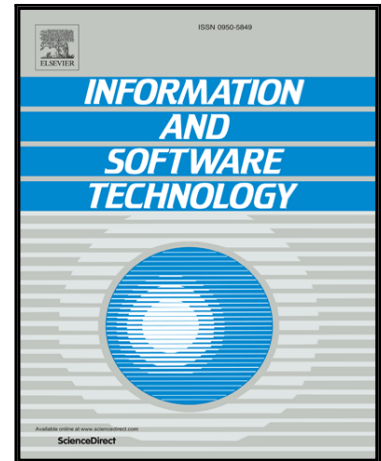


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A Systematic Review of Requirements Change Management

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Abstract

Context: Software requirements are often not set in concrete at the start of a software development project; and requirements changes become necessary and sometimes inevitable due to changes in customer requirements and changes in business rules and operating environments; hence, requirements development, which includes requirements changes, is a part of a software process. Previous work has shown that failing to manage software requirements changes well is a main contributor to project failure. Given the importance of the subject, there's a plethora of research work that discuss the management of requirements change in various directions, ways and means. An examination of these works suggests that there's a room for improvement.

Objective: In this paper, we present a systematic review of research in Requirements Change Management (RCM) as reported in the literature.

Method: We use a systematic review method to answer four key research questions related to requirements change management. The questions are: (1) What are the causes of requirements changes? (2) What processes are used for requirements change management? (3) What techniques are used for requirements change management? and (4) How do organizations make decisions regarding requirements changes? These questions are aimed at studying the various directions in the field of requirements change management and at providing suggestions for future research work.

Results: The four questions were answered; and the strengths and weaknesses of existing techniques for RCM were identified.

Conclusions: This paper has provided information about the current state-of-the-art techniques and practices for RCM and the research gaps in existing work. Benefits, risks and difficulties associated with RCM are also made available to software practitioners who will be in a position of making better decisions on activities related to RCM. Better decisions will lead to better planning which will increase the chance of project success.

Keywords

Requirements change management; Agile; Systematic review

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