



Proceedings of
WSE'99

**1st International Workshop on
Web Site Evolution**

October 5, 1999

Atlanta, GA

Edited by Scott Tilley

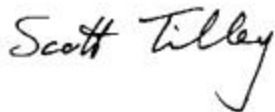
1st International Workshop on Web Site Evolution

Foreword

Welcome to WSE'99! The goal of this workshop is to bring together the software engineering, reverse engineering for program understanding, and information technology communities to focus on techniques for Web site evolution. Web sites have moved from supplementary mechanisms for communication to become a primary component of most organization's infrastructure. Rather than serving simply as a passive means of disseminating information, Web sites have become the integration hub for a wide variety of activities, including electronic commerce, streaming media, and online collaboration.

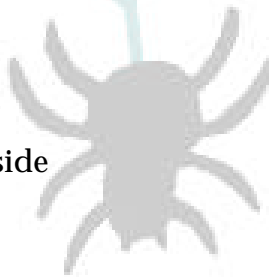
With "older" Web sites now just passing five years on the Net, it seems prudent to examine how they can evolve in a more disciplined manner. As Web sites age, they suffer from some of the same afflictions as any complex software system: their structure degrades, maintenance becomes increasingly problematic, and legacy applications and interfaces hinder evolution. However, Web sites are also unique in several aspects. For example, they are often developed by people who may lack a formal computer science or software engineering background.

I am particularly pleased that the inaugural meeting of this nascent research community is being co-located with WCRE'99, the 6th Working Conference on Reverse Engineering. WCRE has a history of providing enjoyable, informative, and stimulating meetings. I hope WSE can follow a similar path, and that you enjoy the workshop.



Scott Tilley

Scott Tilley
General Chair, WSE'99
University of California, Riverside



Program Committee

Cornelia Boldyreff, Univ. of Durham, UK
Elliot Chikofsky, META Group, USA
Hausi Müller, Univ. of Victoria, Canada

Jock Rader, Raytheon Systems Co., USA
Lisa Schmeiser, schmeiser.com, USA
Chris Verhoef, Univ. of Amsterdam, The Netherlands

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Papers

WEB Sites: Files, Programs or Databases?

G. Antoniol, G. Canfora, A. Cimitile and A. De Lucia

An Architecture for Maintaining Link Structure of a Website

S. Arnold and L. Mark

WHAT: Web Hosting Analysis Tool

L. Cherkasova and M. DeSouza

Aspects to Consider for Understanding Web Site Evolution

E. Chikofsky

Server-side Tracking of New Documents

F. Dougli

Evolving an Engineered Web

D. Eichmann

Evolving the Web Into an Accessible Collaborative Learning Environment

K. Hebenstreit

Web Site Evolution: Designing and Developing for the Future

L. Schmeiser

Web Site Evolution - Towards a Flexible Integration of Data and its Representation

M.-A. Storey and J. Jahnke

On the Emergence of the Renaissance Software Engineer

S. Tilley and S. Huang

Management of Web Site Evolution

J. Verner and H. Müller

Characterising Evolution in Web Sites: Some Case Studies

P. Warren, C. Boldyreff, and M. Munro

Toward Reusable and Evolvable Web Sites

K. Wong

Enabling Technologies for Web-Based Legacy System Integration

Y. Zou and K. Kontogiannis

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Agenda

- 9:00a - **Welcome**
9:15a Scott Tilley, University of California at Riverside, USA
- 9:15a - **Software Engineering Issues**
10:15a
 - Presentation: "Web Site Evolution - Towards a Flexible Integration of Data and its Representation," *M.-A. Storey (University of Victoria, Canada)*
 - Discussion
- 10:15a - *Coffee Break*
10:30a
- 10:30a - **Software Engineering Issues (continued)**
12:00p
 - Presentation: "Server-side Tracking of New Documents," *F. Douglass (AT&T Research, USA)*
 - Discussion
- 12:00p - *Lunch*
1:00p
- 1:00p - **Technology Issues**
2:30p
 - Presentation: "On the Emergence of the Renaissance Software Engineer," *S. Tilley (University of California at Riverside, USA)*
 - Presentation: "Enabling Technologies for Web-Based Legacy System Integration," *Y. Zou (University of Waterloo, Canada)*
 - Discussion
- 2:30p - *Coffee Break*
3:00p
- 3:00p - **Reuse and Product Lines**
4:00p
 - Presentation: "Toward Reusable and Evolvable Web Sites," *K. Wong (University of Alberta, Canada)*
 - Discussion
- 4:00p - **Case Studies; Open Discussion; Next Steps**
5:00p
- 5:00p **Adjourn**

This is a **draft** agenda reflecting possible discussion topics and confirmed presentations as of Friday, October 1, 1999. The agenda will be adjusted as required during the workshop.