Workshop on Testing, Analysis and Verification of Web Software (TAV-WEB 2008)

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ABSTRACT

TAV-WEB 2008 is the third in a series of workshops that focus on testing, analysis and verification of web software. The goal of these workshops has been to bring together researchers from academic, research, and industrial communities interested in the emerging area of dependable Web software development, to present and discuss their recent research results.

Categories and Subject Descriptors

D.2.4 [**Software Engineering**]: Software/Program Verification; D.2.5 [**Software Engineering**]: Testing and Debugging

General Terms

Reliability, Verification

1. INTRODUCTION

The last decade has seen the explosive growth of interactive Web software applications in a diverse set of domains including retail, electronic commerce, wikis, blogs, social network services, etc. This explosive growth is likely to accelerate further by adoption of the service oriented computing paradigm that enables interactions among Web accessible software components. Challenges in developing Web accessible software have inspired a new wave of languages, standards, and tools that have not yet become part of the mainstream software engineering research and education. On the other hand, an increasingly large number of software developers work exclusively on Web software development. The goal of TAV-WEB 2008 is to bring together researchers working on testing, analysis and verification of web software to discuss the recent research results in this area.

2. WORKSHOP FOCUS

The scope of TAV-WEB 2008 has been extended (from the web service scope of previous workshops TAV-WEB 2004 [2, 3] and TAV-WEB 2006 [1]) to include all Web software. Developing dependable Web software requires effective testing, analysis and verification techniques and tools that address not only the needs of software in general but also the peculiar challenges of this domain such as those listed below:

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- Distributed nature of Web accessible software components makes interoperability and integration especially challenging.
- Web applications and services are prone to concurrency errors since they rely on concurrent processing of user/service requests.
- Interfaces play an important role in coordination of components within a Web application or coordination of Web services across organizational boundaries, and interface violations can cause serious problems.
- Diverse communication mechanisms such as synchronous and asynchronous messaging and remote procedure calls result in complex interaction behavior.
- Performance is an important problem for web software due to a high volume of web accesses and requests and communication overhead (such as service interactions) inside web software.
- Security and privacy are critical for web software due to ease of access and cross-enterprise exchange of potentially sensitive data.
- New languages (such as BPEL), new software development platforms (such as Ruby on Rails), and data formats (such as XML) introduced for this particular domain present new challenges.
- Migrating legacy software to web software calls for new techniques and tools to support the process.

These challenges will require and inspire new testing, analysis and verification techniques and corresponding tools, which will form the focus of this workshop.

3. REFERENCES

[1] T. Bultan, editor. *Proceedings of the 2006 Workshop on Testing, Analysis, and Verification of Web Services and Applications.* ACM, 2006.

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[3] S. Krishnamurthi and T. Bultan. Discussion summary: Characteristics of web services and their impact on testing, analysis and verification. *ACM SIGSOFT Software Engineering Notes*, 30(1), 2005.