Web2SE: First Workshop on Web 2.0 for Software Engineering

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ABSTRACT

Social software is built around an "architecture of participation" where user data is aggregated as a side-effect of using Web 2.0 applications. Web 2.0 implies that processes and tools are socially open, and that content can be used in several different contexts. Web 2.0 tools and technologies support interactive information sharing, data interoperability and user centered design. For instance, wikis, blogs, tags and feeds help us organize, manage and categorize content in an informal and collaborative way. One goal of this workshop is to investigate how these technologies can improve software development practices. Some of these technologies have made their way into collaborative software development processes such as Agile and Scrum, and in development platforms such as Rational Team Concert which draw their inspiration from Web 2.0. These processes and environments are just scratching the surface of what can be done by incorporating Web 2.0 approaches and technologies into collaborative software development. This workshop aims to improve our understanding of how Web 2.0, manifested in technologies such as mashups or dashboards, can change the culture of collaborative software development.

Categories and Subject Descriptors

D.2.9 [**Software Engineering**]: Management—*Programming teams*

General Terms

Human Factors, Management

Keywords

Web 2.0, process, tools, collaboration

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1. INTRODUCTION AND MOTIVATION

Web 2.0 [5] is both a usage paradigm and a technology paradigm that uses the Web as a platform. Web 2.0 focuses on services rather than packaged software and on remixable data sources that harness collective intelligence. This has resulted in an "architecture of participation" that has altered how we implicitly and explicitly work and play together.

Web 2.0 technologies such as wikis, blogs, tags and feeds help us organize, manage and categorize web content in an informal and collaborative way. Some of these technologies have made their way into collaborative software engineering processes and modern software development platforms [1]. For example, IBM's Jazz draws its inspiration from the Web[1]. Web 2.0 is built around an architecture of participation where user data is aggregated as a side-effect of using applications [6].

One goal of this workshop is to investigate how these Web 2.0 technologies can improve software development practices. However, this is just scratching the surface of what can be done by incorporating Web 2.0 approaches and technologies into collaborative software development. Web 2.0 implies that processes and tools are socially open, and that content can be used in several different contexts. This workshop aims at improving our understanding of how this attitude, manifested in technologies such as mashups or dashboards, can change the culture of collaborative software development.

While some research on the adoption and adaption of Web 2.0 technologies and mechanisms in software engineering has been conducted, there is no singular venue that brings these research efforts together. With our workshop, we aim to provide that venue and to facilitate exchange between researchers. The workshop will also result in a concise set of papers on Web 2.0 in software engineering. Such a set does not yet exist to date.

This workshop will inform both academia and industry of the current state-of-the-art research in the adoption of Web 2.0 technologies for software development. We will highlight tool ideas and research that has evaluated such ideas. At the same time, we will generate new ideas and strive to think beyond today's software development environments. We will

[1]http://jazz.net/projects/content/project/plans/jia-overview/

consider our workshop to be successful if we identify potential tool enhancements as well as new research areas in which the use of Web 2.0 technologies in software development can be evaluated.

2. OBJECTIVES

Web2SE has four main objectives:

- Summarize the current state-of-the-art research with regard to the use of Web 2.0 technologies in software development. Some Web 2.0 technologies such as wikis [3], facebook [2], blogs [7], social bookmarking [4] and tagging [8, 9] have already in part been adopted by software developers and by development environments. In addition, projects such as Mozilla's web-based framework for code editing Bespin[2] and websites such as stackoverflow[3] bring Web 2.0 into software development. This workshop will highlight pertinent theories and tools from the existing research.

- Explore how Web 2.0 technologies in software development could be further leveraged, in particular to support distributed and team-based development. Some Web 2.0 technologies such as micro-blogging are still fairly new and it is unclear if and how they could improve team-based software development processes, although we note from browsing through twitter that it is being used as a supporting mechanism[4].

- Investigate to which extent the "socially open" attitude of Web 2.0 applies to software development. A main characteristic of most Web 2.0 technologies is that they get better the more people use them. Web 2.0 applications are increasingly data-driven and the key advantage of Internet applications is the extent to which users add their own data [6]. By the end of the workshop we hope to have a notion of how to balance architecture of participation and individual productivity. A promising route that we hope to address in the workshop is how data collection and analysis techniques as used in the field of *software repository mining* for recommending relevant bugs, developers, or artifacts can be enriched with data provided by software engineers or collected from the way they interact with their development tools.

- Explore how Web 2.0 technologies can be incorporated into software engineering processes and methods. Although the more obvious application of Web 2.0 tools is for software development teams to assist in communication and coordination, it is even less explored how Web 2.0 technologies can play a role in software development processes and methods. For instance, the tools can be a good fit with Agile methods which already emphasize communication. We will discuss implications of Web 2.0 mechanisms on software processes and methods during this workshop.

[2]https://bespin.mozilla.com/
[3]http://stackoverflow.com/
[4]E.g., http://wiki.eclipse.org/twitter

3. ACCEPTED PAPERS

The papers that will be presented at the workshop cover a broad range of topics from pre-requirements analysis to software quality. They also address a broad range of technologies that help to facilitate collaboration. Examples include social media, wikis, newsfeeds, commit comments, mashups and tags.

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