IN THIS ISSUE

This issue of the Journal of Web Engineering is composed of four papers focusing on important web application development areas ranging from Web Service discovery mechanisms and cross-cultural interface design of web sites to the integration of users’ trails in the web application modelling process and developing structure services for the web.

The essence of Web Engineering is the development of web applications, i.e. to provide approaches that successfully manage the development of contemporary applications. As web is still growing in size, web technologies continue to evolve and web applications extend to a diverge range of application domains, there is always a growing need for innovative or just enhanced development approaches to address new challenges. This issue aims at articulating and raising awareness of some important issues and considerations in web development nowadays.

In the first paper, E. Gams et. al. investigate how Web applications can profit from the integration of the concept of user trails, implemented as navigation patterns, in the web application modelling process. The notion of trails is an established concept in the field of hypertext navigation. Trails, built up from information acquired by users’ browsing paths and activities, represent the users’ point of how to access and traverse a Web application within the natural navigation borders set by the document space and application designer. The authors argue that the concept of trails defined in terms of a navigation pattern can enrich Web applications with a navigational element that dynamically adapts to the users’ interaction needs. The paper is particularly interesting for web developers given that it focuses on a survey of different Web application classes and discusses how trail pattern can be applied to each one.

In the second paper, M. Vaitis et. al. constitutively introduce the domains of open hypermedia and structural computing as well as define the notions of CB-OHSs and structure servers. They describe the problem of designing structure servers to address a particular application domain. Furthermore, they propose a software development life cycle for structure services and a set of potential tools to direct their development. Finally, they present how this methodology is supported by a specific CB-OHS (Callimachus), emphasizing on the tools enabling rapid prototyping of new structure servers. This is an interesting paper that addresses some key issues of structural computing and seeds some ideas about integrating structure services into web applications.

The paper by Olga De Troyer et. al. focus on the issue of cross-cultural interface design of web sites. They carried out two small-scale studies in order to check whether they could find cultural differences in local web sites. The studies were conducted for university and newspapers web sites. Their hypotheses with regard to cross-cultural variation is based on the well-known theory of Hofstede. This paper raises an interesting question for web developers: Should we consider more the different cultural dimensions of end-users in order to provide more successful web applications? The results of this quite interesting paper give an indication that Hofstede’s theory may not be applicable as such for web sites.
It seems that the Web has developed its own culture, a hybrid cosmopolitan culture overriding traditional cultural differences.

The last paper by Garofalakis et. al. provides a thorough survey of existing Web Service discovery mechanisms. It critically presents the latest methods, architectures, models and concerns that have arisen in the Web Service Discovery area. Among others the paper outlines the main players in the discovery field, examines the architectural aspects, studies the data models that facilitate the discovery and discusses the Quality of Web Service provisioning.

All papers represent extended and revised versions of selected papers presented at the “Web Engineering” workshop, held in Santa Cruz in August 2004, in conjunction with the ACM Hypertext 2004. The papers selected for this issue received peer review by at least two independent reviewers with expertise in the topic, guaranteeing the technical soundness and high quality of the texts.

I hope that reading this issue you will find it enjoyable and the content insightful. Moreover I believe that it would help the web development move onward.

Before concluding this editorial message, I want to thank all the people that have contributed to the success of the web engineering workshop and the publication of this issue. I would sincerely like to thank the workshop program committee and JWE reviewers that helped the authors to further improve the papers of this issue and the Rinton Press editor, Wei Chen, for his valuable support.

Sotiris Christodoulou

Guest Editor