

Software Change and Evolution (SCE'99)

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ABSTRACT

Software evolution is an intrinsic part of both software development and software maintenance and it is one of the most common software processes. It consists of repeated software change that affects only a part of software and leaves the rest intact.

Keywords

software development, maintenance, change, change request, change planning, software comprehension, change impact analysis, restructuring, concept location, propagation of change, validation of change.

1 INTRODUCTION

Software evolution is a change in software requirements. It is an intrinsic part of both software development and software maintenance and it is one of the most common software processes. Change in software is the basic building block of the software evolution. Each change affects only a part of software and leaves the rest intact.

Software change is described in terms of the so-called change minicycle, consisting of several phases:

- change request
- change planning, including of software comprehension and change impact analysis
- change implementation, including restructuring for change, change location, propagation of change
- validation of change.

The current problems with Year 2000 and Euro conversions are manifestations of the importance of research in this field.

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2 TOPICS OF INTEREST

The topics of interest for the workshop include, though are not limited to:

- models of the miniprocess of change
- representations and models of changing software
- theory, techniques and tools of program comprehension
- algorithms and scenarios for impact analysis, change location, and propagation
- techniques of change specification and validation
- pathology of change: misplaced dependencies, cloning
- deterioration of software structure: detection and prevention
- restructuring for a specific change
- evolvable architectures
- design for change
- iterative software life-cycle
- redocumentation after change
- empirical results and practical experience

3 PROGRAM COMMITTEE

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4 WORKSHOP GOALS

The purpose of the workshop is to gather the most active researchers and practitioners in the field of software evolution and change. The workshop will explore both the state of the art and state of the practice. It will explore theoretical foundations, tools, empirical results, and practical experience. Our purpose is to foster collaboration among researchers and practitioners in the field.