

Collaboration, Conflict and Control: Report on the 4th Workshop on Open Source Software Engineering

Joseph Feller
University College Cork
Cork, Ireland
jfeller@afis.ucc.ie

Brian Fitzgerald
University of Limerick
Limerick, Ireland
bf@ul.ie

Scott Hissam
Software Engineering Institute
Pennsylvania, USA
shissam@sei.cmu.edu

Karim Lakhani
MIT Sloan School of Management
Boston Consulting Group
Massachusetts, USA
karim.lakhani@sloan.mit.edu

Abstract

Building on the success of the first three workshops in the series, which were held at ICSE 2001 (Toronto), ICSE 2002 (Orlando) and ICSE 2003 (Portland), the 4th Workshop on Open Source Software Engineering, ("Collaboration, Conflict and Control") brought together researchers and practitioners for the purpose of discussing the platforms and tools, techniques and processes, and the organizational structures that are used to support and sustain communication, collaboration and conflict resolution within and between open source software communities.

1. Introduction

Open Source Software (OSS) is now well recognized as an important research area within both the Software Engineering and Information Systems fields, as evidenced by the growing number of related journal papers, conference papers, workshops and seminars. As part of this community of research, the *Open Source Software Engineering* workshop series has consistently attracted high quality position papers and large numbers of active participants from academia, government and industry. The position papers and presentation slides from each workshop are hosted at the *Open Source Resources* website (<http://opensource.ucc.ie>), and are downloaded by hundreds of readers each month.

The first workshop on open source software engineering, "Making Sense of the Bazaar", demonstrated the existence of a lively and motivated community of software engineering practitioners and researchers interested in OSS. The goal of the second workshop in the series, "Meeting Challenges and Surviving Success", was to nurture this community, and to focus the discussion on both the short and long term sustainability of the OSS phenomenon. Based on the discussion at the second workshop, "Taking Stock of the Bazaar", the third workshop, focused on the diverse array of techniques – as well as supporting tools and social contexts – that can be observed in the domain of OSS. We believed such a "stock taking" exercise would lay the foundation for more a fruitful exchange of ideas

between open source software and other forms of software engineering.

The fourth workshop, held at ICSE 2004 in Edinburgh, took up one of the themes that emerged from the third workshop, namely the need to understand more fully how members of open source software communities communicate, collaborate, and cope with change and conflict.

2. Workshop Theme

The overarching theme of the 4th workshop was "Collaboration, Conflict and Control." Specifically, the goal of the workshop was to bring together researchers and practitioners for the purpose of discussing the platforms and tools, the techniques and processes, and the organizational structures that are used to support and sustain:

- Communication and collaboration within - and between - developer and user communities.
- The resolution of conflict within development projects (ranging from deciding on improvements to be included in a particular release to reconciling the goals of not-for-profit community organizations and their industrial collaborators).
- Effective leadership and control of development activities, and of the evolution of specific products (ranging from the management of code commit privileges in a single project, to the roles played by non-governmental standards builders (e.g. the Internet Engineering Task Force and the World Wide Web Consortium) and governmental policy makers).

3. Workshop Position Papers

Twenty position papers, from 40 authors based in 12 countries, were accepted to be published in the workshop proceedings (available in hardcopy from ACM/IEEE and in PDF format on the workshop website at <http://opensource.ucc.ie/icse2004>). The papers covered a wide range of topics, including:

- Comparisons of academic software research with open source software development, including technology transfer between academia and industry

- Comparisons of open source and closed software development models
- Migrating a development project to an open source development model
- Comparisons between the contributions of individuals and firms within open source projects
- The relationship between architecture, code structure and collaborative processes
- Open source project success measures
- Open source project control objectives
- Community structure, collaboration, leadership, control, communication and conflict negotiation within projects like Apache, Gentoo, Debian and Netbeans.org
- User collaboration communities
- Version Control Tools and related infrastructure

4. Future Workshops

Open Source Application Spaces: The 5th Workshop on Open Source Software Engineering, will be held on May 17, 2005 at The 27th International Conference on Software Engineering (ICSE 2005) in St. Louis, MO, USA.

The goal of the 5th workshop is build a roadmap of the ways in which various computing application spaces (e.g. mobile/embedded computing, ambient intelligence, business domain verticals and horizontals, Web services/semantic web, etc.) have been impacted by open source software and also by open source development methods, tools and organizational structures.