

ECONET Project

Behaviour Abstraction from Code

Filling the Gap between Component Specification and Implementation

supported by Egide

COLOSS - DSRG - LCI - OBASCO

Prague - september, 3-7 2007



<http://www.egide.asso.fr/fr/programmes/econet/>

Welcome

Welcome to Praha!
many czech words for welcome.

Few introductory words on

- Econet Project
- Workshop
- Workshop Organization

Econet Project 1/3

- Title: Behaviour Abstraction from Code
- Subtitle: Filling the Gap between Component Specification and Implementation

- Goal:

The goal of this project is to contribute to the reverse engineering way by developing techniques for extraction of abstractions from code (including some component interface description) and for verification of the abstractions against the code, e.g. to check an in-line bank service with no available code, to check that a client component is compatible with an implemented component.

- Means:

4-parts Cooperation

The four involved teams have complementary knowledge and background on the project domain. The goal is therefore to compare and exchange the point of view, and to integrate the new ideas and techniques in the current proposal.

- ...

Econet Project 2/3

- Participants
 - **COLOSS**: COmposants et LOGiciels SûrS
Safe Component and Software \rightsquigarrow Component System Verification
<http://www.lina.sciences.univ-nantes.fr/coloss/>
 - **DSRG**: Distributed Systems Research Group
SOFA model \rightsquigarrow previous work = basis for the project
<http://dsrg.mff.cuni.cz/>
 - **LCI**: Laboratorul de Cercetare in Informatica
Computer Science Research Laboratory \rightsquigarrow OCL, MDD, Tools
<http://lci.cs.ubbcluj.ro/>
 - **OBASCO**: OBjects, ASpects and COmponents
Previous work on Java and Components
<http://www.emn.fr/x-info/obasco/>
- Wiki
<http://www.lina.sciences.univ-nantes.fr/coloss/wiki/doku.php?id=econet:start>

Econet Project 3/3

● Project Plan

First year:

- Determination the field of application (boundaries of Java concepts and idioms).
- Settings of the major principles to abstract behaviours for software components (into Kmelia, SOFA and STS) from Java code.
- Experimentations on existing code.
- Studying and proposing a pattern for annotating EJB components in order to better support RE (behavior abstraction from code).
- Integration of the verification of guards using OCL (and OCLE).
- Documentation, research report and workshop preparation.

Second year:

- Refinement and classification of the principle and techniques.
- Study of the verification of assertions with OCL.
- Reverse engineering from EJB code to EJB specification (JML or OCL).
- Experimentation with larger case studies.
- Documentation, research report and workshop preparation.

Workshop 2007

Contents

- Participants
- Objectives and Delivery
- Program and Schedule

Workshop 2007 (contd.)

Workshop Participants \rightsquigarrow *self presentations*

- Dan CHIOREAN - LCI
- Dragos PETRASCU - LCI
- Frantisek Plasil - DSRG
- Gilles ARDOUREL - COLOSS
- Jacques NOYE - OBASCO
- Jan Kofron - DSRG
- Jean-Claude ROYER - OBASCO
- Jiri Adamek - DSRG
- Ondrej Sery - DSRG
- Pascal ANDRE - COLOSS
- Pavel Parizek - DSRG
- Tomas Poch - DSRG
- Vladiela PETRASCU - LCI

Workshop 2007 (contd.)

Workshop Objectives and Delivery (open issue !)

- Objectives \rightsquigarrow State of The Art + Clear Application Context
 - build a reference bibliography of the reverse engineering domain
concepts, related work and comparison, mains issues, approaches, platforms and tools (JPF, Bandera,...)
 - set the source area
subset of Java concepts, libraries, components, examples
 - set the target area(s)
SOFA, Kmelia, Vercors, ... - contracts, protocols, inheritance...
 - initiate some directions to follow in order to process the reverse transformation
patterns, rule based system, combination of several existing tools
- Delivery
A report for the project first year evaluation + plan the second year with individual objectives

Workshop 2007 (contd.)

Workshop Program and Schedule

- Day 1 and 2 are dedicated to workshop presentations. The durations and schedules leave time for numerous discussions...
 - Presentation of the teams (recent work, projects, tools, ...)
 - Technical presentations
- Day 3, 4 and 5 are dedicated to the project work (context, goal, process, tools, practical organisation and responsibilities)
- Social events

More details on the Workshop Wiki

<http://www.lina.sciences.univ-nantes.fr/coloss/wiki/doku.php?id=econet:pragues2007>

Workshop Organization

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- Frantisek
- Ondrej