang laku. Sifat e-perkhidmatan menimbulkan cabaran dalam menganalisis dan membangunkan sistem e-perkhidmatan. Dalam tahun-tahun kebelakangan ini, UML sebagai alat yang digunakan untuk menganalisis sistem telah dikritik oleh beberapa penyelidik dan pengamal untuk kerumitan dan kekurangan kefahaman itu. Ini telah menyebabkan kesukaran dalam menggunakan UML untuk menganalisis sistem e-perkhidmatan. Hasil daripada ini, Jadual Tanggungjawab Perkhidmatan (SRT) telah dicadangkan untuk digunakan untuk menganalisis sistem e-perkhidmatan. Jadual tanggungjawab Perkhidmatan adalah berat analisis alat cahaya dibangunkan berdasarkan konsep perkhidmatan nilai rangka rantai, yang memberi tumpuan kepada aktiviti-aktiviti dan tanggungjawab kedua-dua pembekal perkhidmatan dan pelanggan berdasarkan pemerhatian yang luas yang perkhidmatan cenderung untuk bersama-dihasilkan oleh pengeluar perkhidmatan dan pengguna perkhidmatan. Kajian ini menyiasat kebolehgunaan SRTs sebagai bahasa rasmi dan ringan alat analisis untuk menganalisis sistem e-perkhidmatan, dengan menggunakan Sistem Pengurusan Pengajian Siswazah (GSMS) sebagai kajian kes dan membentangkan penilaian alat oleh pengguna. Tambahan pula, kajian ini mencadangkan pendekatan heuristik untuk mengubah SRTs ke rajah aktiviti dan rajah jujukan. Dari penilaian, kami mendapati bahawa pendekatan heuristik yang dicadangkan itu boleh meningkatkan penglibatan pengguna dalam proses penentuan keperluan dan dengan itu meningkatkan dokumentasi keperluan pengguna bagi sistem e-perkhidmatan.