

Proceedings

11th International Software Product Line Conference

SPLC 2007

**10-14 September 2007
Kyoto, Japan**



Los Alamitos, California
Washington • Tokyo



11th International Software Product Line Conference

SPLC 2007

Table of Contents

Message from the General Chair	viii
Message from the Program Chairs	ix
Organizing Committee	x
Program Committee	xi
Sponsors.....	xii

Feature Modeling

Automating Mappings between Use Case Diagrams and Feature Models for Software Product Lines	3
<i>Alexandre Bragaña and Ricardo J. Machado</i>	
Reasoning about Feature Models in Higher-Order Logic	13
<i>Mikoláš Janota and Joseph Kiniry</i>	
Feature Diagrams and Logics: There and Back Again.....	23
<i>Krzysztof Czarnecki and Andrzej Wąsowski</i>	

Experience 1

Experiences with Product Line Development of Multi-discipline Analysis Software at Overwatch Textron Systems	35
<i>Paul Jensen</i>	
Software Product Lines Approach in Enterprise System Development	44
<i>Yuzo Ishida</i>	
Introducing Software Product Line Engineering for Metal Processing Lines in a Small to Medium Enterprise.....	54
<i>David Sellier, Mike Mannion, Gorka Benguria, and Gorka Urchegui</i>	

Cost/Requirement

Impacts of Architecture and Quality Investment in Software Product Line Development	63
<i>Makoto Nonaka, Liming Zhu, Muhammad Ali Babar, and Mark Staples</i>	

Comparing Costs and Benefits of Different Test Strategies for a Software Product Line: A Study from Testo AG	74
<i>Dharmalingam Ganesan, Jens Knodel, Ronny Kolb, Uwe Haury, and Gerald Meier</i>	
Using Requirements Management Tools in Software Product Line Engineering: The State of the Practice	84
<i>Danilo Beuche, Andreas Birk, Heinrich Dreier, Andreas Fleischmann, Heidi Galle, Gerald Heller, Dirk Janzen, Isabel John, Ramin Tavakoli Kolagari, Thomas von der Maßen, and Andreas Wolfram</i>	

Production

The 3-Tiered Methodology: Pragmatic Insights from New Generation Software Product Lines	97
<i>Charles W. Krueger</i>	
Development and Configuration of Service-Based Product Lines.....	107
<i>Alexander Gruler, Alexander Harhurin, and Judith Hartmann</i>	
A Production System for Software Product Lines	117
<i>Gary J. Chastek, Patrick Donohoe, and John D. McGregor</i>	

Variability Management

Automating Product-Line Variant Selection for Mobile Devices	129
<i>Jules White, Douglas C. Schmidt, Egon Wuchner, and Andrey Nechypurenko</i>	
Supporting Product Derivation by Adapting and Augmenting Variability Models	141
<i>Rick Rabiser, Paul Grünbacher, and Deepak Dhungana</i>	
Optimization of Variability in Software Product Lines	151
<i>Felix Loesch and Erhard Ploedereder</i>	

Experience 2

A Guide for Management and Financial Controls of Product Lines.....	163
<i>Yoshihiro Matsumoto</i>	
Building Software Product Line from the Legacy Systems “Experience in the Digital Audio & Video Domain”	171
<i>Kangtae Kim, Hyungrok Kim, and Woomok Kim</i>	
A Component Model Supporting Decomposition and Composition of Consumer Electronics Software Product Lines	181
<i>Chong-Mok Park, Seokjin Hong, Kyoung-Ho Son, and Jagun Kwon</i>	

Experience 3

Challenges of Establishing a Software Product Line for an Aerospace Engine Monitoring System	193
<i>Ibrahim Habli, Tim Kelly, and Ian Hopkins</i>	
Minimally Invasive Migration to Software Product Lines	203
<i>Hans Peter Jepsen, Jan Gaardsted Dall, and Danilo Beuche</i>	
Dynamic Complexity and the Owen Firmware Product Line Program	212
<i>Holt Mebane and Joni T. Ohta</i>	

Aspect-Orientation/MDA

A Case Study Implementing Features Using AspectJ	223
<i>Christian Kästner, Sven Apel, and Don Batory</i>	
Product Line Implementation Using Aspect-Oriented and Model-Driven Software Development	233
<i>Markus Voelter and Iris Groher</i>	
Higher-Order Transformations for Product Lines	243
<i>Jon Oldevik and Øystein Haugen</i>	

Short Paper 1

Tailoring Infrastructure Software Product Lines by Static Application Analysis	255
<i>Horst Schirmeier and Olaf Spinczyk</i>	
A Variability Modeling Method for Adaptable Services in Service-Oriented Computing	261
<i>Soo Ho Chang and Soo Dong Kim</i>	

Short Paper 2

Why Does It Take That Long? Establishing Product Lines in the Automotive Domain	269
<i>Christian Tischer, Andreas Müller, Markus Ketterer, and Lars Geyer</i>	
Software Product Lines Beyond Software Development	275
<i>Scott G. Decker and Jim Dager</i>	
Author Index	281