Preface

The Seventh International Symposium on Spatial and Temporal Databases (SSTD 2001), held in Redondo Beach, CA, USA, July 12–15, 2001, brought together leading researchers and developers in the area of spatial, temporal, and spatio-temporal databases to discuss the state of the art in spatial and temporal data management and applications, and to understand the challenges and research directions in the advancing area of data management for moving objects.

The symposium served as a forum for disseminating research in spatial and temporal data management, and for maximizing the interchange of knowledge among researchers from the established spatial and temporal database communities. The exchange of research ideas and results not only contributes to the academic arena, but also benefits the user and commercial communities.

SSTD 2001 was the seventh in the series of symposia that started in Santa Barbara a dozen years ago and has since been held every two years, in Zurich, Singapore, Portland (Maine), Berlin, and Hong Kong. By 1999, the series had become well established as the premier international forum devoted solely to spatial database management, and it was decided to extend the scope of the series to also cover temporal database management. This extended scope was chosen due, in part, to the increasing importance of research that considers spatial and temporal aspects jointly.

The call for papers attracted 70 submissions, which were submitted by authors from 18 countries and 5 continents, clearly indicating the international nature of the research area and the symposium. The number of submissions represents a 30% increase over the previous two symposia. The program committee selected 25 research papers and two industrial papers for presentation and discussion at the symposium and inclusion in these proceedings.

The papers in this volume cover diverse aspects of the management of spatial, temporal, and spatio-temporal data. We were delighted by the large number of high-quality papers in the relatively new area of spatio-temporal databases. In particular, aspects of database management for moving objects – including modeling and querying, data representation, and query processing techniques – were covered by papers in four sessions. One session was dedicated to spatial data warehousing and mining, which is also a new, emerging topic. As well as these contributions, the sessions of the symposium also included excellent contributions on important, classical subjects, such as indexing, storage structures, cost estimation, and other query processing techniques. In addition to the research sessions, an industrial session described developments at two of the dominant vendors in the area of the symposium.

Although not covered in these proceedings, the symposium also featured four tutorials, three of which were given by speakers from industry. Each tutorial covered emerging technologies in the symposium's area: mobile e-services, spatial and temporal data mining, the emerging Geography Markup Language and other

standardization developments, and the current and future spatial features in the products of a major database vendor. A panel discussed one of the hot topics in the area of spatio-temporal databases, namely that of experimental evaluation of query processing techniques. Robert Abarbanel from the Boeing Company gave an engaging keynote speech that explored advanced uses of spatio-temporal data and consequent research challenges.

Putting together this symposium was a team effort. Special thanks go to the members of the program committee, and the external reviewers they enlisted, for their hard and diligent work. As a reflection of their dedication, almost all the reviews arrived on time. A discussion phase after the initial reviewing aimed to understand and possibly resolve diverging reviews; this phase proceeded effortlessly, with each program committee member taking an active part.

Dieter Pfoser managed the technical aspects of the fully electronic reviewing process with dedication; he handled the receiving of submitted papers and their subsequent distribution to the reviewers; and he customized and managed the software for receiving reviews. Alfred Hofmann at Springer-Verlag lent us his professional help.

The members of the "local" team of organizers at the University of California, Riverside, deserve much credit for their essential contribution. Marios Hadjieleftheriou established and maintained an impressive Web presence for SSTD 2001, and Donghui Zhang managed the registration process. Furthermore we would like to thank Joyce Akhtarkhavari, Jessica Lin, Eilene Montoya, Dimitris Papadopoulos, Terri Phonharath, and Michalis Vlachos for their help at various stages of the SSTD organization.

The symposium was sponsored by ESRI and Microsoft, and it was held in cooperation with the US National Center for Geographic Information and Analysis and the University of California, Riverside. We thank these organizations for their support.

April 2001   Christian S. Jensen
                                                     Markus Schneider
                                                     Bernhard Seeger
                                                     Vassilis J. Tsotras

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