

We are approaching the shortest day of the year in the southern hemisphere and also approaching is the National Authentication Service for Health (NASH) as part of the Australian Government's \$1 billion personally controlled e-health record (PCEHR). The NASH is being delivered by IBM and the public key infrastructure-based system will handle transactions by more than 800,000 doctors and other health professionals as they access patient records across 70,000 organizations. It is a key part of the PCEHR in that it will verify authorized users and support secure communications between medical providers.

This is the final issue for volume #43 for 2011. The first two papers for this issue concern refactoring. "Refactoring is used to improve the internal structure of the code without affecting its external behaviour." In his paper "The Impact of Refactoring on Class and Architecture Stability", Mohammad Alshayeb assesses "the impact of refactoring on class and architecture stability and then proposes a classification for refactoring methods based on the impact of refactoring on class and architecture stability".

In the second paper, "Software Refactoring at the Class Level using Clustering Techniques", the authors, Abdulaziz Alkhalid, Mohammad Alshayeb and Sabri A. Mahmoud discuss the need to reduce software complexity, and the roll of refactoring in this exercise. They propose "a method for identifying ill-structured software at the class level that provides heuristic refactoring advice to software designers in order to create balance between coupling and cohesion using pattern recognition techniques". They compare the effectiveness of four different techniques to identify "ill-structured" code.

The third paper, "A Maturity Model of Software Product Quality" by Rafa E. Al-Qutaish and Alain Abran, presents "a maturity model designed to directly assess the quality of a software product". "The quality of a product can be assessed either directly by looking into the product itself, or indirectly through assessing the process used to develop that product. In the software engineering field, there are currently numerous capability and maturity models for assessing a set of specific software processes, but very few product maturity models for those interested in assessing the quality of software products."

In the final paper, "How to Manage Spatio-temporal Events in Relational Databases", the authors, Dolores Cuadra, Javier Calle and Jesica Rivero discuss "the need for event-condition-action (ECA) rules in spatio-temporal databases and outline a generic scenario for them". "They present a proposal for the implementation of ECA rules, in which several implementation alternatives for different spatio-temporal rule types are considered".

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