Abstract

Walid Abdelmoez

Comparing Maintainability Evolution of Object-Oriented and Aspect-Oriented Software Product Lines

Software Product Line aims at improving productivity; decrease realization times by gathering the analysis, design; implementation activities of a family of systems. Evaluating the quality attributes for SPL architectures is very crucial especially architecture maintainability as SPL are expected to have longer lifetime span. Aspect-orientation offers a modularization way by separating crosscutting concerns from non-crosscutting ones. Aspect-oriented programming is assumed to endorse better modularity; changeability of product lines than traditional variability mechanisms. In this paper, we show that change propagation probability (CP) is helpful; effective in assessing the design quality of software architectures. We propose to use the CP to investigate whether aspect-oriented SPL has better maintainability evolution than object-oriented SPL.