

## Navteq User Manual

Pro Oracle Spatial for Oracle Database 11g Airport Passenger Terminal Planning and Design: Guidebook Transforming Global Information and Communication Markets The One Decision Mapping and the Citizen Sensor OR/MS Today Urbanism on Track Geospatial Technologies for Local and Regional Development Geocomputation with R Human-Computer Interaction: Interaction Modalities and Techniques Using the Phone Book The Social Media Reader Release 2.0: Sun Up, Sun Down Volunteered Geographic Information and the Future of Geospatial Data Out of Office Workforce Needs in Veterinary Medicine Infectious Disease Surveillance Unlocking Agility Quick Start Guide to Oracle Query Tuning: Tips for DBAs and Developers ITS Pilot Project Demonstration Program Summary Report Tour Book Windows 10: The Missing Manual Manual of Digital Earth PC Magazine Motor Carriers Road Atlas Bastard Culture! Crowdsourcing Geographic Knowledge Ajax, Rich Internet Applications, and Web Development for Programmers Mobile Screens Geospatial Health Data Integration of Information and Optimization Models for Routing in City Logistics Autonomous Driving Advancing Geoinformation Science for a Changing World The Multi-Agent Transport Simulation MATSim GPS For Dummies Manual of Geospatial Science and Technology The Car Hacker's Handbook European Handbook of Crowdsourced Geographic Information Future U.S. Workforce for Geospatial Intelligence

### Pro Oracle Spatial for Oracle Database 11g

Following in the tradition of its popular predecessor, the Manual of Geospatial Science and Technology, Second Edition continues to be the authoritative volume that covers all aspects of the field, both basic and applied, and includes a focus on initiating, planning, and managing GIS projects. This comprehensive resource, which contains contributio

### Airport Passenger Terminal Planning and Design: Guidebook

Why make New Year's resolutions you know you won't keep? According to seminar leader and cofounder of the Wright Institute, Judith Wright, there are any number of ways you can better your life—you can quit smoking, start exercising, save toward a bigger house—but the attainment of real life satisfaction requires a fundamental shift in perspective, the ability to make the One Decision that will completely transform the fabric of one's life. This powerful book demonstrates how to isolate and articulate the One Decision that will lead to the life you want to live, and how to allow this simple yet profound choice to become the guiding force in everything you do. Follow the "30 Days to Your One Decision" program at the end of the book and watch your life transform for the better . . . forever.

### Transforming Global Information and Communication Markets

Now available in paperback— Pro Oracle Spatial for Oracle Database 11g shows how to take advantage of Oracle Databases built-in feature set for working with location-based data. A great deal of the information used in business today is associated with location in some way, and analysis of that data is becoming ever

more important in today's mobile and highly connected world. In *Pro Oracle Spatial for Oracle Database 11g*, authors Ravi Kothuri and Albert Godfrind address: The special nature of spatial data and its role in professional and consumer applications Issues in spatial data management such as modeling, storing, accessing, and analyzing spatial data The Oracle Spatial solution and the integration of spatial data into enterprise databases How spatial information is used to understand business and support decisions, to manage customer relations, and to better serve private and corporate users When you read *Pro Oracle Spatial for Oracle Database 11g*, you're learning from the very best. Ravi Kothuri is a key member of Oracle's Spatial development team. Albert Godfrind consults widely with Oracle clients on the implementation of Oracle Spatial, develops training courses, and presents frequently at conferences. Together they have crafted a technically sound and authoritative fountain of information on working with spatial data in the Oracle database.

### **The One Decision**

This book focuses on the study of the remarkable new source of geographic information that has become available in the form of user-generated content accessible over the Internet through mobile and Web applications. The exploitation, integration and application of these sources, termed volunteered geographic information (VGI) or crowdsourced geographic information (CGI), offer scientists an unprecedented opportunity to conduct research on a variety of topics at multiple scales and for diversified objectives. The Handbook is organized in five parts, addressing the fundamental questions: What motivates citizens to provide such information in the public domain, and what factors govern/predict its validity? What methods might be used to validate such information? Can VGI be framed within the larger domain of sensor networks, in which inert and static sensors are replaced or combined by intelligent and mobile humans equipped with sensing devices? What limitations are imposed on VGI by differential access to broadband Internet, mobile phones, and other communication technologies, and by concerns over privacy? How do VGI and crowdsourcing enable innovation applications to benefit human society? Chapters examine how crowdsourcing techniques and methods, and the VGI phenomenon, have motivated a multidisciplinary research community to identify both fields of applications and quality criteria depending on the use of VGI. Besides harvesting tools and storage of these data, research has paid remarkable attention to these information resources, in an age when information and participation is one of the most important drivers of development. The collection opens questions and points to new research directions in addition to the findings that each of the authors demonstrates. Despite rapid progress in VGI research, this Handbook also shows that there are technical, social, political and methodological challenges that require further studies and research.

### **Mapping and the Citizen Sensor**

Modern cars are more computerized than ever. Infotainment and navigation systems, Wi-Fi, automatic software updates, and other innovations aim to make driving more convenient. But vehicle technologies haven't kept pace with today's more hostile security environment, leaving millions vulnerable to attack. The *Car Hacker's Handbook* will give you a deeper understanding of the computer systems

and embedded software in modern vehicles. It begins by examining vulnerabilities and providing detailed explanations of communications over the CAN bus and between devices and systems. Then, once you have an understanding of a vehicle's communication network, you'll learn how to intercept data and perform specific hacks to track vehicles, unlock doors, glitch engines, flood communication, and more. With a focus on low-cost, open source hacking tools such as Metasploit, Wireshark, Kayak, can-utils, and ChipWhisperer, The Car Hacker's Handbook will show you how to:

- Build an accurate threat model for your vehicle
- Reverse engineer the CAN bus to fake engine signals
- Exploit vulnerabilities in diagnostic and data-logging systems
- Hack the ECU and other firmware and embedded systems
- Feed exploits through infotainment and vehicle-to-vehicle communication systems
- Override factory settings with performance-tuning techniques
- Build physical and virtual test benches to try out exploits safely

If you're curious about automotive security and have the urge to hack a two-ton computer, make The Car Hacker's Handbook your first stop.

### **OR/MS Today**

Practical Guidance and Inspiration for Launching, Sustaining, or Improving Any Agile Enterprise Transformation Initiative As long-time competitive advantages disappear, astute executives and change agents know they must achieve true agile transformation. In *Unlocking Agility*, Jorgen Hesselberg reveals what works, what doesn't, and how to overcome the daunting obstacles. Distilling 10+ years of experience leading agile transformation in the enterprise, Hesselberg guides you on jumpstarting change, sustaining momentum, and executing superbly on customer commitments as you move forward. He helps you identify appropriate roles for consultants, optimize organizational structures, set realistic expectations, and measure against them. He shares first-hand accounts from pioneering transformation leaders at firms including Intel, Nokia, Salesforce.com, Spotify, and many more.

- Balance building the right thing, the right way, at the right speed
- Design a holistic transformation strategy using five dimensions of agility: Technology, Organizational Design, People, Leadership, and Culture
- Promote agile skills, knowledge, and abilities throughout your workforce
- Incorporate powerful leadership models, including Level 5, Teal, and Beyond Budgeting
- Leverage business agility metrics to affect norms and change organizational culture
- Establish your Agile Working Group, the engine of agile transformation
- Define operating models and strategic roadmaps for unlocking agility, and track your progress

You already know agile transformation is essential. Now, discover how to customize your strategy, execute on it in your environment, and achieve it.

### **Urbanism on Track**

This fully updated edition of *Infectious Disease Surveillance* is for frontline public health practitioners, epidemiologists, and clinical microbiologists who are engaged in communicable disease control. It is also a foundational text for trainees in public health, applied epidemiology, postgraduate medicine and nursing programs. The second edition portrays both the conceptual framework and practical aspects of infectious disease surveillance. It is a comprehensive resource designed to improve the tracking of infectious diseases and to serve as a starting point in the development of new surveillance systems. *Infectious Disease Surveillance*

includes over 45 chapters from over 100 contributors, and topics organized into six sections based on major themes. Section One highlights the critical role surveillance plays in public health and it provides an overview of the current International Health Regulations (2005) in addition to successes and challenges in infectious disease eradication. Section Two describes surveillance systems based on logical program areas such as foodborne illnesses, vector-borne diseases, sexually transmitted diseases, viral hepatitis healthcare and transplantation associated infections. Attention is devoted to programs for monitoring unexplained deaths, agents of bioterrorism, mass gatherings, and disease associated with international travel. Sections Three and Four explore the uses of the Internet and wireless technologies to advance infectious disease surveillance in various settings with emphasis on best practices based on deployed systems. They also address molecular laboratory methods, and statistical and geospatial analysis, and evaluation of systems for early epidemic detection. Sections Five and Six discuss legal and ethical considerations, communication strategies and applied epidemiology-training programs. The rest of the chapters offer public-private partnerships, as well lessons from the 2009-2010 H1N1 influenza pandemic and future directions for infectious disease surveillance.

## **Geospatial Technologies for Local and Regional Development**

### **Geocomputation with R**

Need directions? Are you good at getting lost? Then GPS is just the technology you've dreamed of, and GPS For Dummies is what you need to help you make the most of it. If you have a GPS unit or plan to buy one, GPS For Dummies, 2nd Edition helps you compare GPS technologies, units, and uses. You'll find out how to create and use digital maps and learn about waypoints, tracks, coordinate systems, and other key points to using GPS technology. Get more from your GPS device by learning to use Web-hosted mapping services and even how to turn your cell phone or PDA into a GPS receiver. You'll also discover: Up-to-date information on the capabilities of popular handheld and automotive Global Positioning Systems How to read a map and how to get more from the free maps available online The capabilities and limitations of GPS technology, and how satellites and radio systems make GPS work How to interface your GPS receiver with your computer and what digital mapping software can offer Why a cell phone with GPS capability isn't the same as a GPS unit What can affect your GPS reading and how accurate it will be How to use Street Atlas USA, TopoFusion, Google Earth, and other tools Fun things to do with GPS, such as exploring topographical maps, aerial imagery, and the sport of geocaching Most GPS receivers do much more than their owners realize. With GPS For Dummies, 2nd Edition in hand, you'll venture forth with confidence!

### **Human-Computer Interaction: Interaction Modalities and Techniques**

### **Using the Phone Book**

Offering an in-depth exploration of AJAX technologies, this book is ideal for programmers with or without a Web programming background. It provides readers with a detailed code-rich walkthrough on writing AJAX programs, and introduces key AJAX techniques and program models.

## **The Social Media Reader**

### **Release 2.0:**

Innovation in information and communication technology (ICT) fuels the growth of the global economy. How ICT markets evolve depends on politics and policy, and since the 1950s periodic overhauls of ICT policy have transformed competition and innovation. For example, in the 1980s and the 1990s a revolution in communication policy (the introduction of sweeping competition) also transformed the information market. Today, the diffusion of Internet, wireless, and broadband technology, growing modularity in the design of technologies, distributed computing infrastructures, and rapidly changing business models signal another shift. This pathbreaking examination of ICT from a political economy perspective argues that continued rapid innovation and economic growth require new approaches in global governance that will reconcile diverse interests and enable competition to flourish. The authors (two of whom were architects of international ICT policy reforms in the 1990s) discuss this crucial turning point in both theoretical and practical terms.

## **Sun Up, Sun Down**

## **Volunteered Geographic Information and the Future of Geospatial Data**

Describes the characteristics of the sun and the ways in which it regulates life on earth.

## **Out of Office**

Geocomputation with R is for people who want to analyze, visualize and model geographic data with open source software. It is based on R, a statistical programming language that has powerful data processing, visualization, and geospatial capabilities. The book equips you with the knowledge and skills to tackle a wide range of issues manifested in geographic data, including those with scientific, societal, and environmental implications. This book will interest people from many backgrounds, especially Geographic Information Systems (GIS) users interested in applying their domain-specific knowledge in a powerful open source language for data science, and R users interested in extending their skills to handle spatial data. The book is divided into three parts: (I) Foundations, aimed at getting you up-to-speed with geographic data in R, (II) extensions, which covers advanced techniques, and (III) applications to real-world problems. The chapters cover progressively more advanced topics, with early chapters providing strong

foundations on which the later chapters build. Part I describes the nature of spatial datasets in R and methods for manipulating them. It also covers geographic data import/export and transforming coordinate reference systems. Part II represents methods that build on these foundations. It covers advanced map making (including web mapping), "bridges" to GIS, sharing reproducible code, and how to do cross-validation in the presence of spatial autocorrelation. Part III applies the knowledge gained to tackle real-world problems, including representing and modeling transport systems, finding optimal locations for stores or services, and ecological modeling. Exercises at the end of each chapter give you the skills needed to tackle a range of geospatial problems. Solutions for each chapter and supplementary materials providing extended examples are available at <https://geocompr.github.io/geocompkg/articles/>. Dr. Robin Lovelace is a University Academic Fellow at the University of Leeds, where he has taught R for geographic research over many years, with a focus on transport systems. Dr. Jakub Nowosad is an Assistant Professor in the Department of Geoinformation at the Adam Mickiewicz University in Poznan, where his focus is on the analysis of large datasets to understand environmental processes. Dr. Jannes Muenchow is a Postdoctoral Researcher in the GIScience Department at the University of Jena, where he develops and teaches a range of geographic methods, with a focus on ecological modeling, statistical geocomputing, and predictive mapping. All three are active developers and work on a number of R packages, including `stplanr`, `sabre`, and `RQGIS`.

## Workforce Needs in Veterinary Medicine

The MATSim (Multi-Agent Transport Simulation) software project was started around 2006 with the goal of generating traffic and congestion patterns by following individual synthetic travelers through their daily or weekly activity programme. It has since then evolved from a collection of stand-alone C++ programs to an integrated Java-based framework which is publicly hosted, open-source available, automatically regression tested. It is currently used by about 40 groups throughout the world. This book takes stock of the current status. The first part of the book gives an introduction to the most important concepts, with the intention of enabling a potential user to set up and run basic simulations. The second part of the book describes how the basic functionality can be extended, for example by adding schedule-based public transit, electric or autonomous cars, paratransit, or within-day replanning. For each extension, the text provides pointers to the additional documentation and to the code base. It is also discussed how people with appropriate Java programming skills can write their own extensions, and plug them into the MATSim core. The project has started from the basic idea that traffic is a consequence of human behavior, and thus humans and their behavior should be the starting point of all modelling, and with the intuition that when simulations with 100 million particles are possible in computational physics, then behavior-oriented simulations with 10 million travelers should be possible in travel behavior research. The initial implementations thus combined concepts from computational physics and complex adaptive systems with concepts from travel behavior research. The third part of the book looks at theoretical concepts that are able to describe important aspects of the simulation system; for example, under certain conditions the code becomes a Monte Carlo engine sampling from a discrete choice model. Another important aspect is the

interpretation of the MATSim score as utility in the microeconomic sense, opening up a connection to benefit cost analysis. Finally, the book collects use cases as they have been undertaken with MATSim. All current users of MATSim were invited to submit their work, and many followed with sometimes crisp and short and sometimes longer contributions, always with pointers to additional references. We hope that the book will become an invitation to explore, to build and to extend agent-based modeling of travel behavior from the stable and well tested core of MATSim documented here.

## **Infectious Disease Surveillance**

TRB's Airport Cooperative Research Program (ACRP) Report 25, Airport Passenger Terminal Planning and Design comprises a guidebook, spreadsheet models, and a user's guide in two volumes and a CD-ROM intended to provide guidance in planning and developing airport passenger terminals and to assist users in analyzing common issues related to airport terminal planning and design. Volume 1 of ACRP Report 25 explores the passenger terminal planning process and provides, in a single reference document, the important criteria and requirements needed to help address emerging trends and develop potential solutions for airport passenger terminals. Volume 1 addresses the airside, terminal building, and landside components of the terminal complex. Volume 2 of ACRP Report 25 consists of a CD-ROM containing 11 spreadsheet models, which include practical learning exercises and several airport-specific sample data sets to assist users in determining appropriate model inputs for their situations, and a user's guide to assist the user in the correct use of each model. The models on the CD-ROM include such aspects of terminal planning as design hour determination, gate demand, check-in and passenger and baggage screening, which require complex analyses to support planning decisions. The CD-ROM is also available for download from TRB's website as an ISO image.

## **Unlocking Agility**

With the rise of web 2.0 and social media platforms taking over vast tracts of territory on the internet, the media landscape has shifted drastically in the past 20 years, transforming previously stable relationships between media creators and consumers. The Social Media Reader is the first collection to address the collective transformation with pieces on social media, peer production, copyright politics, and other aspects of contemporary internet culture from all the major thinkers in the field. Culling a broad range and incorporating different styles of scholarship from foundational pieces and published articles to unpublished pieces, journalistic accounts, personal narratives from blogs, and whitepapers, The Social Media Reader promises to be an essential text, with contributions from Lawrence Lessig, Henry Jenkins, Clay Shirky, Tim O'Reilly, Chris Anderson, Yochai Benkler, danah boyd, and Fred von Loehmann, to name a few. It covers a wide-ranging topical terrain, much like the internet itself, with particular emphasis on collaboration and sharing, the politics of social media and social networking, Free Culture and copyright politics, and labor and ownership. Theorizing new models of collaboration, identity, commerce, copyright, ownership, and labor, these essays outline possibilities for cultural democracy that arise when the formerly passive audience becomes active cultural creators, while warning of the dystopian

potential of new forms of surveillance and control.

## **Quick Start Guide to Oracle Query Tuning: Tips for Dbas and Developers**

Road maps are accompanied by information on federally-designated routes and trucking restrictions.

## **ITS Pilot Project Demonstration Program Summary Report**

The five-volume set LNCS 8004--8008 constitutes the refereed proceedings of the 15th International Conference on Human-Computer Interaction, HCII 2013, held in Las Vegas, NV, USA in July 2013. The total of 1666 papers and 303 posters presented at the HCII 2013 conferences was carefully reviewed and selected from 5210 submissions. These papers address the latest research and development efforts and highlight the human aspects of design and use of computing systems. The papers accepted for presentation thoroughly cover the entire field of human-computer interaction, addressing major advances in knowledge and effective use of computers in a variety of application areas. This volume contains papers in the thematic area of human-computer interaction, addressing the following major topics: speech, natural language and auditory interfaces; gesture and eye-gaze based Interaction; touch-based interaction; haptic interaction; graphical user interfaces and visualisation.

## **Tour Book**

The U.S. veterinary medical profession contributes to society in diverse ways, from developing drugs and protecting the food supply to treating companion animals and investigating animal diseases in the wild. In a study of the issues related to the veterinary medical workforce, including demographics, workforce supply, trends affecting job availability, and capacity of the educational system to fill future demands, a National Research Council committee found that the profession faces important challenges in maintaining the economic sustainability of veterinary practice and education, building its scholarly foundations, and evolving veterinary service to meet changing societal needs. Many concerns about the profession came into focus following the outbreak of West Nile fever in 1999, and the subsequent outbreaks of SARS, monkeypox, bovine spongiform encephalopathy, highly pathogenic avian influenza, H1N1 influenza, and a variety of food safety and environmental issues heightened public concerns. They also raised further questions about the directions of veterinary medicine and the capacity of public health service the profession provides both in the United States and abroad. To address some of the problems facing the veterinary profession, greater public and private support for education and research in veterinary medicine is needed. The public, policymakers, and even medical professionals are frequently unaware of how veterinary medicine fundamentally supports both animal and human health and well-being. This report seeks to broaden the public's understanding and attempts to anticipate some of the needs and measures that are essential for the profession to fulfill given its changing roles in the 21st century.



## **Windows 10: The Missing Manual**

This book includes the full research papers accepted by the scientific programme committee for the 22nd AGILE Conference on Geographic Information Science, held in June 2019 at Cyprus University of Technology, Limassol, Cyprus. It is intended primarily for professionals and researchers in geographic information science, as well as those in related fields in which geoinformation application plays a significant role.

## **Manual of Digital Earth**

## **PC Magazine**

The book comprises innovative research presented at the 14th Conference of the Association of Geographic Information Laboratories in Europe (AGILE), held in 2011 in Utrecht, The Netherlands. The scientific papers cover a large variety of fundamental research topics as well as applied research in Geoinformation Science including measuring spatiotemporal phenomena, quality and semantics, spatiotemporal analysis, modeling and decision support as well as spatial information infrastructures. The book is aimed at researchers, practitioners and students who work in various fields and disciplines related to Geoinformation Science and technology.

## **Motor Carriers Road Atlas**

This open access book offers a summary of the development of Digital Earth over the past twenty years. By reviewing the initial vision of Digital Earth, the evolution of that vision, the relevant key technologies, and the role of Digital Earth in helping people respond to global challenges, this publication reveals how and why Digital Earth is becoming vital for acquiring, processing, analysing and mining the rapidly growing volume of global data sets about the Earth. The main aspects of Digital Earth covered here include: Digital Earth platforms, remote sensing and navigation satellites, processing and visualizing geospatial information, geospatial information infrastructures, big data and cloud computing, transformation and zooming, artificial intelligence, Internet of Things, and social media. Moreover, the book covers in detail the multi-layered/multi-faceted roles of Digital Earth in response to sustainable development goals, climate changes, and mitigating disasters, the applications of Digital Earth (such as digital city and digital heritage), the citizen science in support of Digital Earth, the economic value of Digital Earth, and so on. This book also reviews the regional and national development of Digital Earth around the world, and discusses the role and effect of education and ethics. Lastly, it concludes with a summary of the challenges and forecasts the future trends of Digital Earth. By sharing case studies and a broad range of general and scientific insights into the science and technology of Digital Earth, this book offers an essential introduction for an ever-growing international audience.

## **Bastard Culture!**

With Windows 8, Microsoft completely reimagined the graphical user interface for its operating system, which now runs on both desktop PCs and tablets, but the overhaul was not without hitches and its dueling UIs (one designed for touch, the other for keyboards and mice) created significant confusion for users. Windows 10 (a free update to users of Windows 8 or Windows 7) fixes a number of the problems introduced by the revolution in Windows 8 and offers plenty of new features along, such as the new Spartan web browser, Cortana voice-activated “personal assistant,” new universal apps (that run on tablet, phone, and computer), and more. But to really get the most out of the new operating system, you’re going to need a guide. Thankfully, *Windows 10: The Missing Manual* will be there to help. Like its predecessors, this book from the founder of Yahoo Tech, previous New York Times columnist, bestselling author, and Missing Manuals creator David Pogue illuminates its subject with technical insight, plenty of wit, and hardnosed objectivity for beginners, veteran standalone PC users, new tablet owners, and those who know their way around a network.

### **Crowdsourcing Geographic Knowledge**

Geographic data is a valuable source of information in modern society. By utilizing alternative sources of this data, the availability and potential applications of geographic information systems can be increased. *Volunteered Geographic Information and the Future of Geospatial Data* is a pivotal reference source for the latest scholarly research on information gathering from volunteers, as opposed to official agencies and private companies, to compile geospatial data. Highlighting a range of pertinent topics such as regional landscape mapping, road safety, and land usage, this book is ideally designed for researchers, academics, students, professionals, and practitioners interested in the growing area of volunteered geographic information.

### **Ajax, Rich Internet Applications, and Web Development for Programmers**

This book takes a look at fully automated, autonomous vehicles and discusses many open questions: How can autonomous vehicles be integrated into the current transportation system with diverse users and human drivers? Where do automated vehicles fall under current legal frameworks? What risks are associated with automation and how will society respond to these risks? How will the marketplace react to automated vehicles and what changes may be necessary for companies? Experts from Germany and the United States define key societal, engineering, and mobility issues related to the automation of vehicles. They discuss the decisions programmers of automated vehicles must make to enable vehicles to perceive their environment, interact with other road users, and choose actions that may have ethical consequences. The authors further identify expectations and concerns that will form the basis for individual and societal acceptance of autonomous driving. While the safety benefits of such vehicles are tremendous, the authors demonstrate that these benefits will only be achieved if vehicles have an appropriate safety concept at the heart of their design. Realizing the potential of automated vehicles to reorganize traffic and transform mobility of people and goods requires similar care in the design of vehicles and networks. By covering all

of these topics, the book aims to provide a current, comprehensive, and scientifically sound treatment of the emerging field of "autonomous driving".

## **Mobile Screens**

The computer and particularly the Internet have been represented as enabling technologies, turning consumers into users and users into producers. The unfolding online cultural production by users has been framed enthusiastically as participatory culture. But while many studies of user activities and the use of the Internet tend to romanticize emerging media practices, this book steps beyond the usual framework and analyzes user participation in the context of accompanying popular and scholarly discourse, as well as the material aspects of design, and their relation to the practices of design and appropriation.

## **Geospatial Health Data**

The Geospatial Web (aka the GeoWeb) is a rapidly evolving Web 2.0 market of innovative data and software applications--including location-based services, social software, and even augmented reality--for both the web and mobile devices. Propelled by the new location-aware iPhone, the GeoWeb is hurtling into the mainstream. This special issue lays out the new generation of geo products and services, identify the major players, and show how your business can leverage the power of Where 2.0.

## **Integration of Information and Optimization Models for Routing in City Logistics**

Tracking technologies such as GPS, mobile phone tracking, video and RFID monitoring are rapidly becoming part of daily life. Technological progress offers huge possibilities for studying human activity patterns in time and space in new ways. Delft University of Technology (TU Delft) held an international expert meeting in early 2007 to investigate the current and future possibilities and limitations of the application of tracking technologies in urban design and spatial planning. This book is the result of that expert meeting.

## **Autonomous Driving**

The phenomenon of volunteered geographic information is part of a profound transformation in how geographic data, information, and knowledge are produced and circulated. By situating volunteered geographic information (VGI) in the context of big-data deluge and the data-intensive inquiry, the 20 chapters in this book explore both the theories and applications of crowdsourcing for geographic knowledge production with three sections focusing on 1). VGI, Public Participation, and Citizen Science; 2). Geographic Knowledge Production and Place Inference; and 3). Emerging Applications and New Challenges. This book argues that future progress in VGI research depends in large part on building strong linkages with diverse geographic scholarship. Contributors of this volume situate VGI research in geography's core concerns with space and place, and offer several ways of addressing persistent challenges of quality assurance in VGI. This book positions

VGI as part of a shift toward hybrid epistemologies, and potentially a fourth paradigm of data-intensive inquiry across the sciences. It also considers the implications of VGI and the exaflood for further time-space compression and new forms, degrees of digital inequality, the renewed importance of geography, and the role of crowdsourcing for geographic knowledge production.

## **Advancing Geoinformation Science for a Changing World**

Geospatial health data are essential to inform public health and policy. These data can be used to quantify disease burden, understand geographic and temporal patterns, identify risk factors, and measure inequalities. *Geospatial Health Data: Modeling and Visualization with R-INLA and Shiny* describes spatial and spatio-temporal statistical methods and visualization techniques to analyze georeferenced health data in R. The book covers the following topics: Manipulate and transform point, areal, and raster data, Bayesian hierarchical models for disease mapping using areal and geostatistical data, Fit and interpret spatial and spatio-temporal models with the Integrated Nested Laplace Approximations (INLA) and the Stochastic Partial Differential Equation (SPDE) approaches, Create interactive and static visualizations such as disease maps and time plots, Reproducible R Markdown reports, interactive dashboards, and Shiny web applications that facilitate the communication of insights to collaborators and policy makers. The book features fully reproducible examples of several disease and environmental applications using real-world data such as malaria in The Gambia, cancer in Scotland and USA, and air pollution in Spain. Examples in the book focus on health applications, but the approaches covered are also applicable to other fields that use georeferenced data including epidemiology, ecology, demography or criminology. The book provides clear descriptions of the R code for data importing, manipulation, modeling and visualization, as well as the interpretation of the results. This ensures contents are fully reproducible and accessible for students, researchers and practitioners.

## **The Multi-Agent Transport Simulation MATSim**

We live in a changing world with multiple and evolving threats to national security, including terrorism, asymmetrical warfare (conflicts between agents with different military powers or tactics), and social unrest. Visually depicting and assessing these threats using imagery and other geographically-referenced information is the mission of the National Geospatial-Intelligence Agency (NGA). As the nature of the threat evolves, so do the tools, knowledge, and skills needed to respond. The challenge for NGA is to maintain a workforce that can deal with evolving threats to national security, ongoing scientific and technological advances, and changing skills and expectations of workers. *Future U.S. Workforce for Geospatial Intelligence* assesses the supply of expertise in 10 geospatial intelligence (GEOINT) fields, including 5 traditional areas (geodesy and geophysics, photogrammetry, remote sensing, cartographic science, and geographic information systems and geospatial analysis) and 5 emerging areas that could improve geospatial intelligence (GEOINT fusion, crowdsourcing, human geography, visual analytics, and forecasting). The report also identifies gaps in expertise relative to NGA's needs and suggests ways to ensure an adequate supply of geospatial intelligence expertise over the next 20 years.

## **GPS For Dummies**

Maps are a fundamental resource in a diverse array of applications ranging from everyday activities, such as route planning through the legal demarcation of space to scientific studies, such as those seeking to understand biodiversity and inform the design of nature reserves for species conservation. For a map to have value, it should provide an accurate and timely representation of the phenomenon depicted and this can be a challenge in a dynamic world. Fortunately, mapping activities have benefitted greatly from recent advances in geoinformation technologies. Satellite remote sensing, for example, now offers unparalleled data acquisition and authoritative mapping agencies have developed systems for the routine production of maps in accordance with strict standards. Until recently, much mapping activity was in the exclusive realm of authoritative agencies but technological development has also allowed the rise of the amateur mapping community. The proliferation of inexpensive and highly mobile and location aware devices together with Web 2.0 technology have fostered the emergence of the citizen as a source of data. Mapping presently benefits from vast amounts of spatial data as well as people able to provide observations of geographic phenomena, which can inform map production, revision and evaluation. The great potential of these developments is, however, often limited by concerns. The latter span issues from the nature of the citizens through the way data are collected and shared to the quality and trustworthiness of the data. This book reports on some of the key issues connected with the use of citizen sensors in mapping. It arises from a European Co-operation in Science and Technology (COST) Action, which explored issues linked to topics ranging from citizen motivation, data acquisition, data quality and the use of citizen derived data in the production of maps that rival, and sometimes surpass, maps arising from authoritative agencies.

## **Manual of Geospatial Science and Technology**

"Nanna Verhoeff's new book is a must for anybody interested in visual culture and media theory. It offers a rich and stimulating theoretical account of the central dimension of our contemporary existence--interfacing and navigating both data and physical world through a variety of screens (game consoles, mobile phones, car interfaces, GPS devices, etc.). In the process of exploring these new screen practices, Verhoeff offers fresh perspectives on many of the key questions in media and new media studies as well as a number of new original theoretical concepts. As the first theoretical manual for the society of mobile screens, this book will become an essential reference for all future investigations of our mobile screen condition.--Lev Manovich."--Publisher's description.

## **The Car Hacker's Handbook**

## **European Handbook of Crowdsourced Geographic Information**

As urban congestion continues to be an ever increasing problem, routing in these settings has become an important area of operations research. This monograph provides cutting-edge research, utilizing the recent advances in technology, to

quantify the value of dynamic, time-dependent information for advanced vehicle routing in city logistics. The methodology of traffic data collection is enhanced by GPS based data collection, resulting in a comprehensive number of travel time records. Data Mining is also applied to derive dynamic information models as required by time-dependent optimization. Finally, well-known approaches of vehicle routing are adapted in order to handle dynamic information models. This book interweaves the usually distinct areas of traffic data collection, information retrieval and time-dependent optimization by an integrated methodological approach, which refers to synergies of Data Mining and Operations Research techniques by example of city logistics applications. These procedures will help improve the reliability of logistics services in congested urban areas.

### **Future U.S. Workforce for Geospatial Intelligence**

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