Tuesday, August 26, 2014 (Full-day)

TUTORIAL ANNOUNCEMENT

22nd IEEE International Requirements Engineering Conference (RE'14) – Karlskrona, Sweden – http://www.re14.org

Michael Mannion

Juha Savolainen

T17 – Aligning product line business and technical strategies

In the fast-moving consumer goods' software product space, product types, requirements and features evolve continuously in response to a wide variety of sociological, cultural, technological, economic, political, environmental changes. Often this evolution is anticipated but often it is not. To survive, many software product suppliers build a software product line platform that enables rapid cost-effective product derivation using common and variable requirements. However the choice of platform development strategy must align with the supplier's business strategy. Without careful management over time, the platform can become unaligned and no longer cost-effective to use. In this tutorial we will describe how the prudent use of a set of requirements variability management techniques can ensure the alignment of the business strategy and platform development strategy.

After presenting an overview of product line business and corresponding platform development strategies, we will describe the development and specification of common and variable product line requirements and explain a process for managing changing variability between product line requirements and product line design. We will show how the successful outcome and outputs for these activities is governed by alignment with the overall business strategy. We will illustrate these differences by developing the detail of a mobile phone worked example.

Finally, drawing upon a range of experiences working at Nokia and Danfoss and with several other organisations, we will show that regardless of the successful application of these engineering techniques, aligning the platform development strategy and business strategy is also shaped by a range of organizational socio-political factors including the motivation, structure, culture, capability and capacity of the supplier's staff. We will illustrate with case studies from the mobile phone and power electronics industries.

BIOGRAPHIES

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BIOGRAPHIES

Prof. Michael Mannion is Vice-Rector (Research) and Professor of Computing at Glasgow Caledonian University, Glasgow, Scotland, UK. He has several years' software engineering industrial experience and his research interests include product-line engineering, software engineering and engineering education. He is a Chartered Engineer, and a member of the British Computer Society, IEEE and ACM. He has published more than 50 papers.

Dr. Juha Savolainen is Software Systems Manager Danfoss Power Electronics. He has ex-tensive experience in working closely with numerous product lines in helping them to manage and realize variability. His main research interests include requirements engineering, software architectures and product line development. He has published more than 50 papers.