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Volume 9, Issue 1, 2019, Pages 8-17

Requirements Engineering (RE) process for the adaptation of the Hospital Information System (HIS) (Article)

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Abstract

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Requirements Engineering (RE) process is an initial stage for any software development process. In this research, we adopted the RE process into a system adaptation software project for a Hospital Information System (HIS) in a Saudi Arabian hospital. Instead of developing from scratch, the adaptation of an existing system enables a working system to be configured into use in a similar situation in another organization, or use it in a different organization in a different geographical area. Nonetheless, the approach of systems adaptation has its own issues and challenges. This research considers investigating culture-specific behaviors when adapting a system to another environment. The research is motivated by the challenges faced by real-life cases of implementation of a HIS developed in South Korea at one of Kingdom of Saudi Arabian (KSA) hospital. The cultural behavioral requirements were identified using focus group technique and the outcomes were analyzed and represented using Unified Modelling Language (UML). The outcome of the research is validated through evaluation of feedback from a review session and academic experts. This work investigates cultural and behavioral features that have the potentials to support software engineers, who are considering new systematic techniques and approaches to improve systems adaptation processes, especially in HIS domain. This work could be used as a reference to guide developers to adapt similar systems in similar culture and environment settings. In addition to an adaptation to a specific environment, the outcome could also be useful for designing system for-reuse facet from the perspective of reusability. © 2019, Insight Society.

SciVal Topic Prominence ⓘ

Topic: Information systems | Research | Social media

Prominence percentile: 81.127 ⓘ

Author keywords

Cultural-specific behaviors Hospital Information System adaptation Requirements engineering Software adaption System adaptation

Funding details

| Funding sponsor | Funding number | Acronym |
|---|----------------|---------|
| International Islamic University Malaysia | | IIUM |
| Portland State University | | PSU |

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ISSN: 20885334

Source Type: Journal

Original language: English

DOI: 10.18517/ijaseit.9.1.7764

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