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Quality Management, pp. 311-322, edited by M. Ross, C. A. Brebbia, G.
Staples and J. Stapleton, Computational Mechanics Publications,
Southampton, United Kingdom, 1995.

Impact Analysis of Process Change Proposals*

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Abstract

Before software processes are changed in order to achieve improvements, an impact analysis can be performed to predict the impact of the proposed change on specific quality attributes, such as product reliability, time to market and development productivity. In this paper an impact analysis method is presented. It consists mainly of a prediction system, which based on a proper data collection can be used to derive the impact prior to making any changes.

1 Introduction

Life is evolutionary and changes occur over time. Most persons strive to turn changes into improvements, for example when buying a new house, we make a very thorough impact analysis, which in turn is used to evaluate costs and benefits. The impacts when buying a house may be in terms of travel time to work and closeness to recreation areas. This type of evaluation must be made when developing software as well. The process of developing software can not be changed arbitrarily, it must be a conscious and well founded decision. Therefore impact analysis of software process change is needed as support in decision making.

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