

Foreword

Software product lines are emerging as an important new paradigm for software development. Product lines are enabling organizations to achieve impressive time-to-market gains and cost reductions. In 1997, we at the Software Engineering Institute (SEI) launched a Product Line Practice Initiative. Our vision was that product line development would be a low-risk, high-return proposition for the entire software engineering community. It was our hope from the beginning that there would eventually be sufficient interest to hold a conference. The First Software Product Line Conference (SPLC1) was the realization of that hope.

Since SPLC1, we have seen a growing interest in software product lines. Companies are launching their own software product line initiatives, product line technical and business practices are maturing, product line tool vendors are emerging, and books on product lines are being published. Motivated by the enthusiastic response to SPLC1 and the increasing number of software product lines and product line researchers and practitioners, the SEI is proud to sponsor this second conference dedicated to software product lines.

We were gratified by the submissions to SPLC2 from all parts of the globe, from government and commercial organizations. From these submissions we were able to assemble a rich and varied conference program with unique opportunities for software product line novices, experts, and those in between. This collection represents the papers selected from that response and includes research and experience reports.

I would like to take this opportunity to thank the authors of all submitted papers, and the members of the program committee who donated their time and energy to the review process. I offer my special appreciation to Len Bass and Henk Obbink, the program co-chairs, to Gary Chastek, the tireless editor of these proceedings, and to Pennie Walters who assisted in the editing process. We hope you will enjoy the fruits of our labor. Together we are pushing the frontier of software product lines.

August 2002

Linda M. Northrop

Preface

SPLC2 continues to demonstrate the maturation of the field of product lines of software. By their nature, product lines cut across many other areas of software engineering. What we see in the papers presented at this conference is the sharpening of the distinction between software engineering for single system development and software engineering for product lines. The distinction exists not only during the software life cycle (requirements gathering, design, development, and evolution) but also in the business considerations that enter into which systems to build and how to manage the construction of these systems.

We have papers that cover the introduction of product lines and the dynamics of organizations attempting to introduce product lines. We have papers that discuss how to choose which products to produce and how to model the features of those products. All of these topics are essential to the success or failure of a product line within an organization and contribute to the uniqueness of the discipline.

We have several sessions that deal with the discovery, management, and implementation of variability. Variability is perhaps the single most important distinguishing element of product lines as compared to single system development. Identification of variation among products is essential to discover the scope of a set of core development assets and identification of variations within a design is essential to manage the production of products from these core assets.

We also cover specialized topics within normal software engineering and their relationship to product line development. Topics such as necessary tool support, validation of aspects of a system's behavior, and the relationship between product lines and component-based software engineering are also covered within the program.

In short, we have selected a collection of papers that cover a broad spectrum of the areas within product lines of software and are excited about the continued development of the field.

Organizing Committee

Conference Chair:	Linda M. Northrop (Software Engineering Institute, USA)
Program Co-chair:	Len Bass (Software Engineering Institute, USA) Henk Obbink (Philips, The Netherlands)
Tutorial Chair:	Patrick Donohoe (Software Engineering Institute, USA)
Workshop Chair:	Sholom Cohen (Software Engineering Institute, USA)
Panel Chair:	Paul Clements (Software Engineering Institute, USA)
Demonstration Chair:	Felix Bachmann (Software Engineering Institute, USA)
Proceedings Editor:	Gary Chastek (Software Engineering Institute, USA)

Program Committee

Felix Bachmann (Software Engineering Institute)
Stuart Faulk (University of Oregon)
Frank van der Linden (Philips Medical Systems)
Sergio Bandinelli (European Software Institute)
Cristina Gacek (University of Newcastle)
Nenad Medvidovic (University of Southern California)
Don Batory (University of Texas at Austin)
André van der Hoek (University of California, Irvine)
Michael Moore (NASA/Goddard Space Flight Center)
Joseph H. Bauman (Hewlett Packard)
Jean Jourdan (Thales)
Robert L. Nord (Siemens Research, Inc.)
Günter W. Böckle (Siemens AG)
Peter Knauber (Fraunhofer IESE)
Scott Preece (Motorola)
Jan Bosch (University of Groningen)
Philippe Kruchten (Rational Software, Canada)
Alexander Ran (Nokia Research Center)
Grady H. Campbell (Prosperity Heights Software)
Charles W. Krueger (BigLever Software)
David Sharp (The Boeing Company)
Paul Clements (Software Engineering Institute, USA)
Juha H. T. Kuusela (Nokia Research Center)
Steffen Thiel (Robert Bosch GmbH, Germany)
David M. Weiss (Avaya)

Software Product Lines

Second International Conference, SPLC 2, San Diego,
CA, USA, August 19-22, 2002. Proceedings

Chastek, G.J. (Ed.)

2002, X, 402 p., Softcover

ISBN: 978-3-540-43985-1