Editorial

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Biographical notes: Professor Ki-Joune Li received his PhD in Computer Science from Institut National des Sciences Appliquées (INSA) in Lyon, France. Professor Li has been lecturing in Pusan National University, South Korea from 1993. He has served on the programme committees of several international conferences. He was Program Chair of ACM-GIS 2000 and was co-chair of the Springer workshop on *Web and Wireless Geographical Information Systems* (W2GIS) held in Lausanne, Switzerland in 2005.

Dr. Christelle Vangenot is a Senior Researcher at the Database Laboratory of the Computer Science Faculty of the Swiss Federal Institute of Technology in Switzerland. Her current main research interests include conceptual modelling for spatio-temporal databases, spatio-temporal data warehouses, location based services, and ontology modelling. She has published in the fields of databases and GIS. She is an editorial board member of the Revue Internationale de Géomatique and member of the steering committee of the Web and Wireless Geographical Information Systems (W2GIS) workshop. She has served on the programme committees of many international conferences. She was co-chair of the Springer workshop on *Web and Wireless Geographical Information Systems* (W2GIS) held in Lausanne, Switzerland in 2005.

Conferences provide researchers with the fastest way to disseminate their ideas and results to a selected community of other researchers in the same domain. Conferences, however, usually have to enforce space limitation and a fixed time frame, with no chances for improving a paper by producing multiple versions. In contrast, journals offer more space, room for debate and refinement, and are usually considered the real archival venue. Therefore, the publication of an extended version of a conference paper is a much appreciated opportunity for researchers to widely disseminate a significantly improved presentation of their work, where they can develop the appropriate motivations, reasoning, results and comparative analysis.

We are pleased to offer in this *International Journal of Web Engineering and Technology* issue extended versions of five papers that were selected from the papers presented at the 5th International Workshop on *Web and Wireless Geographical Information Systems* (W2GIS, 2005), held 15–16 December in Lausanne, Switzerland. These papers, showing consistently high reviews from the Program Committee, were selected based on their quality, relevance and significance, and the viability of extending their results. All extended papers were subject to a scholarly review process, and the authors were required to respond to all concerns expressed by the reviewers before papers were accepted.

The objective of this special issue is to provide an up-to-date review of advances on recent development of Web and Wireless Geographical Information Systems.

The first two papers deal with *Web Geographical Information Systems*.

The paper 'Connectivity inferences over the web for the analysis of semantic networks' by Béra and Claramunt introduces a modelling approach that derives a social network and computes some of its emerging properties, from the semantics exhibited from domain knowledge embedded in a series of web pages.

Web mapping is the topic of the paper entitled 'Efficient and consistent line simplification for web mapping' by Bertolotto and Zhou. They have developed an improved version of Saalfeld's algorithm for line generalisation that preserves topological consistency. In order to have an acceptable processing time for web mapping, this algorithm has been integrated into a web mapping system that relies on a progressive transmission approach where a sequence of simplified maps is pre-computed, stored on the server and transmitted incrementally upon request.

The three next papers deal with *Mobile Geographical Information Systems*. 'Geo-mobile query-by-sketch' by Cadduf and Egenhofer introduces a sketch-based spatial querying system for mobile GIS environments that combines techniques for spatial querying with mobile technologies. The system implements an adaptive client-server architecture, which copes with restrictions of mobile environments, such as fluctuating bandwidth and frequent disconnections. The core concept analysed is the *mobile sketch*, a multi-representation data structure of a sketched scene, which enables an adaptation strategy that is tailored to the available transmission rates.

The paper by Kang *et al.*, 'A framework for dynamic updates of map data in mobile devices' proposes a framework to update maps on mobile devices. In their framework, all the time-consuming tasks are done on the server side and only updated spatial objects described in an extended version of SVG are sent to the mobile in order to update the maps.

Finally, the last paper, 'Personalised maps in multimodal mobile GIS', by Wilson *et al.* provides a description and evaluation of an approach as implemented in CoMPASS, a multimodal mobile GIS that implicitly records user movements and map interactions to dynamically infer persistent spatial preferences and recommend relevant map content and related information.

We would like to thank all the authors that contribute to this special issue for the quality of their work and their collaboration. We would also like to thank all the reviewers for the quality of their evaluations.