

ASIGURAREA CALITĂȚII – QUALITY ASSURANCE

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Construction of a Contextualized Quality Problem-Solving Method

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Abstract

The industrial products developed today are more complex and the times given to design them, shorter. In this situation, companies have to use effective problem-solving methods which have to be adapted to all types of problems. This article proposes to adapt the problem-solving method to the context of each problem. The idea is to have a methodological base and to choose the right tools and stage sequences related to each specific problem. To characterize the context of the problem, we propose to introduce two evaluations: the problem profile and the problem solving state. This article gives techniques to materialize these two concepts and then to build a customized method from these two evaluations each time. An industrial application in a new high technology company illustrates our proposition and presents how it can be implemented.

Keywords: Contextualized Method, Meta method, Problem Profile, Problem-solving, Quality Tools, Solving State

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On Virtual Machine Survivability Analysis

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Abstract

This paper analyzes the concept of survivability and examines some models to ensure the virtual machines survivability. The virtual machines – efficient and isolated duplicates of the real machines will be analyzed. Some attack models like the Trojan horse and the computer worm attacks will be proposed to evaluate the performance of virtual machine survivability.

Keywords: Security, Survivability, Dependability, Attack model, Attack tree, Virtual machine.

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Advances and Trends in Microelectronic Packaging

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Abstract

After a short introduction, the most important problematical issues are presented. The paper – intended to inform the non-specialists and decision makers – explores advanced packaging solutions for next generation microelectronics in key applications areas.

Keywords: Electrochemical processing, ITRS packaging requirements of IC, SMT, MEMS, NEMS, 3D, flexible circuits, reliability.

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Integrarea unor tehnici de analiză a fiabilității software în biblioteca Jreliability

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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

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Figura 5. Reprezentarea grafică a funcțiilor legate de fiabilitate, generate în JReliability