Preface

User-adaptive systems have evolved from small-scale stand-alone applications to interactive Web-based applications that are often deployed on a larger scale. Consequently, the need has arisen to move from prototypical systems to scalable, deployable solutions. At the same time, a shift can be seen from rule-based, mentalistic user modeling approaches to 'Web 2.0' approaches that involve machine learning, data mining, and collaborative techniques.

Past research provided a large body of methods for adaptation/personalization, and techniques for user modeling, usage mining, and collaborative filtering. Conceptual frameworks splitting the adaptation process into various layers provide guidance for implementing user-adaptive systems. Based on these building blocks, various groups have created their own frameworks, among others AHA!, APELS, and Personal Reader. Framework design provides an opportunity to reuse components or even whole layers of the adaptation process. Reuse of components such as user behavior observation and logging tools, user model storage promotes faster development, better feature selection, and more robust systems.

Although, system fragmentation enables component reuse and speeds up the development of the new systems, there are several issues. First, decomposition of a monolithic system should result in a good abstraction of the data and process model to provide a convenient basis for reuse. Second, the data traffic between the separated system components may intensify. As the number of system users increases issues related to scalability might arise. This is especially true for user-adaptive and cognitive systems where the modeling and personalization components are traditionally computationally and data intensive.

Existing work on the Web-based user-adaptive and cognitive systems, including work on frameworks, shown that there exists a strong overlap between conceptual models of the decomposed adaptation process and the practical implications of its design. In this situation, a logical step is to compare already working systems with emerging approaches and models. In this workshop we seek to identify current practices and experiences with concrete implementations of user-adaptive and cognitive systems or specific components - varying from experimental, small-scale prototypes to systems that are deployed on a larger scale.

The topics of this workshop include but are not limited to:

- user behavior observation and user data collection: embedded into the adaptive system or available as standalone components or add-ons,
- user data management: data storage platforms and formats, the use of open standards, querying techniques or APIs, interoperability issues,
- reusing reasoning and adaptation techniques,
- scalability and performance issues of user modeling and adaptation,
- generalizable techniques for adaptation, personalization and recommendation,
- translations of conceptual designs into concrete implementation,
- deployment issues and lessons learned (case studies and evaluation).

In summary, research papers presented at this workshop focus on *Architectures and Building Blocks of Web-Based User-Adaptive Systems*.

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Organization

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