

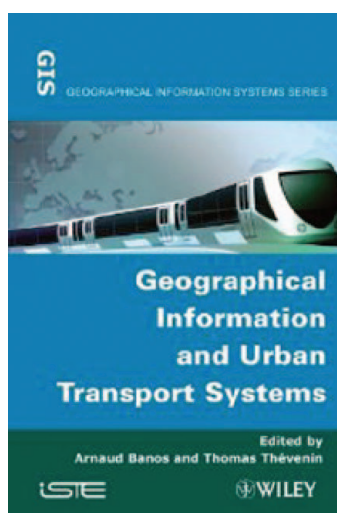


Review of the Book *Geographical and Urban Transport Systems*

Geographical Information and Urban Transport Systems is edited by Arnaud Banos and Thomas Thevenin. The book attempts to connect three major dimensions: supply, demand and finally the negative aspects or the main risks associated with transportation systems. Each chapter of this short collection of authoritative works is written by experts in their fields, and each deals with issues of transportation systems that fall into the above-mentioned three dimensions. The book is organized in two separated parts with 4 chapters in the first one and 3 chapters in the second. The parts are entitled “Characterizing transport supply” and “Estimating transport demands” respectively. Part 1 deals with the characterization of transport supply. The four chapters within it, paint a detailed picture of the technological and methodological investment needed in order to accurately describe transport supply in urban areas.

In Chapter 1, which is entitled “Modelling on an Intra-Urban Scale,” Thomas Thévenin analyzes the problem of dispersion and the lack of interoperability of data-bases used within transport domains. The author proposes a model with temporal and spatial

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data, providing specific information which is organized and structured on the “GIS-Transport” (GIS-T). The chapter also offers a brief discussion on evolutionary perspectives of GIS-T.

Chapter 2 “Determining Urban Public Transport Supply” is written by Robert Chapleau. The author shows how to model public

transport in order to describe it adequately, in terms of its spatial, temporal, static and dynamic components. As an example, Chapleau describes the urban community of Machiaville, which is a fictional region without time limitations. The model then is applied to real cities showing that the urban public transport supply is mostly a communication problem between individuals, practices, software and objects.

Alexis Conesa and Alain L’Hostis define multimodal and intermodal accessibility, by introducing travel time accessibility in chapter 3 “Defining Intermodal Accessibility.” The authors underline that the two aspects with regard to accessibility, such as the station-temporal constraints and transport network performance are quite critical. The chapter indicates that databases with traveling information using graphs provide a vital and realistic representation of mobility conditions.

Part 1 ends with chapter 4 “Characterizing Form and Functioning of Transportation Networks,” written by Cyrille Genre-Grandpierre. The author points out the precautions needed to be taken regarding to characterization form and functioning of transportation networks that were discussed in the previous chapters. The main goal is to inspire the reader to continuously ask himself/herself

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Christos-Nikolaos E. Anagnostopoulos was born in Athens, Greece in 1975. He received his Mechanical Engineering Diploma from the National Technical University of Athens (NTUA) in 1998, and the Ph.D. degree from the Electrical and Computer Engineering Dpt., NTUA in 2002.

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questions related to possibilities of building networks which, through their form and functioning, contribute to the scope of durability.

Part 2 describes how we can define accurately the real and the desired mobility on the scale of a city or community. Chapters 5, 6 and 7 confront this difficult question, using three complementary angles of approach.

Chapter 5 “Estimating Transport Demand” provides specific knowledge regarding the mobility tools implemented for transport demand and for transportation planning. Patrick Bonnel gives to the reader a broad and thorough review of the

methods used to estimate demands for transport in urban environments, including advantages and limitations. The chapter highlights the difference of the simulation from the forecasting models, emphasizing that the model is a tool used to analyze the problem of dynamics.

Chapter 6 “Visualizing Daily Mobility” is written by Olivier Klein. This chapter brings GIS at play describing other modes of representation. Using the latest technologies we can place images, animations, symbols, algorithmic visualizations and cartographic databases in a broad architecture in order to build

modern Geographical Information Systems and global visualizations for urban dynamics.

Finally, chapter 7 “Guiding a Tram-Train Installation” summarizes the outcomes of the tram-train project around the French region of Grenoble. Olivier Bouhet denotes the success of the project, when this is fed with geographical data correctly from multiple and heterogeneous sources. The chapter ends with the indication that tram-train develop a new line of thinking in order to manage mobility on behalf of public transport in agglomerations and their peri-urban zones.

Our daily life heavily depends on large scale urban transportation systems, which nowadays incorporate logistics, urban planning, infrastructure engineering, environmental science, transportation networks, transport modeling in conjunction with Geographical Information Systems. This easy-to-read book is of considerable interest to students, engineers and researchers that seek answers and good practices in applications that engage GIS and urban transport.

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2013 IEEE Medal for Environmental and Safety Technologies

TSUNEO TAKAHASHI (MIEEE)—President, NF Corporation, Yokohama, Japan, was awarded the 2013 IEEE Medal for Environmental and Safety Technologies, for outstanding accomplishments in the application of technology in the fields of interest to IEEE that improve the environment and/or public safety, sponsored by *Toyota Motor Corporation*. The citation on the award is “For pioneering the development of navigation technology in automobiles.” The medal came with an honorarium of US\$20,000, and Mr. Takahashi has graciously gifted that money back to the IEEE Intelligent Transportation Systems Society.

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