

In this issue

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The three research papers in this issue deal with the diverse software quality topics of process management, the modifiability of enterprise architectures and quality modeling for mission-critical systems.

In “How to get mature global virtual teams: a framework to improve team process management in distributed software teams”, Javier García Guzmán, Javier Saldaña Ramos, Antonio Amescua Seco and Ana Sanz Esteban define a methodology that provides a set of practices for virtual team management in software development projects. The authors show how the methodology was used in geographically distributed teams involving people from seven countries. Two particularly important practices that are emphasized are managing effective communication among team members and incorporating effective mechanisms for shared knowledge management. This paper helps to raise awareness of these crucial aspects of distributed software development.

Enterprise architecture has become an important part of large-scale systems modeling. In “Architecture Analysis of Enterprise Systems Modifiability—A Metamodel for Software Change Cost Estimation”, Robert Lagerström, Pontus Johnson and Mathias Ekstedt propose an enterprise architecture metamodel for analyzing systems modifiability and assessing the costs of changes. The metamodel is formalized using probabilistic relational models, and the paper presents details of how it was applied in a case study conducted at a Nordic transportation company. The metamodel was found to be useful for estimating costs, project planning and risk analyses. This paper is an example of applied research which can have an immediate impact on the analysis of enterprise architecture in the real world.

In “Quality specification and metrication, results from a case study in a mission-critical software domain”, Jos J. M. Trienekens, Rob J. Kusters and Dennis C. Brussel describe a stepwise approach for modeling software quality in mission-critical systems engineering. The approach is based on the international standard ISO9126 and the analytical hierarchy process. A case study was carried out with a combat management system belonging to the

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Dutch Royal Navy. This work may provide a step towards a professional methodology for the specification, prioritization and metrication of software quality.

I do hope that you enjoy this issue of the Software Quality Journal. I welcome your comments and suggestions.