

Free epub Local government spatial information management Copy

this book places spatial data within the broader domain of information technology it while providing a comprehensive and coherent explanation of the guiding principles methods implementation and operational management of spatial databases within the workplace the text explains the key concepts issues and processes of spatial data implementation and provides a holistic management perspective this book contains state of the art research studies on the concepts theory processes and real world applications of geographical information systems gis in business its chapters are authored by many of the leading experts in applying gis and geospatial science to business the book utilizes a wide variety of approaches and methodologies including conceptual theory development research frameworks quantitative and qualitative methods case studies systems design dss theory and geospatial analysis combined with point of sale since relatively little research has been published on gis in business this book is pioneering and should be the principal compendium of the latest research in this area the book impacts not only the underlying definitions concepts and theories of gis in business and industry but its practice as well this book was inspired by the revolution in geographical information systems during the late 1970s and 1980s which introduced to many the concept of computer based information systems for spatially referenced data the map the aerial photograph and the satellite image were wedded to a database of textual information through the rapidly developing technology of powerful graphics workstations this brought the skills of the geographer to a wide range of disciplines and specialists but this book is not about the basic concepts of geographical information systems themselves it is not about hardware or software per se nor the integral concepts of geo referenced data handling built into such systems these are to be found in a growing number of introductory texts on the subject instead the focus of this book is on of geo information management the much wider issues while an understanding of the systems their capabilities and limitations is necessary of greater importance to the long term application of geographical understanding to problem solving is the wider context of information handling spatial data are becoming increasingly important in understanding the issues that confront the world chapter 1 is a discussion of the general issues which relate to management and information systems it concludes with review of spatial decision support systems which are of increasing importance to the gis community geographic information systems gis remote sensing and environmental modelling are increasingly being used to address land use and land use management issues although much of the development in these applications is based in specific case studies that are not readily accessible to a wide audience spatial information for land use management is d this book is an eclectic collection of articles written in english that explores the assimilation of spatial information technology sit such as remote sensing global positioning system geographic information system and maps to enhance and sustained the local knowledge the goal to sit integration is to make the invisible knowledge visible and beneficial to be used by others it is a technology that transfers the local knowledge from owners into the form of maps and analysis the maps play a key role in locating the presence of different local knowledge thus help stakeholders in future planning development and resource allocation the editors have chosen topics to embody the sit in multidisciplinary nature of local knowledge in this region this book draws on author s wealth of knowledge working on numerous projects across many countries it provides a clear overview of the development of the sdi concept and sdi worldwide implementation and brings a logical chronological approach to the linkage of gis technology with sdi enabling data the theory and practice approach help understand that sdi development and implementation is very much a social process of learning by doing the author masterfully selects main historical developments and updates them with an analytical perspective promoting informed and responsible use of geographic information and geospatial technologies for the benefit of society from local to global scales features subject matter spans thirty years of the development of gis and sdi brings a social science perspective into gis and sdi debates that have been largely dominated by technical considerations based on a world wide perspective as a result of the author s experience and research in the usa australia canada brazil peru china india korea malaysia and japan as well as most european countries draws upon professional and academic experience relating to pioneering uk and european gis research initiatives includes updated historical material with an analytical perspective explaining what was done right and what didn t work although interest in spatial decision support systems sds

continues to grow rapidly in a wide range of disciplines students planners managers and the research community have lacked a book that covers the fundamentals of sdss along with the advanced design concepts required for building sdss filling this need spatial decision support system this textbook aims to develop a scientific knowledge base on spatial information technology to communicate the united nations sustainable development goals sdgs among students researchers professionals and laymen the book improves understanding of the spatial database and explains how to extract information from this for planning purposes to enhance the knowledge of geoscientists and environmentalists the book describes the basic fundamental concepts to advance techniques for spatial data management and analysis and discusses the methodology the geographic information system gis remote sensing and global positioning system gps are presented in an integrated manner for the planning of resources and infrastructure the management of these systems is discussed in a very lucid way to develop the reader s skills the proper procedure for map making and spatial analysis are included along with case studies to the reader where the first part of the book discusses the conceptual background the second part deals with case studies using these applications in different disciplines the presented case studies include land use agriculture flood watershed characterization and infrastructure assessment for the sustainable development goals this introduction explains how to use geographical information systems gis both in practice and in principle with the turn of the century our ability to collect and store geospatial information has increased considerably this has resulted in ever increasing amounts of heterogeneous geospatial data an issue that poses new challenges and opportunities as these rich sources of data are made available users rely now more than ever on the geospatial data infrastructure the availability and accessibility of such data as well as the ability to effectively manage model index and query the data is becoming a cornerstone in numerous applications moreover the ability to formalize and represent data is becoming key to integration and interoperability with the introduction of distributed geospatial data infrastructure and the implementation of web based services the impact of such issues is becoming even more evident inspired by these challenges this book on next generation geospatial information offers a collection of original contributions from leading experts in spatial information modeling image processing and analysis database management ontologies and data mining it provides a unique insight into the current state of the art and future challenges in geospatial information through four thematic chapters each of which represents a primary research theme namely distributed spatial infrastructure image based geospatial information management indexing and querying geospatial databases and ontology and semantics for geospatial data spatial database management deals with the storage indexing and querying of data with spatial features such as location and geometric extent many applications require the efficient management of spatial data including geographic information systems computer aided design and location based services the goal of this book is to provide the reader with an overview of spatial data management technology with an emphasis on indexing and search techniques it first introduces spatial data models and queries and discusses the main issues of extending a database system to support spatial data it presents indexing approaches for spatial data with a focus on the r tree query evaluation and optimization techniques for the most popular spatial query types selections nearest neighbor search and spatial joins are portrayed for data in euclidean spaces and spatial networks the book concludes by demonstrating the ample application of spatial data management technology on a wide range of related application domains management of spatio temporal data and high dimensional feature vectors multi criteria ranking data mining and olap privacy preserving data publishing and spatial keyword search table of contents introduction spatial data indexing spatial query evaluation spatial networks applications of spatial data management technology exploit the advantages of geographic information systems in your business once the domain of cartographers and other specialists geographic information systems gis are increasingly being employed by the business community location based services supply chain management management of field distributed equipment geographical marketing and promotion and the spatial web are some of the current business applications which make use of gis principles written specifically for the businessperson geo business gis in the digital organization is the first book to provide comprehensive coverage of gis applications in the business and organizational environment going beyond a strictly geographical focus this book sets gis in the context of business information systems and other business sub disciplines such as logistics marketing finance and strategic management it presents from an organizational perspective the advantages of spatially enabling existing enterprise systems and illustrates how gis is applied in the real world through rigorous case study analyses of twenty companies including baystate health chico s kaiser permanente lamar

advertising company rand mcnally southern company sears roebuck and sperry van ness in this book you ll find out what gis is and how it can be integrated into your organization s existing information infrastructure how gis is currently making businesses better and how you can apply the same techniques to your industry or organization the expanding roles of gis and spatial technologies in the web and mobile environments the ethical legal and security issues of special technologies how to conduct a cost benefit and roi analyses for gis grounded in the real world of business and it geo business will show you how spatially enabling your it systems can give you a unique advantage to beat your competitors in the market win and retain customers grow your business make better decisions develop new products and services and optimize your workflow several emerging phenomena and technologies such as the increasing availability of open source software and the continuing evolution of distributed computing are introducing a new dynamic into information system development emerging spatial information systems and applications presents innovative spatial information systems that have been developed for a specific problem or decision making situation and discusses key concepts and theories underlying current spatial information systems as well as technology trends and emerging concepts that may impact spatial information system development and applications this title was first published in 2003 with the increasing use of gis in industrialised and developing countries the availability of spatial data has become an issue that affects many public and private sector organisations they are faced with the high cost and substantial effort involved in the generation of spatial data and so the sharing of this data is increasingly being seen as a way of overcoming expense and easing availability and access but this can provide a way of using gis effectively only if the key players involved in the use and supply of spatial data are willing to share this book employs a theory from social psychology as an organising framework to systematize the determinants of organisations spatial data sharing behaviour it develops a model which explains the likely willingness of key individuals within organisations to engage in spatial data exchanges across organisational boundaries and then tests this on a survey based in south africa as early pioneers in the use of digital geographic data many local governments in the uk were ahead of their counterparts in central government and the private sector in the application of gis technology to meet current challenges local authorities must coordinate the latest technology with effective information management strategies human and cultural issues and organizational structures and processes geographic information management in local government examines the factors that are necessary to ensure that real benefits are delivered from the improved availability of geographic information written by two practitioners with extensive government experience this four part book examines supporting technology the data that fuels it and the human factors that help or hinder successful gis implementation exploring the history of geographic information management in local government this volume offers a pragmatic overview of the subject and what local authorities need to do in order to be successful the introduction covers the emergence of geographic information management gim and gis in local government and explains why they are important part 2 explains the key elements of human and organizational issues data the technology toolbox gis selection and implementation and coordinating mechanisms part 3 provides in depth analyses of nine case studies on the use of technology by local uk authorities part 4 looks forward to the prospects and challenges for further gim by local governments decision makers such as government officials need to better understand human activity in order to make informed decisions with the ability to measure and explore geographic space through the use of geospatial intelligence data sources including imagery and mapping data they are better able to measure factors affecting the human population as a broad field of study geospatial research has applications in a variety of fields including military science environmental science civil engineering and space exploration geospatial intelligence concepts methodologies tools and applications explores multidisciplinary applications of geographic information systems to describe assess and visually depict physical features and to gather data information and knowledge regarding human activity highlighting a range of topics such as geovisualization spatial analysis and landscape mapping this multi volume book is ideally designed for data scientists engineers government agencies researchers and graduate level students in gis programs stress on natural resources has recently increased due to commercialization and the need to provide livelihoods for locals because they are such core parts of everyday life ensuring sustainability in resource management is of paramount importance only by integrating the tools of spatial information science can an effective course for preserving and protecting natural resources be created spatial information science for natural resource management is a pivotal reference source that explores coordinated approaches to sustainable development and management of natural resources to keep a balance of the environment ecology and

human livelihood featuring coverage on a wide range of topics including crop yield estimation ecosystem services and land information systems this book covers interdisciplinary techniques in monitoring and managing natural resources this publication is ideally designed for urban planners environmentalists policymakers ecologists researchers academicians students and professionals in the fields of remote sensing civil engineering social science computer science and information technology this book focuses on geospatial information in living spaces providing many examples of its collection and use as well as discussing the problems of how it is used and its future prospects geospatial information science is in the process of evolving and being systematized with the technical and usage aspects of the real world stimulating each other this book systematizes the technical aspects of positioning of geography which manages and represents what is measured in units of earth coordinates and of data science which aims to efficiently express and process geographic information all by introducing contemporary examples that are systematized with regard to their use in our living spaces examples of geospatial information used in almost all aspects of our lives including urban areas transportation disaster prevention health and medical care agriculture forestry and fisheries culture ecology and topography are presented along with examples of their use in each area one of the major features of this book is that it describes the use of data from earthquake disasters that is unique to japan as well as the use of open data and personal data in japan which is a trend that is gaining attention in many countries in this way the book systematically describes events and circumstances in living spaces that are revealed by the expression and analysis of geospatial data with case studies and discusses their use in the iot era shelving guide this book will present new research regarding the interdisciplinary applications of spatial information sciences for identification assessment monitoring and modeling issues related to natural resources and environmental management it will focus on the creation collection storage processing modeling interpretation display and dissemination of spatio temporal data which could greatly aid with environmental management issues including ecosystem change resource utilization land use management and environmental pollution the positive environmental impacts of information technology advancements with regard to global environmental and climate change will also be discussed features explains how geospatial information can best serve environmental management needs including ecosystem change resource utilization land use management and environmental pollution examines the environmental impacts of information technology advancements with regard to global environmental and climate change focuses on the creation collection storage processing modeling interpretation display and dissemination of environmental spatio temporal data presents examples of applications for spatial information sciences regarding the assessment monitoring and modeling of natural resources includes practical case studies in every chapter introdução aos sistemas de informação geográfica gis sensoriamento remoto input e output de dados qualidade e gerenciamento de dados funções de análise e implementação the role of property in fostering good governance robust economies and strong civil societies has received fresh attention in the wake of the collapse of communism the adoption of a market driven approach to the economy and the increasing impact of information technology some of these reforms have focused on a diverse package of measures dealing with land tenure security land and property transactions and access to credit they have also been concerned with supporting physical planning the sustainable management and control of land use and of natural resources and facilitating real property taxation as well there has been a growing awareness of the requirement to address such issues as the protection of the environment and the provision of land for all people whatever their gender but especially for the poor and ethnic minorities land administration provides a high level overview of recent advances in building formal property systems throughout the world and reviews the role of property in advancing a society s economic and social agenda it undertakes an in depth examination of the land administration infrastructure required to support these modern property systems giving particular attention to the survey registration valuation and land use control functions the text also provides an extended discussion of the information management challenges associate with the land administration field the proper management of geographic data can provide assistance to a number of different sectors within society as such it is imperative to continue advancing research for spatial data analysis the handbook of research on geographic information systems applications and advancements presents a thorough overview of the latest developments in effective management techniques for collecting processing analyzing and utilizing geographical data and information highlighting theoretical frameworks and relevant applications this book is an ideal reference source for researchers academics professionals and students actively involved in the field of geographic information systems transcript of papers from a ugc sponsored seminar held at dept of geography university of

delhi in feb 2003 with the turn of the century our ability to collect and store geospatial information has increased considerably this has resulted in ever increasing amounts of heterogeneous geospatial data an issue that poses new challenges and opportunities as these rich sources of data are made available users rely now more than ever on the geospatial data infrastructure the availability and accessibility of such data as well as the ability to effectively manage model index and query the data is becoming a cornerstone in numerous applications moreover the ability to formalize and represent data is becoming key to integration and interoperability with the introduction of distributed geospatial data infrastructure and the implementation of web based services the impact of such issues is becoming even more evident inspired by these challenges this book on next generation geospatial information offers a collection of original contributions from leading experts in spatial information modeling image processing and analysis database management ontologies and data mining it provides a unique insight into the current state of the art and future challenges in geospatial information through four thematic chapters each of which represents a primary research theme namely distributed spatial infrastructure image based geospatial information management indexing and querying geospatial databases and ontology and semantics for geospatial data resource management information systems remote sensing gis and modelling second edition provides you with the knowledge and skill necessary to design build implement and operate spatial resource management information systems for the management of physical resources this volume promotes the use of these technologies in a spatial context enabling you to apply information systems toward the management of resources in agriculture forestry land use planning valuation engineering and many additional fields a follow up to the first edition resource management information systems process and practice this book offers extensive revisions reflecting the rapidly evolving nature of the technologies needed to manage spatial resources this book draws on author s wealth of knowledge working on numerous projects across many countries it provides a clear overview of the development of the sdi concept and sdi worldwide implementation and brings a logical chronological approach to the linkage of gis technology with sdi enabling data the theory and practice approach help understand that sdi development and implementation is very much a social process of learning by doing the author masterfully selects main historical developments and updates them with an analytical perspective promoting informed and responsible use of geographic information and geospatial technologies for the benefit of society from local to global scales features subject matter spans thirty years of the development of gis and sdi brings a social science perspective into gis and sdi debates that have been largely dominated by technical considerations based on a world wide perspective as a result of the author s experience and research in the usa australia canada brazil peru china india korea malaysia and japan as well as most european countries draws upon professional and academic experience relating to pioneering uk and european gis research initiatives includes updated historical material with an analytical perspective explaining what was done right and what didn t work this book constitutes the refereed proceedings of the first international conference on geospatial semantics geos 2005 held in mexico city mexico in november 2005 the 15 revised full papers presented together with 4 short papers were carefully reviewed and selected from 42 submissions the papers are organized in topical sections on theories for the semantics of geospatial information formal representations for geospatial data similarity comparison of spatial data sets ontology based spatial information retrieval and geospatial semantic this textbook provides comprehensive and in depth explanations of all topics related to spatial analysis and spatiotemporal simulation including how spatial data are acquired represented digitally and spatially aggregated also features the nature of space and how it is measured descriptive explanatory and inferential analyses are covered for point line and area data it captures the latest developments in spatiotemporal simulation with cellular automata and agent based modelling and through practical examples discusses how spatial analysis and modelling can be implemented in different computing platforms a much needed textbook for a course at upper undergraduate and postgraduate levels the book deals with the integration of temporal information in geographic information systems the main purpose of an historical or time integrative gis is to reproduce spatio temporal processes or sequents of events in the real world in the form of a model the model thus making them accessible for spatial query analysis and visualization this volume reflects both theoretical thoughts on the interrelations of space and time as well as practical examples taken from various fields of application e g business data warehousing demographics history and spatial analysis geographic information systems gis remote sensing and environmental modelling are increasingly being used to address land use and land use management issues although much of the development in these applications is based in specific case studies that are

not readily accessible to a wide audience spatial information for land use management is designed as a reference that provides a description and discussion of the issues involved in the use of spatial information for land use management the chapters include detailed examples of the use of spatial information in land use management the book begins with the technological methods examines applications in a variety of environments and describes the ways in which issues of scale uncertainty linkage of models and gis and problem solution have been addressed initiatives such as inspire and the us dhs geospatial data model are working to develop a rich set of standards that will create harmonized models and themes for the spatial information infrastructure however this is only the first step semantically meaningful models must still be developed in order to stimulate interoperability creatin 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 this book shows how geospatial information systems gis can be used for operations management in public institutions it covers theory and practical applications ranging from tracking public health trends to mapping transportation routes to charting the safest handling of hazardous materials along with an expert line up of contributors and case studies the editor provides a complete overview of how to use gis as part of a successful collaborative data analysis and how to translate the information into cost saving decisions or even life saving ones this book is based on the research results of the authors in the area of integration with related data existing in literature the main aim of this book is to demonstrate the process of data collection and processing for management this book describes suitability and how space technology advances could be used and oriented as an influential instrument in management within the framework of this book the content has reflected general aspects of space technology applications remote sensing methods and gis technology have been used as an instrument of data collection and processing depending on requirements of the task expected to be solved and implemented within the management process this book presents space technology applications in different disciplines of engineering and the engineering management process

Spatial Database Systems 2007-05-23

this book places spatial data within the broader domain of information technology it while providing a comprehensive and coherent explanation of the guiding principles methods implementation and operational management of spatial databases within the workplace the text explains the key concepts issues and processes of spatial data implementation and provides a holistic management perspective

Geographic Information Systems in Business 2005-01-01

this book contains state of the art research studies on the concepts theory processes and real world applications of geographical information systems gis in business its chapters are authored by many of the leading experts in applying gis and geospatial science to business the book utilizes a wide variety of approaches and methodologies including conceptual theory development research frameworks quantitative and qualitative methods case studies systems design dss theory and geospatial analysis combined with point of sale since relatively little research has been published on gis in business this book is pioneering and should be the principal compendium of the latest research in this area the book impacts not only the underlying definitions concepts and theories of gis in business and industry but its practice as well

Introduction to Integrated Geo-information Management 2012-12-06

this book was inspired by the revolution in geographical information systems during the late 1970s and 1980s which introduced to many the concept of computer based information systems for spatially referenced data the map the aerial photograph and the satellite image were wedded to a database of textual information through the rapidly developing technology of powerful graphics workstations this brought the skills of the geographer to a wide range of disciplines and specialists but this book is not about the basic concepts of geographical information systems themselves it is not about hardware or software per se nor the integral concepts of geo referenced data handling built into such systems these are to be found in a growing number of introductory texts on the subject instead the focus of this book is on of geo information management the much wider issues while an understanding of the systems their capabilities and limitations is necessary of greater importance to the long term application of geographical understanding to problem solving is the wider context of information handling spatial data are becoming increasingly important in understanding the issues that confront the world chapter 1 is a discussion of the general issues which relate to management and information systems it concludes with review of spatial decision support systems which are of increasing importance to the gis community

Spatial Information for Land Use Management 2000-11-17

geographic information systems gis remote sensing and environmental modelling are increasingly being used to address land use and land use management issues although much of the development in these applications is based in specific case studies that are not readily accessible to a wide audience spatial information for land use management is d

Spatial Information in Local Knowledge (Penerbit USM) 2015-12-30

this book is an eclectic collection of articles written in english that explores the assimilation of spatial information technology such as remote sensing global positioning system geographic information system and maps to enhance and sustain the local knowledge the goal of integration is to make the invisible knowledge visible and beneficial to be used by others it is a technology that transfers the local knowledge from owners into the form of maps and analysis the maps play a key role in locating the presence of different local knowledge thus help stakeholders in future planning development and resource allocation the editors have chosen topics to embody the multidisciplinary nature of local knowledge in this region

Geographic Information Systems to Spatial Data Infrastructures 2019-09-25

this book draws on author's wealth of knowledge working on numerous projects across many countries it provides a clear overview of the development of the sdi concept and sdi worldwide implementation and brings a logical chronological approach to the linkage of gis technology with sdi enabling data the theory and practice approach help understand that sdi development and implementation is very much a social process of learning by doing the author masterfully selects main historical developments and updates them with an analytical perspective promoting informed and responsible use of geographic information and geospatial technologies for the benefit of society from local to global scales features subject matter spans thirty years of the development of gis and sdi brings a social science perspective into gis and sdi debates that have been largely dominated by technical considerations based on a world wide perspective as a result of the author's experience and research in the usa australia canada brazil peru china india korea malaysia and japan as well as most european countries draws upon professional and academic experience relating to pioneering uk and european gis research initiatives includes updated historical material with an analytical perspective explaining what was done right and what didn't work

Spatial Decision Support Systems 2010-11-15

although interest in spatial decision support systems sdss continues to grow rapidly in a wide range of disciplines students planners managers and the research community have lacked a book that covers the fundamentals of sdss along with the advanced design concepts required for building sdss filling this need spatial decision support system

Spatial Information Technology for Sustainable Development Goals 2019-08-08

this textbook aims to develop a scientific knowledge base on spatial information technology to communicate the united nations sustainable development goals sdgs among students researchers professionals and laymen the book improves understanding of the spatial database and explains how to extract information from this for planning purposes to enhance the knowledge of geoscientists and environmentalists the book describes the basic fundamental concepts to advance techniques for spatial data management and analysis and discusses the methodology the geographic information system gis remote sensing and global positioning system gps are presented in an integrated manner for the planning of resources and infrastructure the management of these systems is discussed in a very lucid way to develop the reader's skills the proper procedure for map making and spatial analysis are included along with case studies to the reader where the first part of the book

discusses the conceptual background the second part deals with case studies using these applications in different disciplines the presented case studies include land use agriculture flood watershed characterization and infrastructure assessment for the sustainable development goals

GIS in Land and Property Management 2003

this introduction explains how to use geographical information systems gis both in practice and in principle

Local Government Spatial Information Management Toolkit 2004

with the turn of the century our ability to collect and store geospatial information has increased considerably this has resulted in ever increasing amounts of heterogeneous geospatial data an issue that poses new challenges and opportunities as these rich sources of data are made available users rely now more than ever on the geospatial data infrastructure the availability and accessibility of such data as well as the ability to effectively manage model index and query the data is becoming a cornerstone in numerous applications moreover the ability to formalize and represent data is becoming key to integration and interoperability with the introduction of distributed geospatial data infrastructure and the implementation of web based services the impact of such issues is becoming even more evident inspired by these challenges this book on next generation geospatial information offers a collection of original contributions from leading experts in spatial information modeling image processing and analysis database management ontologies and data mining it provides a unique insight into the current state of the art and future challenges in geospatial information through four thematic chapters each of which represents a primary research theme namely distributed spatial infrastructure image based geospatial information management indexing and querying geospatial databases and ontology and semantics for geospatial data

Next Generation Geospatial Information 2005-08-11

spatial database management deals with the storage indexing and querying of data with spatial features such as location and geometric extent many applications require the efficient management of spatial data including geographic information systems computer aided design and location based services the goal of this book is to provide the reader with an overview of spatial data management technology with an emphasis on indexing and search techniques it first introduces spatial data models and queries and discusses the main issues of extending a database system to support spatial data it presents indexing approaches for spatial data with a focus on the r tree query evaluation and optimization techniques for the most popular spatial query types selections nearest neighbor search and spatial joins are portrayed for data in euclidean spaces and spatial networks the book concludes by demonstrating the ample application of spatial data management technology on a wide range of related application domains management of spatio temporal data and high dimensional feature vectors multi criteria ranking data mining and olap privacy preserving data publishing and spatial keyword search table of contents introduction spatial data indexing spatial query evaluation spatial networks applications of spatial data management technology

Spatial Data Management 2011-12-11

exploit the advantages of geographic information systems in your business once the domain of cartographers and other specialists geographic information systems

gis are increasingly being employed by the business community location based services supply chain management management of field distributed equipment geographical marketing and promotion and the spatial web are some of the current business applications which make use of gis principles written specifically for the businessperson geo business gis in the digital organization is the first book to provide comprehensive coverage of gis applications in the business and organizational environment going beyond a strictly geographical focus this book sets gis in the context of business information systems and other business sub disciplines such as logistics marketing finance and strategic management it presents from an organizational perspective the advantages of spatially enabling existing enterprise systems and illustrates how gis is applied in the real world through rigorous case study analyses of twenty companies including baystate health chico s kaiser permanente lamar advertising company rand mcnally southern company sears roebuck and sperry van ness in this book you ll find out what gis is and how it can be integrated into your organization s existing information infrastructure how gis is currently making businesses better and how you can apply the same techniques to your industry or organization the expanding roles of gis and spatial technologies in the web and mobile environments the ethical legal and security issues of special technologies how to conduct a cost benefit and roi analyses for gis grounded in the real world of business and it geo business will show you how spatially enabling your it systems can give you a unique advantage to beat your competitors in the market win and retain customers grow your business make better decisions develop new products and services and optimize your workflow

Policy Appraisal of the Management of Digital Spatial Data in Nigeria 1999

several emerging phenomena and technologies such as the increasing availability of open source software and the continuing evolution of distributed computing are introducing a new dynamic into information system development emerging spatial information systems and applications presents innovative spatial information systems that have been developed for a specific problem or decision making situation and discusses key concepts and theories underlying current spatial information systems as well as technology trends and emerging concepts that may impact spatial information system development and applications

Geo-Business 2008-01-02

this title was first published in 2003 with the increasing use of gis in industrialised and developing countries the availability of spatial data has become an issue that affects many public and private sector organisations they are faced with the high cost and substantial effort involved in the generation of spatial data and so the sharing of this data is increasingly being seen as a way of overcoming expense and easing availability and access but this can provide a way of using gis effectively only if the key players involved in the use and supply of spatial data are willing to share this book employs a theory from social psychology as an organising framework to systematize the determinants of organisations spatial data sharing behaviour it develops a model which explains the likely willingness of key individuals within organisations to engage in spatial data exchanges across organisational boundaries and then tests this on a survey based in south africa

Emerging Spatial Information Systems and Applications 2006-10-31

as early pioneers in the use of digital geographic data many local governments in the uk were ahead of their counterparts in central government and the private sector in the application of gis technology to meet current challenges local authorities must coordinate the latest technology with effective information management strategies human and cultural issues and organizational structures and processes geographic information management in local government examines the factors that are necessary to ensure that real benefits are delivered from the improved availability of geographic information written by two practitioners with extensive

government experience this four part book examines supporting technology the data that fuels it and the human factors that help or hinder successful gis implementation exploring the history of geographic information management in local government this volume offers a pragmatic overview of the subject and what local authorities need to do in order to be successful the introduction covers the emergence of geographic information management gim and gis in local government and explains why they are important part 2 explains the key elements of human and organizational issues data the technology toolbox gis selection and implementation and coordinating mechanisms part 3 provides in depth analyses of nine case studies on the use of technology by local uk authorities part 4 looks forward to the prospects and challenges for further gim by local governments

Mapping the Determinants of Spatial Data Sharing 2017-11-01

decision makers such as government officials need to better understand human activity in order to make informed decisions with the ability to measure and explore geographic space through the use of geospatial intelligence data sources including imagery and mapping data they are better able to measure factors affecting the human population as a broad field of study geospatial research has applications in a variety of fields including military science environmental science civil engineering and space exploration geospatial intelligence concepts methodologies tools and applications explores multidisciplinary applications of geographic information systems to describe assess and visually depict physical features and to gather data information and knowledge regarding human activity highlighting a range of topics such as geovisualization spatial analysis and landscape mapping this multi volume book is ideally designed for data scientists engineers government agencies researchers and graduate level students in gis programs

Geographic Information Management in Local Government 2004-06-11

stress on natural resources has recently increased due to commercialization and the need to provide livelihoods for locals because they are such core parts of everyday life ensuring sustainability in resource management is of paramount importance only by integrating the tools of spatial information science can an effective course for preserving and protecting natural resources be created spatial information science for natural resource management is a pivotal reference source that explores coordinated approaches to sustainable development and management of natural resources to keep a balance of the environment ecology and human livelihood featuring coverage on a wide range of topics including crop yield estimation ecosystem services and land information systems this book covers interdisciplinary techniques in monitoring and managing natural resources this publication is ideally designed for urban planners environmentalists policymakers ecologists researchers academicians students and professionals in the fields of remote sensing civil engineering social science computer science and information technology

Geospatial Intelligence: Concepts, Methodologies, Tools, and Applications 2019-03-01

this book focuses on geospatial information in living spaces providing many examples of its collection and use as well as discussing the problems of how it is used and its future prospects geospatial information science is in the process of evolving and being systematized with the technical and usage aspects of the real world stimulating each other this book systematizes the technical aspects of positioning of geography which manages and represents what is measured in units of earth coordinates and of data science which aims to efficiently express and process geographic information all by introducing contemporary examples that are systematized with regard to their use in our living spaces examples of geospatial information used in almost all aspects of our lives including urban areas

transportation disaster prevention health and medical care agriculture forestry and fisheries culture ecology and topography are presented along with examples of their use in each area one of the major features of this book is that it describes the use of data from earthquake disasters that is unique to japan as well as the use of open data and personal data in japan which is a trend that is gaining attention in many countries in this way the book systematically describes events and circumstances in living spaces that are revealed by the expression and analysis of geospatial data with case studies and discusses their use in the iot era

Spatial Information Science for Natural Resource Management 2020-06-26

shelving guide this book will present new research regarding the interdisciplinary applications of spatial information sciences for identification assessment monitoring and modeling issues related to natural resources and environmental management it will focus on the creation collection storage processing modeling interpretation display and dissemination of spatio temporal data which could greatly aid with environmental management issues including ecosystem change resource utilization land use management and environmental pollution the positive environmental impacts of information technology advancements with regard to global environmental and climate change will also be discussed features explains how geospatial information can best serve environmental management needs including ecosystem change resource utilization land use management and environmental pollution examines the environmental impacts of information technology advancements with regard to global environmental and climate change focuses on the creation collection storage processing modeling interpretation display and dissemination of environmental spatio temporal data presents examples of applications for spatial information sciences regarding the assessment monitoring and modeling of natural resources includes practical case studies in every chapter

Utilization of Geospatial Information in Daily Life 2023-05-02

introdução aos sistemas de informação geográfica gis sensoriamento remoto input e output de dados qualidade e gerenciamento de dados funções de análise e implementação

Geospatial Applications for Natural Resources Management 2018-03-29

the role of property in fostering good governance robust economies and strong civil societies has received fresh attention in the wake of the collapse of communism the adoption of a market driven approach to the economy and the increasing impact of information technology some of these reforms have focused on a diverse package of measures dealing with land tenure security land and property transactions and access to credit they have also been concerned with supporting physical planning the sustainable management and control of land use and of natural resources and facilitating real property taxation as well there has been a growing awareness of the requirement to address such issues as the protection of the environment and the provision of land for all people whatever their gender but especially for the poor and ethnic minorities land administration provides a high level overview of recent advances in building formal property systems throughout the world and reviews the role of property in advancing a society s economic and social agenda it undertakes an in depth examination of the land administration infrastructure required to support these modern property systems giving particular attention to the survey registration valuation and land use control functions the text also provides an extended discussion of the information management challenges associate with the land administration field

Geographic Information Systems 1989

the proper management of geographic data can provide assistance to a number of different sectors within society as such it is imperative to continue advancing research for spatial data analysis the handbook of research on geographic information systems applications and advancements presents a thorough overview of the latest developments in effective management techniques for collecting processing analyzing and utilizing geographical data and information highlighting theoretical frameworks and relevant applications this book is an ideal reference source for researchers academics professionals and students actively involved in the field of geographic information systems

Spatial information management in the new millenium 1999

transcript of papers from a ugc sponsored seminar held at dept of geography university of delhi in feb 2003

Land Administration 2000-02-03

with the turn of the century our ability to collect and store geospatial information has increased considerably this has resulted in ever increasing amounts of heterogeneous geospatial data an issue that poses new challenges and opportunities as these rich sources of data are made available users rely now more than ever on the geospatial data infrastructure the availability and accessibility of such data as well as the ability to effectively manage model index and query the data is becoming a cornerstone in numerous applications moreover the ability to formalize and represent data is becoming key to integration and interoperability with the introduction of distributed geospatial data infrastructure and the implementation of web based services the impact of such issues is becoming even more evident inspired by these challenges this book on next generation geospatial information offers a collection of original contributions from leading experts in spatial information modeling image processing and analysis database management ontologies and data mining it provides a unique insight into the current state of the art and future challenges in geospatial information through four thematic chapters each of which represents a primary research theme namely distributed spatial infrastructure image based geospatial information management indexing and querying geospatial databases and ontology and semantics for geospatial data

Handbook of Research on Geographic Information Systems Applications and Advancements 2016-10-21

resource management information systems remote sensing gis and modelling second edition provides you with the knowledge and skill necessary to design build implement and operate spatial resource management information systems for the management of physical resources this volume promotes the use of these technologies in a spatial context enabling you to apply information systems toward the management of resources in agriculture forestry land use planning valuation engineering and many additional fields a follow up to the first edition resource management information systems process and practice this book offers extensive revisions reflecting the rapidly evolving nature of the technologies needed to manage spatial resources

Spatial Information Technology for Natural Resource Management 2007

this book draws on author s wealth of knowledge working on numerous projects across many countries it provides a clear overview of the development of the sdi concept and sdi worldwide implementation and brings a logical chronological approach to the linkage of gis technology with sdi enabling data the theory and practice approach help understand that sdi development and implementation is very much a social process of learning by doing the author masterfully selects main historical developments and updates them with an analytical perspective promoting informed and responsible use of geographic information and geospatial technologies for the benefit of society from local to global scales features subject matter spans thirty years of the development of gis and sdi brings a social science perspective into gis and sdi debates that have been largely dominated by technical considerations based on a world wide perspective as a result of the author s experience and research in the usa australia canada brazil peru china india korea malaysia and japan as well as most european countries draws upon professional and academic experience relating to pioneering uk and european gis research initiatives includes updated historical material with an analytical perspective explaining what was done right and what didn t work

Next Generation Geospatial Information 2005-09-14

this book constitutes the refereed proceedings of the first international conference on geospatial semantics geos 2005 held in mexico city mexico in november 2005 the 15 revised full papers presented together with 4 short papers were carefully reviewed and selected from 42 submissions the papers are organized in topical sections on theories for the semantics of geospatial information formal representations for geospatial data similarity comparison of spatial data sets ontology based spatial information retrieval and geospatial semantic

Resource Management Information Systems 2005-12-21

this textbook provides comprehensive and in depth explanations of all topics related to spatial analysis and spatiotemporal simulation including how spatial data are acquired represented digitally and spatially aggregated also features the nature of space and how it is measured descriptive explanatory and inferential analyses are covered for point line and area data it captures the latest developments in spatiotemporal simulation with cellular automata and agent based modelling and through practical examples discusses how spatial analysis and modelling can be implemented in different computing platforms a much needed textbook for a course at upper undergraduate and postgraduate levels

Geographic Information Systems to Spatial Data Infrastructures 2019-09-25

the book deals with the integration of temporal information in geographic information systems the main purpose of an historical or time integrative gis is to reproduce spatio temporal processes or sequents of events in the real world in the form of a model the model thus making them accessible for spatial query analysis and visualization this volume reflects both theoretical thoughts on the interrelations of space and time as well as practical examples taken from various fields of application e g business data warehousing demographics history and spatial analysis

GeoSpatial Semantics 2005-11-03

geographic information systems gis remote sensing and environmental modelling are increasingly being used to address land use and land use management issues although much of the development in these applications is based in specific case studies that are not readily accessible to a wide audience spatial information for land use management is designed as a reference that provides a description and discussion of the issues involved in the use of spatial information for land use management the chapters include detailed examples of the use of spatial information in land use management the book begins with the technological methods examines applications in a variety of environments and describes the ways in which issues of scale uncertainty linkage of models and gis and problem solution have been addressed

Fundamentals of Spatial Analysis and Modelling 2021-12-15

initiatives such as inspire and the us dhs geospatial data model are working to develop a rich set of standards that will create harmonized models and themes for the spatial information infrastructure however this is only the first step semantically meaningful models must still be developed in order to stimulate interoperability creatin

Time-Integrative Geographic Information Systems 2012-12-06

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

Spatial Information for Land Use Management 2000-11-17

this book shows how geospatial information systems gis can be used for operations management in public institutions it covers theory and practical applications ranging from tracking public health trends to mapping transportation routes to charting the safest handling of hazardous materials along with an expert line up of contributors and case studies the editor provides a complete overview of how to use gis as part of a successful collaborative data analysis and how to translate the information into cost saving decisions or even life saving ones

Creating Spatial Information Infrastructures 2008-04-23

this book is based on the research results of the authors in the area of integration with related data existing in literature the main aim of this book is to demonstrate the process of data collection and processing for management this book describes suitability and how space technology advances could be used and oriented as an influential instrument in management within the framework of this book the content has reflected general aspects of space technology applications remote sensing methods and gis technology have been used as an instrument of data collection and processing depending on requirements of the task expected to be solved and implemented within the management process this book presents space technology applications in different disciplines of engineering and the engineering management process

Pro Oracle Spatial for Oracle Database 11g 2012-01-03

Geospatial Information System Use in Public Organizations 2019-09-11

SIRC 92 1992

Global Management and Geo-spatial Information System Applications 2016

Managing Our Land Information Resources 1989

Proceedings, Spatial Analysis and Forest Pest Management 1993

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