

Appendixes of “A Systematic Mapping Study on Software Product Line Evolution: from Legacy System Reengineering to Product Line Refactoring”

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1 Introduction

Software product lines (SPLs) are used in industry to develop families of similar software systems. Legacy systems, either highly configurable or with a story of versions and local variations, are potential candidates for reconfiguration as SPLs using reengineering techniques. Existing SPLs can also be restructured using specific refactorings to improve their internal quality. Although many contributions (including industrial experiences) can be found in the literature, we lack a global vision covering the whole life cycle of an evolving product line.

The mentioned study aims to survey existing research on the reengineering of legacy systems into SPLs and the refactoring of existing SPLs in order to identify proven approaches and pending challenges for future research in both subfields. A systematic mapping study was launched to find as much literature as possible, covering the diverse terms involved in the search string (restructuring, refactoring, reengineering, etc. always connected with SPLs) and filtering the papers using relevance criteria. The 74 papers selected were classified with respect to several dimensions: main focus, research and contribution type, academic or industrial validation if included, etc. A classification of the research approaches and their feasibility for use in industry is achieved.

This document collects the list of papers initially found and analyzed. Three groups are detailed: The selected papers (Appendix A), the papers refused because they are not peer-reviewed studies (Appendix B), and the papers refused because they do not cover all the required criteria about the subject of the paper (Appendix C).

Appendix A

Selected Papers

- [S1] S. A. Ajila, “Reusing base product features to develop product line architecture,” in *Information Reuse and Integration, Conf, 2005. IRI -2005 IEEE International Conference on.*, 2005, pp. 288-293.
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 - [S14] M. V. Couto, M. T. Valente, and E. Figueiredo, “Extracting software product lines: A case study using conditional compilation,” in Proceedings of the European Conference on Software Maintenance and Reengineering, CSMR, 2011, pp. 191-200.
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 - [S16] A. Dabholkar and A. Gokhale, “Middleware Specialization for Product-Lines Using Feature-Oriented Reverse Engineering,” in Seventh International Conference on Information Technology, 2010, 2010, pp. 696-701.
 - [S17] J.-M. DeBaud and J.-F. Girard, “The Relation Between the Product Line Development Entry Points and Reengineering,” in Second International ESPRIT ARES Workshop on Development and Evolution of Software Architectures for Product Families, 1998, pp. 132-139.
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Appendix B

Refused Papers (type of paper)

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- [R6] J. Conejero, “THE CROSSCUTTING PATTERN: A CONCEPTUAL FRAMEWORK FOR THE ANALYSIS OF MODULARITY ACROSS SOFTWARE DEVELOPMENT PHASES.,” Extremadura, 2010.
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Appendix C

Refused Papers (not SPL oriented evolution)

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