

## Web Engineering: Introduction to Minitrack

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The Web, or the WWW architecture, has become, undisputedly, the premier delivery platform for the majority of applications today. Applications range from small, simple static sites to large applications, involving distributed, heterogenous databases, scattered throughout a wide geographical area. In addition, more recent delivery platforms must also be integrated, such as the case of mobile networks.

The constant technological evolution, coupled with the increasing complexity of applications, has stressed the already perceived need for adequate methods and techniques for the development, maintenance and evolution of such applications. The area of Web Engineering has focused on such methods and techniques, leveraging existing software engineering practices, enriched with new, web-specific approaches. The Minitrack consists of nine papers that cover a broad range of aspects concerning Web Engineering:

In “A Component-Based Architecture for the development and Deployment of WAP-Compliant transactional services” Canataro and Pascuzzi present a general architectural framework to develop portable services and applications accessible by mobile terminals, extending end-to-end services between terminals and business applications. Göschka and Smeikal describe the Interaction Markup Language in “Interaction Markup Language-An Open Interface for Device Independent Interaction with E-Commerce Applications”. They show how to make different interfaces work together with the same application by describing the interactions rather than the elements or components.

Emilia Mendes and Nile Mosley argue in “Using an Engineering Approach to Understanding and Predicting Web Authoring and Design” that prediction is a necessary part of an effective process, and that they can use some measurements obtained in a project to predict the effort in future Web applications. In their paper “Supporting Reusable Web Design with HDM-Edit” Garzotto, Paolini and Baressi present HDM-Edit, a schema editor that

supports general and detailed design of Web applications. They show that HDM-Edit promotes design reuse by supporting several navigation patterns as built-in modeling primitives.

In “Automatic HTML Generation from Formal Hypermedia Specifications” Shibuya, Leiva, Ferreira de Olivera and Masiero propose three strategies for automatically generating an HTML implementation from a hyperdocument model. They presume this model has been obtained using HySCharts, an environment for specifying state-chart-based hypermedia applications. Zafiridis, Georgantidis, Kalamaras, Christodoulou and Papatheodorou address, in “Remodeling and Evolving Large-Scale WWW sites”, the issues of remodeling the heterogeneous information that is the foundation of many large-scale WWW sites. They present an architecture for integrating diverse data repositories through a shared metadata layer.

In “Utilizing Abstract Web Engineering Concepts: An Architecture”, Heberle, Rehse, Onasch and Sieling present an open, platform independent and scalable architecture based on the object-oriented WebComposition approach. Liu, Lin, Chen and Huang argue that the explosive growth of information is creating difficulties for customers in searching for products they need. In “A Framework for Personalized E-catalogs: an Integration of XML-based Metadata, User Models and Agents”, they propose an architecture that can facilitate resource-discovery and format translation. Finally, in “Extending XML To Index from Control Vocabularies”, Arnold and Spenla present an architecture to integrate indexing from control vocabularies at a structural level into XML.

In spite of the limited space, the collection of papers in this Minitrack is a faithful reflection of the variety of issues and approaches that are being taken within the Web Engineering field.