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TELEGEOINFORMATICS

Location-Based Computing and Services

Hassan A. Karimi

UNIVERSITY OF PITTSBURGH, PENNSYLVANIA, USA

Amin Hammad

CONCORDIA UNIVERSITY, MONTREAL, QUEBEC, CANADA



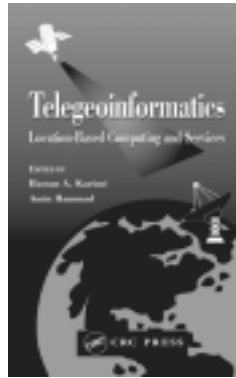
Telegeoinformatics is a new discipline resulting from the integration of mobile computing with wired and wireless communications, geoinformatics (including GIS and GPS), and remote sensing techniques and technologies. Users of telegeoinformatics from every field will need a comprehensive reference to solve multiple types of problems involving location information.

Telegeoinformatics: Location-Based Computing and Services helps readers with different backgrounds and expertise to learn the fundamentals and intricacies of telegeoinformatics.

The book is divided into three parts: Theories and Technologies; Integrated Data and Technologies; and Applications. These sections are broken down into chapters, each of which addresses a topic crucial to the understanding of telegeoinformatics. Authors who are experts in one or more related subject areas contributed these chapters.

This volume covers the concepts and technologies related to GIS and geoprocessing, remote sensing, the GPS, and wireless systems. It also explores the main issues of integrated data and technologies in Location-Based Computing (LBC), Location-Based Services (LBS), mediated reality, and mobile augmented reality systems. The final part discusses applications of telegeoinformatics in emergency response, mobile inspection data collection, and Intelligent Transportation Systems (ITS).

The chapters in this book can be read in any order depending upon your interest, and cross-referencing among chapters can be used to transition to other subjects as needed. The information in this volume will fuel ongoing understanding of and advances in applications including transportation, utilities, environmental studies, navigation, planning, and emergency response.



FEATURES

- Provides an introduction to telegeoinformatics, with a discussion of new capabilities such as predictive computing and adaptation
- Explores the theories and technologies related to GIS and geoprocessing, remote sensing, GPS, and wireless communication systems
- Covers the main issues related to integrated data and technologies in LBC, LBS, mediated reality, and mobile augmented reality systems
- Analyzes some wearable systems and vision-based head tracking technology
- Examines applications of telegeoinformatics in emergency response systems (ERS), mobile inspection data collection systems, and ITS
- Discusses the potential and limitations of a mobile data collection system for civil engineering through a prototype system tested in a case study
- Predicts the impact and penetration of LBS

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APPLICATIONS

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Location-based computing for infrastructure field tasks

The role of telegeoinformatics in ITS

The impact and penetration of location-based services

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