On the applicability of random testing for aspect-oriented programs.

ABSTRACT

Random Testing(RT) and its derivatives such as Adaptive Random Testing (ART) are active and important research topics in software testing, which have also a niche in practical settings due to the merits they offers, e.g. fault-detection capacities at low cost, ease of implementation, reliability estimation, facility for automation and so forth. Inspired by these advantages, we believe the idea behind random testing can be worthwhile and attractive for testing aspect oriented programs since current research on testing of AOP, especially automated has not been adequately performed and is still in infancy. In this paper, we propose a preliminary approach to automated random testing of aspect-oriented programs, which are becoming an important part of software engineering theory and practice. This paper also includes a survey of applicable testing techniques and discussion of established testing methods in both area of Aspect-Oriented Programming (AOP) and Random Testing (RT).

Keyword: Aspec-oriented programming; Random testing; Adaptive random testing; Aspect testing.