

## EDITORIAL

The Web is changing fast from a static, single interaction medium to a highly interactive and dynamic platform. The current trend in the creation of modern Web applications, commonly referred to as Web 2.0 applications, is to increase the user involvement in the production of contents, annotations, and evaluations. An emerging practice, that is currently gaining popularity, even among users with only little programming skills, is the development of mashups through the integration of contents and functions that are provided by third parties that open their APIs toward developers and end users. This new generation of applications proves the initially unexpected value of integrating end-users in the development process of online applications.

In order to facilitate the construction and maintenance process, several efforts have been so far devoted to the production of authoring environments and development tools, and to the definition of corresponding enabling technologies. However, all these efforts have proven insufficient to ensure the quality of this kind of applications, which poses particular challenges to the Web engineering community. Particularly, there is a lack of proposals for the definition of key quality principles, evaluation methods, and quality-driven development methods for Web 2.0 applications. In the literature, quality criteria covering different aspects have been proposed and analyzed, but the adaptability and dynamicity that characterize the modern Web applications require a separate and focused analysis.

To achieve quality for any class of Web application (e.g., data-intensive applications, services, mashups, community portals), the set of relevant quality attributes for Web artefacts must be clearly defined. Otherwise, quality assessment is left to the intuition or the responsibility of people who are in charge of the process. Quality models should be built to precisely identify the quality attributes (and the relationships among them), and based on these quality models, quality evaluation techniques should be defined and exploited during the whole Web application life cycle.

In this issue, which is about *Quality in New Generation Web Applications*, three articles introduce the Web Engineering readers to some quality evaluation techniques that address the requirements posed by the modern Web applications. These evaluation techniques cover in a practical way some basic evaluation principles from traditional Web applications that have been transferred to Web 2.0; in addition, they provide some insights about the new trends in quality evaluation for Web 2.0 applications.

In the first article “A Core Quality Model for Web Applications”, Roberto Polillo presents a methodological approach for defining quality models for any class of Web applications, including Web 2.0. In the author’s view, the success of modern Web applications may depend more on activities performed during operations than on the static properties of these applications. As a consequence, the proposed core quality model includes the quality characteristics that are continuously built and improved during site operations. Another distinguishing characteristic of this approach is the use of the

organization mapping criterion as the main driver for defining quality models. The approach brings new insights to deal with the evaluation of today's Web applications.

Luis Olsina, Philip Lew, Alexander Dieser, and Belen Rivera in their article "Updating Quality Models for Evaluating New Generation Web Applications" discuss the adaptation of their previously developed quality models and framework, namely 2Q2U to address the features of new generation Web applications. The paper offers a detailed presentation of the resulting approach that, when used in conjunction with evaluation strategies, contribute towards a flexible, integrated approach to evaluate Web 2.0 applications. The authors illustrate the approach through the evaluation of a mashup.

In the last article, titled "Quality-driven Extraction, Fusion and Matchmaking of Semantic Web API Descriptions", Luca Panziera, Marco Comerio, Matteo Palmonari, Flavio De Paoli and Carlo Batini introduce a solution for discovering and selecting APIs based on the semantic matchmaking of user requirements against API descriptions collected from heterogeneous sources available on the Web. In the approach, three Web data quality dimensions, namely accuracy, currency and trustworthiness are considered for the effective fusion of descriptions extracted from Web sources. In addition, the authors consider the overall quality of the fused policies in a ranking method. This solution provides a valuable contribution toward the composition of quality Web applications by selecting the most appropriate APIs.

We take this opportunity to express our sincere gratitude to the authors who contributed to this special issue, the reviewers who helped a lot improving the quality of the accepted papers, and the JWE Editorial Board that assisted us in the review and selection of papers.

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Guest Editors