

Decision Support Systems Concepts And Resources For Managers

Describes how Decision Support Systems (DSS) computer-based systems, and described the steps and components necessary to develop effective DSS.

The vast flow of information to be considered by policy and decision makers in national and local governments is continuing to expand during the 1990s, whilst budgets for staff to process the information are being tightened. This publication provides a forum for the examination of the problem. It aims to focus the efforts of researchers and practitioners more effectively in applying information technology to increase the performance of decision makers in public administration despite the limited resources. Topics explored include the following: design considerations and approaches for, and practical experiences with, communication and information processing infrastructure and applications at the workplace level; the design and implementation of support systems for individual or group decision making in governmental and municipal settings; modelling and model management techniques, based on case reports of successful and unsuccessful modelling efforts; concepts, approaches and models for re-designing tasks and processes in public administration; issues and challenges in integrating the information systems of several governmental bodies. The book is divided into two parts for the discussion of these themes - the first section deals primarily with theoretical and conceptual issues; the second part contains papers with a stronger emphasis on systems, their functionality and experiences in their development and application. The authors' affiliations (17 organizations from 8 different countries) indicates the international nature of the contributions. The ideas put forward in their papers show that research into supporting decision making in public administration is well on its way but that the research area is vast, with yet many hills to scale.

Developments in technologies have evolved in a much wider use of technology throughout science, government, and business; resulting in the expansion of geographic information systems. GIS is the academic study and practice of presenting geographical data through a system designed to capture, store, analyze, and manage geographic information. Geographic Information Systems: Concepts, Methodologies, Tools, and Applications is a collection of knowledge on the latest advancements and research of geographic information systems. This book aims to be useful for academics and practitioners involved in geographical data.

In Indian context.

As effective organizational decision making is a major factor in a company's success, a comprehensive account of current available research on the core concepts of the decision support agenda is in high demand by academicians and professionals. Through 110 authoritative contributions by over 160 of the world's leading experts the Encyclopedia of Decision Making and Decision Support Technologies presents a critical mass of research on the most up-to-date research on human and computer support of managerial decision making, including discussion on support of operational, tactical, and strategic decisions, human vs. computer system support structure, individual and group decision making, and multi-criteria decision making.

This textbook for business undergraduates integrates accounting principles and concepts into today's business information systems. This edition has been revised to include an extensive discussion of decision support systems and a new chapter on coding and flowcharting. There are many case studies and sample problems, and the computer supplement has been expanded to reflect the most recent developments in computer hardware and software. The text employs a prototype organization to examine accounting information systems subject by subject, including management concepts in relation to accounting information systems, the flow of data within an information system, internal control systems and a systems life-cycle analysis.

This is a resource book on clinical decision support systems for informatics specialists, a textbook for teachers or students in health informatics and a comprehensive introduction for clinicians. It has become obvious that, in addition to physicians, other health professionals have need of decision support. Therefore, the issues raised in this book apply to a broad range of clinicians. The book includes chapters written by internationally recognized experts on the design, evaluation and application of these systems, who examine the impact of computer-based diagnostic tools both from the practitioner's perspective and that of the patient.

In recent years, much work has been done in formulating and clarifying the concept of sustainable development and related theoretical and research issues. Now, the challenge has shifted to designing and stimulating processes of effective planning and decision-making, at all levels of human activity, in such a way as to achieve local and global sustainable development.

Information technology can help a great deal in achieving sustainable development by providing well-designed and useful tools for decision makers. One such tool is the decision support system, or DSS. This book explores the area of DSS in the context of sustainable development. As DSS is a very new technique, especially in the developing world, this book will serve as a reference text, primarily for managers, government officials, and information professionals in developing countries. It covers the concept of sustainable development, defines DSS and how it can be used in the planning and management of sustainable development, and examines the state of the art in DSS use. Other interested readers will include students, teachers, and analysts in information sciences; DSS designers, developers, and implementors; and international development agencies.

As the most comprehensive reference work dealing with decision support systems (DSS), this book is essential for the library of every DSS practitioner, researcher, and educator. Written by an international array of DSS luminaries, it contains more than 70 chapters that approach decision support systems from a wide variety of perspectives. These range from classic foundations to cutting-edge thought, informative to provocative, theoretical to practical, historical to futuristic, human to technological, and operational to strategic. The chapters are conveniently organized into ten major sections that novices and experts alike will refer to for years to come.

Decision Support Systems: Frequently Asked Questions is the authoritative reference guide to computerized Decision Support Systems. Author Dan Power has spent almost 30 years building, studying and teaching others about computerized Decision Support Systems. Dr. Power is first and foremost a Decision Support evangelist and generalist. From his vantage point as editor of DSSResources.COM, he tracks a broad range of contemporary DSS topics. In this DSS FAQ, Dr. Power answers 83 frequently asked questions about computerized decision support systems. The FAQ covers a broad range of contemporary topics and the questions are organized into 8 chapters. DSS FAQ helps readers understand questions like: What is a DSS? What kind of DSS does Mr. X need? Does data modeling differ for a Data-Driven DSS? Is a Data Warehouse a DSS? Is tax preparation software an example of a DSS? What do I need to know about Data

Warehousing/OLAP? What is a cost estimation DSS? What is a Spreadsheet-based DSS? Decision Support Systems: Frequently Asked Questions is a useful resource for IT specialists, students, professors and managers. It organizes important Ask Dan! questions (with answers) published in DSS News from 2000 through 2004.

During recent decades we have witnessed not only the introduction of automation into the work environment but we have also seen a dramatic change in how automation has influenced the conditions of work. While some 30 years ago the addition of a computer was considered only for routine and boring tasks in support of humans, the balance has dramatically shifted to the computer being able to perform almost any task the human is willing to delegate. The very fast pace of change in processor and information technology has been the main driving force behind this development. Advances in automation and especially Artificial Intelligence (AI) have enabled the formation of a rather unique team with human and electronic members. The team is still supervised by the human with the machine as a subordinate associate or assistant, sharing responsibility, authority and autonomy over many tasks. The requirement for teaming human and machine in a highly dynamic and unpredictable task environment has led to impressive achievements in many supporting technologies. These include methods for system analysis, design and engineering and in particular for information processing, for cognitive and complex knowledge [1] engineering .

The goal of this book is to provide, in a friendly and refreshing manner, both theoretical concepts and practical techniques for the important and exciting field of Artificial Intelligence that can be directly applied to real-world healthcare problems. Healthcare – the final frontier. Lately, it seems like Pandora opened the box and evil was released into the world. Fortunately, there was one thing left in the box: hope. In recent decades, hope has been increasingly represented by Intelligent Decision Support Systems. Their continuing mission: to explore strange new diseases, to seek out new treatments and drugs, and to intelligently manage healthcare resources and patients. Hence, this book is designed for all those who wish to learn how to explore, analyze and find new solutions for the most challenging domain of all time: healthcare.

IEC 61131-3 gives a comprehensive introduction to the concepts and languages of the new standard used to program industrial control systems. A summary of the special programming requirements and the corresponding features in the IEC 61131-3 standard make it suitable for students as well as PLC experts. The material is presented in an easy-to-understand form using numerous examples, illustrations, and summary tables. There is also a purchaser's guide and a CD-ROM containing two reduced but functional versions of programming systems.

This handbook incorporates new developments in automation. It also presents a widespread and well-structured conglomeration of new emerging application areas, such as medical systems and health, transportation, security and maintenance, service, construction and retail as well as production or logistics. The handbook is not only an ideal resource for automation experts but also for people new to this expanding field.

When people or computers need to make a decision, typically multiple conflicting criteria need to be evaluated; for example, when we buy a car, we need to consider safety, cost and comfort. Multiple criteria decision making (MCDM) has been researched for decades. Now as the rising trend of big-data analytics in supporting decision making, MCDM can be more powerful when combined with state-of-the-art analytics and machine learning. In this book, the authors introduce a new framework of MCDM, which can lead to more accurate decision making. Several real-world cases will be included to illustrate the new hybrid approaches.

Business Information Systems: Concepts, Methodologies, Tools and Applications offers a complete view of current business information systems within organizations and the advancements that technology has provided to the business community. This four-volume reference uncovers how technological advancements have revolutionized financial transactions, management infrastructure, and knowledge workers.

This text presents contemporary knowledge about Decision-Making Support Systems (DMSS). Its main goals are to help diffuse knowledge about effective methods and strategies for successfully designing, developing, implementing and evaluating DMSS, and to create an awareness among academicians and practitioners about the relevance of DMSS in the contemporary dynamic management environment. This volume is a compilation of DMSS and vision, dealing with issues such as decision making concepts in organizations.

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 Systems: Principles and Practices provides a comprehensive examination of the various aspects of SDSS evolution, components, architecture, and implementation. It integrates research from a variety of disciplines, including the geosciences, to supply a complete overview of SDSS technologies and their application from an interdisciplinary perspective. This groundbreaking reference provides thorough coverage of the roots of SDSS. It explains the core principles of SDSS, how to use them in various decision making contexts, and how to design and develop them using readily available enabling technologies and commercial tools. The book consists of four major parts, each addressing different topic areas in SDSS: Presents an introduction to SDSS and the evolution of SDSS Covers the essential and optional components of SDSS Focuses on the design and implementation of SDSS Reviews SDSS applications from various domains and disciplines—investigating current challenges and future directions The text includes numerous detailed case studies, example applications, and methods for tailoring SDSS to your work environment. It also integrates sample code segments throughout. Addressing the technical and organizational challenges that affect the success or failure of SDSS, the book concludes by considering future directions of this rapidly emerging field of study.

Intelligent Support Systems for Marketing Decisions examines new product development, market penetration strategies, and other marketing decisions utilizing a confluence of methods, including Decision Support Systems (DSS), Artificial Intelligence in Marketing and Multicriteria Analysis. The authors systematically examine the use and implementation of these methodologies in making strategic marketing decisions. Part I discusses the basic concepts of multicriteria analysis vis-à-vis marketing decisions and in new product development situations. Part II presents basic concepts from the fields of Information Systems, Decision Support Systems, and Intelligent Decision Support Methods. In addition, specialized categories of DSS (multicriteria DSS, web-based DSS, group DSS, spatial DSS) are discussed in terms of their key features and current use in marketing applications. Part III presents IDSS and a multicriteria methodology for new product development. Further chapters present a developmental strategy for analyzing, designing, and implementing an Intelligent Marketing Decision Support System. The implementation discussion is illustrated with a real-world example of the methods and system in use.

This book presents real-world decision support systems, i.e., systems that have been running for some time and as such have been tested in real environments and complex situations; the cases are from various application domains and highlight the best practices in each stage of the system's life cycle, from the initial requirements analysis and design phases to the final stages of the project. Each chapter provides decision-makers with recommendations and insights into lessons learned so that failures can be avoided and successes repeated. For this reason unsuccessful cases, which at some point of their

life cycle were deemed as failures for one reason or another, are also included. All decision support systems are presented in a constructive, coherent and deductive manner to enhance the learning effect. It complements the many works that focus on theoretical aspects or individual module design and development by offering 'good' and 'bad' practices when developing and using decision support systems. Combining high-quality research with real-world implementations, it is of interest to researchers and professionals in industry alike.

One of the goals of artificial intelligence (AI) is creating autonomous agents that must make decisions based on uncertain and incomplete information. The goal is to design rational agents that must take the best action given the information available and their goals. *Decision Theory Models for Applications in Artificial Intelligence: Concepts and Solutions* provides an introduction to different types of decision theory techniques, including MDPs, POMDPs, Influence Diagrams, and Reinforcement Learning, and illustrates their application in artificial intelligence. This book provides insights into the advantages and challenges of using decision theory models for developing intelligent systems.

This compact and easy-to-read book describes in detail the basic principles of Decision Support Systems (DSS). The book also gives a comprehensive account of the various models used in decision making process, the many facets of DSS, and explains how they are implemented. Further, it discusses the significance of business reengineering, the role of client-server technology, Internet and Intranet, and analyzes the concepts of Database Management Systems (DBMS), model management and various GUIs. Designed as a textbook for the undergraduate and postgraduate students of Computer Science and Management, this book would also be of considerable assistance to the practising professional.

Ongoing advancements in modern technology have led to significant developments in intelligent systems. With the numerous applications available, it becomes imperative to conduct research and make further progress in this field. *Intelligent Systems: Concepts, Methodologies, Tools, and Applications* contains a compendium of the latest academic material on the latest breakthroughs and recent progress in intelligent systems. Including innovative studies on information retrieval, artificial intelligence, and software engineering, this multi-volume book is an ideal source for researchers, professionals, academics, upper-level students, and practitioners interested in emerging perspectives in the field of intelligent systems.

This three-volume collection, titled *Enterprise Information Systems: Concepts, Methodologies, Tools and Applications*, provides a complete assessment of the latest developments in enterprise information systems research, including development, design, and emerging methodologies. Experts in the field cover all aspects of enterprise resource planning (ERP), e-commerce, and organizational, social and technological implications of enterprise information systems.

Decision Support and Business Intelligence Systems provides the only comprehensive, up-to-date guide to today's revolutionary management support system technologies, and showcases how they can be used for better decision-making. The 10th edition focuses on Business Intelligence (BI) and analytics for enterprise decision support in a more streamlined book.

Annotation The book presents state-of-the-art knowledge about decision-making support systems (DMSS). Its main goals are to provide a compendium of quality chapters on decision-making support systems that help diffuse scarce knowledge about effective methods and strategies for successfully designing, developing, implementing, and evaluating decision-making support systems, and to create an awareness among readers about the relevance of decision-making support systems in the current complex and dynamic management environment.

Appropriate for all courses in Decision Support Systems (DSS), computerized decision making tools, and management support systems. *Decision Support and Business Intelligence Systems 9e* provides the only comprehensive, up-to-date guide to today's revolutionary management support system technologies, and showcases how they can be used for better decision-making. The 9th edition focuses on Business Intelligence (BI) and analytics for enterprise decision support in a more streamlined book.

Decision support systems (DSS) have evolved over the past four decades from theoretical concepts into real world computerized applications. DSS architecture contains three key components: knowledge base, computerized model, and user interface. DSS simulate cognitive decision-making functions of humans based on artificial intelligence methodologies (including expert systems, data mining, machine learning, connectionism, logistical reasoning, etc.) in order to perform decision support functions. The applications of DSS cover many domains, ranging from aviation monitoring, transportation safety, clinical diagnosis, weather forecast, business management to internet search strategy. By combining knowledge bases with inference rules, DSS are able to provide suggestions to end users to improve decisions and outcomes. This book is written as a textbook so that it can be used in formal courses examining decision support systems. It may be used by both undergraduate and graduate students from diverse computer-related fields. It will also be of value to established professionals as a text for self-study or for reference.

"This book presents findings utilizing the incorporation of the systems approach into fields such as systems engineering, computer science, and software engineering"--Provided by publisher.

This book provides an overview of the main methods and results in the formal study of the human decision-making process, as defined in a relatively wide sense. A key aim of the approach contained here is to try to break down barriers between various disciplines encompassed by this field, including psychology, economics and computer science. All these approaches have contributed to progress in this very important and much-studied topic in the past, but none have proved sufficient so far to define a complete understanding of the highly complex processes and outcomes. This book provides the reader with state-of-the-art coverage of the field, essentially forming a roadmap to the field of decision analysis. The first part of the book is devoted to basic concepts and techniques for representing and solving decision problems, ranging from operational research to artificial intelligence. Later chapters provide an extensive overview of the decision-making process under conditions of risk and uncertainty. Finally, there are chapters covering various approaches to multi-criteria decision-making. Each chapter is written by experts in the topic concerned, and contains an extensive bibliography for further reading and reference.

Decision support systems have experienced a marked increase in attention and importance over the past 25 years. The aim of this book is to survey the decision support system (DSS) field – covering both developed territory and emergent frontiers. It will give the reader a clear understanding of fundamental DSS concepts, methods, technologies, trends, and issues. It will serve as a basic reference work for DSS research, practice, and instruction. To achieve these goals, the book has been designed according to a ten-part structure, divided in two volumes with chapters authored by well-known, well-versed scholars and practitioners from the DSS community.

Decision Support Systems Concepts and Resources for Managers Greenwood Publishing Group

This book is targeted to busy managers and MBA students who need to grasp the basics of computerized decision support. Some of the topics covered include: What is a DSS? What do managers need to know about computerized decision support? And how can managers identify opportunities to create innovative DSS? Overall the book addresses 35 fundamental questions that are relevant to understanding computerized decision support.

For MIS specialists and nonspecialists alike, a comprehensive, readable, understandable guide to the concepts and applications of decision support systems.

"This 4-volume set provides a compendium of comprehensive advanced research articles written by an international collaboration of experts involved with the strategic use of information systems"--Provided by publisher.

Through expanded intelligence, the use of robotics has fundamentally transformed a variety of fields, including manufacturing, aerospace, medicine, social services, and agriculture. Continued research on robotic design is critical to solving various dynamic obstacles individuals, enterprises, and humanity at large face on a daily basis. *Robotic Systems: Concepts, Methodologies, Tools, and Applications* is a vital reference source that delves into the current issues, methodologies, and trends relating to advanced robotic technology in the modern world. Highlighting a range of topics such as mechatronics, cybernetics, and human-computer interaction, this multi-volume book is ideally designed for robotics engineers, mechanical engineers, robotics technicians, operators, software engineers, designers, programmers, industry professionals, researchers, students, academicians, and computer practitioners seeking current research on developing innovative ideas for intelligent and autonomous robotics systems.

Foundations of Decision Support Systems focuses on the frameworks, strategies, and techniques involved in decision support systems (DSS). The publication first takes a look at information processing, decision making, and decision support; frameworks for organizational information processing and decision making; and representative decision support systems. Discussions focus on classification scheme for DSS, abilities required for decision making, division of information-processing labor within an organization, and decision support. The text then elaborates on ideas in decision support, formalizations of purposive systems, and conceptual and operational constructs for building a data base knowledge system. The book takes a look at building a data base knowledge system, language systems for data base knowledge systems, and problem-processing systems for data base knowledge systems. Topics include problem processors for computationally oriented DSS, major varieties of logical data structures, and indirect associations among concepts. The manuscript also examines operationalizing modeling knowledge in terms of predicate calculus; combining the data base and formal logic approaches; and the language and knowledge systems of a DSS based on formal logic. The publication is a valuable reference for researchers interested in decision support systems.

Healthcare Information Management Systems, 4th edition, is a comprehensive volume addressing the technical, organizational and management issues confronted by healthcare professionals in the selection, implementation and management of healthcare information systems. With contributions from experts in the field, this book focuses on topics such as strategic planning, turning a plan into reality, implementation, patient-centered technologies, privacy, the new culture of patient safety and the future of technologies in progress. With the addition of many new chapters, the 4th Edition is also richly peppered with case studies of implementation. The case studies are evidence that information technology can be implemented efficiently to yield results, yet they do not overlook pitfalls, hurdles, and other challenges that are encountered. Designed for use by physicians, nurses, nursing and medical directors, department heads, CEOs, CFOs, CIOs, COOs, and healthcare informaticians, the book aims to be a indispensable reference.

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