Workshop on Design Pattern Detection for Reverse Engineering  
-- DPD4RE 2006 --

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Abstract

The main goal of the workshop is to address the issues related to design patterns identification for design recovery focusing on the role of the reverse engineering in identifying the sub-elements of the design patterns that can improve their detection.

1. Background

“Design recovery is a subset of reverse engineering in which domain knowledge, external information, and detection or fuzzy reasoning are added to the observations of the subject system to identify meaningful higher level abstractions beyond those obtained directly by examining the system itself” [1].

Design recovery should produce and reproduce the information required to understand what a program does, how it does it and why it does it. In this context, design patterns are the prime candidates for design recovery because of their own unique design intents.

2. Topics of Interest

Primarily, the idea of detecting design patterns in the reverse engineering process, has encountered strong resistance of both the pattern and reverse engineering communities because of their various possible implementations and interpretations. Today, design patterns detection represents a challenging topic that raises interesting research issues related to design recovery.

There is a strong need to formalize design patterns to improve and automate their recognition. Inevitably, formalization leads to the identification of regular recurring elements. The aim of this workshop is to address the issues related to design patterns detection in the context of reverse engineering.

Contributions include but are not limited to:
- The role of design patterns detection in reverse engineering
- Approaches to recognize design patterns: static vs dynamic
- Design patterns detection processes (manually, semi-automated, automated)
- Tools for design patterns detection
- Design patterns decomposition for design recovery
- Design patterns formalization
- Metrics for design patterns recognition
- Addressing variants for design patterns detection
- Design recovery
- Software architecture reconstruction

3. Workshop Organization

The workshop is a half-day event, held as a working event to facilitate discussions and disseminations of ideas. We invite people with practical experience and knowledge of design patterns and reverse engineering to gather and report successful and less successful stories with the aim of sharing their experience and to identify meaningful research issues.

Further info can be found on the workshop website: http://www.rcost.unisannio.it/wcre2006/colocated_events/DPD4RE.htm.

References