Integrarea unor tehnici de analiză a fiabilității software în biblioteca *JReliability*

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Integration of Some Software Reliability Analysis Techniques in *JReliability* Library

Abstract

Software reliability is currently a research subject with a growing importance from all areas of activity, particularly industry. However, in complex systems having software components, specific techniques for quality and reliability assessment must be implemented urgently and with the same seriousness as in hardware.

In this paper, the authors propose an integrated framework for software reliability modeling and analysis, based on several assessment techniques, and using advanced Java programming technologies. The new methodology is simple to use and can model and analyze, in terms of reliability, a variety of complex systems having hardware and software components. The analysis framework uses a new Java library called JReliability, which can assess various measures of reliability, using analytical calculations together with graphical representations.

Keywords: *Software Reliability, Software Modeling Techniques, Reliability Analysis, SFTA, BDD, Java-based Reliability*