4th International Workshop on Product LinE Approaches in Software Engineering (PLEASE 2013)

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***Abstract*—This paper summarizes PLEASE 2013, the fourth edition of the PLEASE workshop series. The main goal of PLEASE is to encourage and promote the adoption of Software Product Line Engineering. To this end, we aim at bringing together researchers and industrial practitioners involved in developing families of related products in order to (1) facilitate a dialogue between these two groups and (2) initiate and foster long-term collaborations.**

I. Introduction

Numerous companies, especially in the consumer electronics, automotive, aerospace and defense and other industrial sectors, develop and maintain families of related software-intensive products. These products share a common set of features and a defined set of variations on those features that satisfy the specific needs of a particular market segment and are often referred to as software product lines [1], [2]

Software Product Line Engineering (SPLE) is a software engineering discipline aiming to provide methods for improving the quality of the products within the product line and making their production more efficient. SPLE practices promote systematic software reuse by identifying and managing commonalities and variabilities across the whole product portfolio. By adopting SPLE practices organizations are able to achieve significant improvement in time-to-market and quality, reduce engineering costs, portfolio size, and more [1].

However, despite the proven benefits of SPLE, it is still in the early adopter stage. In many cases, organizations tend to use practice-based, ad-hoc reuse techniques, which, while sufficient for a small number of products, do not scale in the long run and result in increased complexity, as well as inability to sustain the desired quality level. Impediments to SPLE adoption vary from organizational, governmental, and process issues to issues related to engineering tools, design and testing methodologies, and others.

II. Objectives

The main goal of the PLEASE workshop series[1] is to encourage and promote SPLE adoption. In many occasions, industrial practitioners revert to ad-hoc approaches because they lack access to state-of-the-art methods and techniques. At the same time, researchers lack access product lines of realistic complexity and scale, and thus, the approaches that are developed by the research community might be seen as naïve and do not scale for real life cases.

PLEASE attempts to address these gaps, by coupling real-life problems related to development and maintenance of software product lines with well established solutions proposed by research and industry. We aim at bringing together researchers and industrial practitioners involved in developing families of related products. We encourage and facilitate a dialogue between these two groups: researches can get feedback on their work from industrial practitioners while industrial practitioners can get inspired by solutions developed by the SPLE community. In addition, our goal is to initiate and foster long-term collaborations between the participants, which promotes widespread adoption of SPLE.

As a result of the workshop, we aim to:

- suggest concrete solutions to the identified industrial problems;
- allow researchers access to empirical data and product line cases of realistic complexity and scale, in order to validate applicability of the developed techniques;
- encourage industrial practitioners and researchers to learn from each others experience;
- establish long lasting collaboration between the participants;
- establish measures of progress, including benefits of different solutions;
- elicit a long-term research agenda for identified unsolved problems.

[1] http://please2013.haifa.il.ibm.com/

III. Workshop format and program

The workshop program consists of three sessions:

- An *introduction and feedback session* in which a realistic problem or a concrete solution in the SPLE domain, or progress in a collaboration born in a previous PLEASE workshop, is described and exemplified in a short presentation by the participants. The presentation is followed by facilitated feedback – either from the audience or from an expert panel.
- A *speed-dating session*, in which participants are engaged in a time-limited discussion with each other. The goal of such session is to identify the potential "matches" between the participants' interests.
- A *summary session* that focuses on presenting and summarizing the identified matches and establishing future long-term trackable collaboration between the participants.

The papers accepted this year for presentation at the workshop and inclusion in the proceedings cover a whole spectrum of topics including PLE in-the-large (e.g., systems of systems, ecosystems, multi product lines), the application of PLE in domains (e.g., product control software, user interfaces, process models), the migration towards product lines (e.g., mining of software repositories, reverse engineering of variability) and the validation for product lines (e.g., variability-aware testing).

IV. PLEASE 2013 Committees

V. Program Committee

- Eduardo Almeida, Federal U da Bahia, Salvador, Brazil
- Martin Becker, Fraunhofer, Germany
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- Tim Trew, Cisco Systems, UK
- Markus Voelter, independent / itemis, Germany

VI. Workshop Organizers

- Julia Rubin, IBM Research, Israel
- Goetz Botterweck, Lero, Ireland
- Andreas Pleuss, Lero, Ireland
- David M. Weiss, Iowa State University, USA

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References

[1] P. Clements and L. Northrop. *Software Product Lines: Practices and Patterns*, volume 0201703327. Addison-Wesley, 2001.

[2] D. M. Weiss and C. T. R. Lai. *Software Product Line Engineering: A Family-Based Software Development Process*. Addison-Wesley, 1999.