

ICSE 99 Workshop on Software Engineering over the Internet

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ABSTRACT

This summary gives an overview on the 2nd Workshop on “Software Engineering over the Internet” held in conjunction with ICSE 99 in Los Angeles.

Keywords

Internet, Software Engineering

1 WORKSHOP DESCRIPTION

The Internet is nowadays a key factor in software development projects. On the one hand, many projects deal with developing systems that work via the Web. Electronic commerce is one of these days buzzwords. On the other hand, it is also an enabling technology for software companies to meet challenges they face in the global economy. Important problems are the world-wide shortage of skilled software developers and the push towards shorter cycle times: Software shall be delivered in Internet time - meaning that tomorrow is already too late.

The ubiquitous communication infrastructure provided by the Internet allows team members to participate in a development effort without being physically collocated. Virtual software engineering projects become a possibility where teams are created on the fly, work together on a task for a short period of time and then each team member moves on to work in the next project.

Open source projects like Linux or the Apache server demonstrate the success of such virtual teams. Without being paid their developers produced industrial strength software using the Internet as the basic means for communication and collaboration. Their technical support often answers questions and provides bug fixes within a couple of hours and so proves to be more efficient than many software companies.

Even though the open source approach can not be

transferred to arbitrary projects - after all, software developers and companies need to earn some money to survive - software manufactures are now taking advantage of the Internet. Beta tests with thousands of testers – as exemplified by Microsoft – would cost much more if the Internet would not be used to distribute the beta version. And the same holds for distributing system patches.

These examples demonstrate that the Internet is changing everyday practice of software development.

Following the ICSE 98 Workshop with the same topic that was held in Kyoto [1], the 2nd Workshop “Software Engineering over the Internet” is bringing together researchers and practitioners that share a vision of using the Internet as a primary infrastructure for supporting globally distributed software development projects.

The goal of the workshop is to discuss questions like

- What methods and tools do we need to support projects over the Internet? What are their benefits and limitations?
- What are the special problems in distributed software engineering projects and how can we make use of the Internet to solve them?
- Which technologies did work in real world projects, which did not?
- What are the relevant research questions and technical problems to address in the future for supporting software engineering projects over the Internet?
- How can we measure the success of Internet-based approaches and compare them with more conventional ones? What metrics need to be gathered and what experiments should be carried out?
- What experiences exist with virtual software teams? How effective did they work? What problems did they encounter?

Submissions cover all phases of software engineering: requirements engineering, system analysis, software design,

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component & integration testing, code generation, implementation, software maintenance, and technical support. Topics of interest were

- web-based software process modeling environments
- distributed process enactment
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- distributed process enactment
- replication support for software documents
- distributed data repositories
- knowledge management for SE projects
- Internet-based experience factories
- world-wide configuration management support
- groupware support for software development
- project coordination support
- Internet-based around-the-clock software development
- distributed testing environments
- collaborative system analysis and design
- improved internet-based traceability support
- distributed change impact analysis
- developing and maintaining large-scale software libraries
- Internet-based problem tracking tools
- electronic commerce for software components
- technologies for building Internet-based process sensitive software engineering environments

All accepted submissions are accessible via the Web at [2].

2 WORKSHOP ORGANIZATION

The following distributed team organized the workshop:

Frank Maurer, Department of Computer Science, University of Calgary, Canada, maurer@cpsc.ucalgary.ca (Primary organizer)

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