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KEY=APPLICATIONS - BALL FLORES

GLOBAL MOBILE SATELLITE COMMUNICATIONS

FOR MARITIME, LAND AND AERONAUTICAL APPLICATIONS

Springer Science & Business Media Global mobile satellite communications (GMSC) are specific satellite communication systems for maritime, land and aeronautical applications. It enables connections between moving objects such as ships, vehicles and aircrafts, and telecommunications subscribers through the medium of communications satellites, ground earth stations, PTT or other landline telecommunications providers. Mobile satellite communications and technology have been in use for over two decades. Its initial application is aimed at the maritime market for commercial and distress applications. In recent years, new developments and initiatives have resulted in land and aeronautical applications and the introduction of new satellite constellations in non-geostationary orbits such as Little and Big LEO configurations and hybrid satellite constellations as Ellipso Borealis and Concordia system. This book is important for modern shipping, truck, train and aeronautical societies because GMSC in the present millennium provides more effective business and trade, with emphasis on safety and commercial communications. Global Mobile Satellite Communications is written to make bridges between potential readers and current GMSC trends, mobile system concepts and network architecture using a simple mode of style with understandable technical information, characteristics, graphicons, illustrations and mathematics equations. Global Mobile Satellite Communications represents telecommunications technique and technology, which can be useful for all technical staff on vessels at sea and rivers, on all types of land vehicles, on planes, on off shore constructions and for everyone possessing satellite communications handset phones.

GLOBAL MOBILE SATELLITE COMMUNICATIONS APPLICATIONS

FOR MARITIME, LAND AND AERONAUTICAL APPLICATIONS VOLUME 2

Springer This book discusses global mobile satellite communications (GMSC) for maritime, land (road and rail), and aeronautical applications. It covers how these enable connections between moving objects such as ships, road and rail vehicles and aircrafts on one hand, and ground telecommunications subscribers through the medium of communications satellites, ground earth stations, Terrestrial Telecommunication Networks (TTN), Internet Service Providers (ISP) and other wireless and landline telecommunications providers. The new edition covers new developments and initiatives that have resulted in land and aeronautical applications and the introduction of new satellite constellations in non-geostationary orbits and projects of new hybrid satellite constellations. The book presents current GMSC trends, mobile system concepts and network architecture using a simple mode of style with understandable technical information, characteristics, graphics, illustrations and mathematics equations. It represents telecommunications technique and technology, which can be useful for all technical staff on vessels at sea and rivers, on all types of land vehicles, on planes, on off shore constructions and for everyone possessing satellite communications handset phones. The first edition of Global Mobile Satellite Communications (Springer, 2005) was split into two books for the second edition - one on applications and one on theory. This book presents global mobile satellite communications applications.

GLOBAL MOBILE SATELLITE COMMUNICATIONS THEORY

FOR MARITIME, LAND AND AERONAUTICAL APPLICATIONS

Springer This book discusses current theory regarding global mobile satellite communications (GMSC) for maritime, land (road and rail), and aeronautical applications. It covers how these can enable connections between moving objects such as ships, road and rail vehicles and aircrafts on one hand, and on the other ground telecommunications subscribers through the medium of communications satellites, ground earth stations, Terrestrial Telecommunication Networks (TTN), Internet Service Providers (ISP) and other wireless and landline telecommunications providers. This new edition covers new developments and initiatives that have resulted in land and aeronautical applications and the introduction of new satellite constellations in non-geostationary orbits and projects of new hybrid satellite constellations. The book presents current GMSC trends, mobile system concepts and network architecture using a simple mode of style with understandable technical information, characteristics, graphics, illustrations and mathematics equations. The first edition of Global Mobile Satellite Communications (Springer, 2005) was split into two books for the second edition—one on applications and one on theory. This book presents global mobile satellite communications theory.

GLOBAL MOBILE SATELLITE COMMUNICATIONS: FOR MARITIME, LAND AND AERONAUTICAL APPLICATIONS

GLOBAL AERONAUTICAL DISTRESS AND SAFETY SYSTEMS (GADSS)

THEORY AND APPLICATIONS

Springer Nature This book presents the principal structure, networks and applications of the Global Aeronautical Distress and Safety System (GADSS) for enhanced airborne Communication, Navigation and Surveillance (CNS). It shows how their implementation works to ensure better security in flight and on the airports surface; improved aircraft tracking and determination in real space and time; and enhanced distress alerting, safety; and Search and Rescue (SAR) system for missing, hijacked and landed aircraft at sea or on the ground. Main topics of this book are as follows: an overview of radio and satellite systems with retrospective to aeronautical safety; security and distress systems; space segment with all aspects regarding satellite orbits and infrastructures; transmission segment of radio and satellite systems; ground segment of radio and earth ground stations; airborne radio and satellite antenna systems and propagation; aeronautical VHF and HF Radio CNS systems and networks; Inmarsat, Iridium and Cospas-Sasrast aeronautical satellite CNS systems and networks; Aeronautical Global Satellite Augmentation System (GSAS) and networks; Digital Video Broadcasting - Return Channel via Satellite (DVB-RCS) standards and Aeronautical Stratospheric Platform Systems (SPS) and networks.

GLOBAL SATELLITE METEOROLOGICAL OBSERVATION (GSMO) THEORY

VOLUME 1

Springer This book presents the principal structure of space systems, functionality, media and applications for modern remote sensing, transmission systems, meteorological antennas, propagation meteorological observation and transferring weather data from satellite to the ground infrastructures and users. The book starts with a short background to the development of Radio and Space systems including overview, concepts and applications of satellite communications in function of transfer meteorological observation data and images. It goes on to discuss the fundamental principles of the space platforms and orbital parameters, laws of satellite motions, new types of launching systems, satellite orbits and geometric relations, spacecraft configuration, payload structure, type of onboard antenna systems, satellite orbits and components of satellite bus. The author also provides comprehensive coverage of baseband and transmission systems, fundamentals of atmospheric electromagnetic radiation, satellite meteorological parameters and instruments, and research and applications in antenna systems and propagation. This is a companion book of Global Satellite Meteorological Observation Applications (Springer).

GLOBAL SATELLITE METEOROLOGICAL OBSERVATION (GSMO) APPLICATIONS

VOLUME 2

Springer This book presents principal structures of space systems functionality of meteorological networks, media and applications for modern remote sensing, transmission systems, meteorological ground and users segments and transferring weather data from satellite to the ground infrastructures and users. The author presents techniques and different modes of satellite image interpretation, type of satellite imagery, spectral imaging properties, and enhancement of imaging technique, geo-location and calibration, atmospheric and surface phenomena. Several satellite meteorological applications are introduced including common satellite remote sensing applications, weather analysis, warnings and prediction, observation and measurements of meteorological variables, atmosphere and surface applications, ocean and coastal applications, land, agriculture and forestry applications, and maritime and aviation satellite weather applications. The author also covers ground segment and user segment in detail. The final chapter looks to the future, covering possible space integrations in meteorological and weather observation. This is a companion book of Global Satellite Meteorological Observation Theory (Springer), which provides the following topics: Evolution of meteorological observations and history satellite meteorology Space segment with satellite orbits and meteorological payloads Analog and digital transmission, type of modulations and broadcasting systems Atmospheric radiation, satellite meteorological parameters and instruments Meteorological antenna systems and propagation

THE 1ST INTERNATIONAL CONFERENCE ON MARITIME EDUCATION AND DEVELOPMENT

ICMED

Springer Nature This book presents the proceedings of the 1st International Conference on Maritime Education and Development. The conference exchanges knowledge, experiences and ideas in the domain of maritime education and development, with the ultimate goal of generating new knowledge and implementing smart strategies and actions. Topics include the 4th Industrial Revolution (4IR); unmanned air/sea surface/underwater vehicles (UxV); the digital divide and Internet accessibility; digital infrastructure; IMO E-navigation strategy; smart-ship concept; automation and digitalization; cyber security; and maritime future. This proceedings pertains to researchers, academics, students, and professionals in the realm of maritime education and development.

MARINE NAVIGATION AND SAFETY OF SEA TRANSPORTATION

NAVIGATIONAL PROBLEMS

CRC Press The TransNav 2013 Symposium held at the Gdynia Maritime University, Poland in June 2013 has brought together a wide range of participants from all over the world. The program has offered a variety of contributions, allowing to look at many aspects of the navigational safety from various different points of view. Topics presented and discussed at th

RULES AND REGULATIONS

CODE OF FEDERAL REGULATIONS

1949-1984

Special edition of the Federal Register, containing a codification of documents of general applicability and future effect ... with ancillaries.

THE CODE OF FEDERAL REGULATIONS OF THE UNITED STATES OF AMERICA

The Code of Federal Regulations is the codification of the general and permanent rules published in the Federal Register by the executive departments and agencies of the Federal Government.

HANDBOOK OF ANTENNAS IN WIRELESS COMMUNICATIONS

CRC Press The move toward worldwide wireless communications continues at a remarkable pace, and the antenna element of the technology is crucial to its success. With contributions from more than 30 international experts, the Handbook of Antennas in Wireless Communications brings together all of the latest research and results to provide engineering professionals and students with a one-stop reference on the theory, technologies, and applications for indoor, hand-held, mobile, and satellite systems. Beginning with an introduction to wireless communications systems, it offers an in-depth treatment of propagation prediction and fading channels. It then explores antenna technology with discussion of antenna design methods and the various antennas in current use or development for base stations, hand held devices, satellite communications, and shaping beams. The discussions then move to smart antennas and phased array technology, including details on array theory and beamforming techniques. Space diversity, direction-of-arrival estimation, source tracking, and blind source separation methods are addressed, as are the implementation of smart antennas and the results of field trials of systems using smart antennas implemented. Finally, the hot media topic of the safety of mobile phones receives due attention, including details of how the human body interacts with the electromagnetic fields of these devices. Its logical development and extensive range of diagrams, figures, and photographs make this handbook easy to follow and provide a clear understanding of design techniques and the performance of finished products. Its unique, comprehensive coverage written by top experts in their fields promises to make the Handbook of Antennas in Wireless Communications the standard reference for the field.

COMMUNICATIONS SATELLITES

GLOBAL CHANGE AGENTS

*Routledge Over the past 40 years, satellites have played a key role in creating a global culture, spreading worldwide entertainment, stimulating technological interchange, and promoting trade around the world. Communications Satellites: Global Change Agents addresses communications satellites not only in terms of the technology and the services they provide, but also with consideration of the technology's impact in socio-political, security, economic, policy, news, entertainment, and cultural spheres. Editors Joseph N. Pelton, Robert J. Oslund, and Peter Marshall bring together contributions that place satellites into a broad context and examine how they influence and define today's world. Written in a non-technical, reader-friendly style, chapters investigate how satellite communications work and explore the role of satellites in such arenas as: *news and entertainment systems around the world; *Internet, E-business, and the new global economy; *global television and radio channels; *military operations; and *education, health services, economic development, and electronic immigration. Communications Satellites: Global Change Agents examines what satellites have been and projects how they will evolve in the future, articulating what they mean to the world today and forecasting what they will mean tomorrow. As the definitive source on communications satellites and their role in today's world, this volume serves as a valuable, unique, and timely resource for scholars and students in telecommunications, communication and technology, mass communication and society, and broadcasting.*

FCC RECORD

A COMPREHENSIVE COMPILATION OF DECISIONS, REPORTS, PUBLIC NOTICES, AND OTHER DOCUMENTS OF THE FEDERAL COMMUNICATIONS COMMISSION OF THE UNITED STATES

SATELLITE COMMUNICATIONS

BoD - Books on Demand This study is motivated by the need to give the reader a broad view of the developments, key concepts, and technologies related to information society evolution, with a focus on the wireless communications and geoinformation technologies and their role in the environment. Giving perspective, it aims at assisting people active in the industry, the public sector, and Earth science fields as well, by providing a base for their continued work and thinking.

PROCEEDINGS OF THE XVII INTERNATIONAL SYMPOSIUM SYMORG 2020

BUSINESS AND ARTIFICIAL INTELLIGENCE

FON Ever since 1989, the Faculty of Organizational Sciences, University of Belgrade, has been the host of SymOrg, an event that promotes scientific disciplines of organizing and managing a business. Traditionally, the Symposium has been an opportunity for its participants to share and exchange both academic and practical knowledge and experience in a pleasant and creative atmosphere. This time, however, due the challenging situation regarding the COVID-19 pandemic, we have decided that all the essential activities planned for the International Symposium SymOrg 2020 should be carried out online between the 7th and the 9th of September 2020. We are very pleased that the topic of SymOrg 2020, "Business and Artificial Intelligence", attracted researchers from different institutions, both in Serbia and abroad. Why is artificial intelligence a disruptive technology? Simply because "it significantly alters the

way consumers, industries, or businesses operate." According to the European Commission document titled *Artificial Intelligence for Europe 2018*, AI is a key disruptive technology that has just begun to reshape the world. The Government of the Republic of Serbia has also recognized the importance of AI for the further development of its economy and society and has prepared an *AI Development Strategy for the period between 2020 and 2025*. The first step has already been made: the Science Fund of the Republic of Serbia, after a public call, has selected and financed twelve AI projects. This year, more than 200 scholars and practitioners authored and co-authored the 94 scientific and research papers that had been accepted for publication in the Proceedings. All the contributions to the Proceedings are classified into the following 11 sections: *Information Systems and Technologies in the Era of Digital Transformation Smart Business Models and Processes Entrepreneurship, Innovation and Sustainable Development Smart Environment for Marketing and Communications Digital Human Resource Management Smart E-Business Quality 4.0 and International Standards Application of Artificial Intelligence in Project Management Digital and Lean Operations Management Transformation of Financial Services Methods and Applications of Data Science in Business and Society* We are very grateful to our distinguished keynote speakers: Prof. Moshe Vardi, Rice University, USA, Prof. Blaž Zupan, University of Ljubljana, Slovenia, Prof. Vladan Devedžić, University of Belgrade, Serbia, Milica Đurić-Jovičić, PhD, Director, Science Fund of the Republic of Serbia, and Harri Ketamo, PhD, Founder & Chairman of HeadAI Ltd., Finland. Also, special thanks to Prof. Dragan Vukmirović, University of Belgrade, Serbia and Prof. Zoran Ševarac, University of Belgrade, Serbia for organizing workshops in fields of Data Science and Machine Learning and to Prof. Rade Matić, Belgrade Business and Arts Academy of Applied Studies and Milan Dobrota, PhD, CEO at Agremo, Serbia, for their valuable contribution in presenting Serbian experiences in the field of AI. The Faculty of Organizational Sciences would to express its gratitude to the Ministry of Education, Science and Technological Development and all the individuals who have supported and contributed to the organization of the Symposium. We are particularly grateful to the contributors and reviewers who made this issue possible. But above all, we are especially thankful to the authors and presenters for making the SymOrg 2020 a success!

AERONAUTICS AND SPACE REPORT OF THE PRESIDENT

GEO-SPATIAL KNOWLEDGE AND INTELLIGENCE

5TH INTERNATIONAL CONFERENCE, GSKI 2017, CHIANG MAI, THAILAND, DECEMBER 8-10, 2017, REVISED SELECTED PAPERS, PART I

Springer This two-volume set (CCIS 848 and CCIS 849) constitutes the thoroughly refereed proceedings of the 5th International Conference *Geo-Spatial Knowledge and Intelligence, GSKI 2017*, held in Chiang Mai, Thailand, in December 2018. The 142 full papers presented were carefully reviewed and selected from 579 submissions. They are organized in topical sections on smart city in resource management and sustainable ecosystem; spatial data acquisition through RS and GIS in resource management and sustainable ecosystem; ecological and environmental data processing and management; advanced geospatial model and analysis for understanding ecological and environmental process; applications of geo-informatics in resource management and sustainable ecosystem.

THE POLITICS OF SPACE

A SURVEY

Routledge The pace of space exploration has long been dictated by political motivations. This book helps to explain why this is so in the post-Cold War era. Combining essays, a glossary of terms, tables and statistics, this new title from Routledge comes as a welcome addition to this increasingly popular topic. The book: covers theories and concepts, as well as current issues gives a background to international and national space agencies contains essays that cover military, commercial and governmental actors in space politics.

NEAR-SPACE REMOTE SENSING

POTENTIAL AND CHALLENGES

Springer Science & Business Media Near-space is defined as the atmospheric region from about 20 kilometer (km) altitude to 100 km altitude above the Earth's surface. It has received much attention in recent years and several types of near-space vehicles are currently being studied, developed, or employed. "Near-Space Remote Sensing: Potential and Challenges" concentrates mainly on the role of near-space vehicles in bridging the gap between satellites and airplanes for microwave remote sensing applications, providing a top-level system description and aiming to encourage further research. Further, this book also describes several potential applications such as passive surveillance, reconnaissance, and high resolution wide swath remote imaging. The book is intended for geographers, transportation engineers and other researchers involved in remote sensing development and applications, in particular for near-space vehicles. Wen-Qin Wang is an assistant professor at the School of Communication and Information Engineering, University of Electronic Science and Technology of China.

AERONAUTICS AND SPACE REPORT OF THE PRESIDENT ... ACTIVITIES

MANUAL OF REGULATIONS AND PROCEDURES FOR FEDERAL RADIO FREQUENCY MANAGEMENT

PROCEEDINGS OF THE FIFTH INTERNATIONAL MOBILE SATELLITE CONFERENCE 1997, IMSC '97

PASADENA, CA, JUNE 16-18, 1997

OBSERVATION OF THE EARTH AND ITS ENVIRONMENT

SURVEY OF MISSIONS AND SENSORS

Springer Science & Business Media Windows-/Macintosh-Version

FEDERAL REGISTER

MEMORANDUM ON OCEAN-AIR TRANSPORTATION

CONTAINING STATEMENT OF ADMIRAL LAND BEFORE THE COMMITTEE ON JANUARY 13, 1944, AND AN ADDRESS BY ADMIRAL LAND BEFORE THE UNITED NATIONS FORUM JANUARY 3, 1944

AEROSPACE AMERICA

RADIO WAVE PROPAGATION AND CHANNEL MODELING FOR EARTH-SPACE SYSTEMS

CRC Press The accurate design of earth-space systems requires a comprehensive understanding of the various propagation media and phenomena that differ depending on frequencies and types of applications. The choice of the relevant channel models is crucial in the design process and constitutes a key step in performance evaluation and testing of earth-space systems. The subject of this book is built around the two characteristic cases of satellite systems: fixed satellites and mobile satellite systems. Radio Wave Propagation and Channel Modeling for Earth-Space Systems discusses the state of the art in channel modeling and characterization of next-generation fixed multiple-antennas and mobile satellite systems, as well as propagation phenomena and fade mitigation techniques. The frequencies of interest range from 100 MHz to 100 GHz (from VHF to W band), whereas the use of optical free-space communications is envisaged. Examining recent research advances in space-time tropospheric propagation fields and optical satellite communication channel models, the book covers land mobile multiple antennas satellite- issues and relative propagation campaigns and stratospheric channel models for various applications and frequencies. It also presents research and well-accepted satellite community results for land mobile satellite and tropospheric attenuation time-series single link and field synthesizers. The book examines aeronautical communications channel characteristics and modeling, relative radio wave propagation campaigns, and stratospheric channel model for various applications and frequencies. Propagation effects on satellite navigation systems and the corresponding models are also covered.

NEVER BEYOND REACH

THE WORLD OF MOBILE SATELLITE COMMUNICATIONS

SCIENTIFIC AND TECHNICAL AEROSPACE REPORTS

JETS AT SEA

NAVAL AVIATION IN TRANSITION, 1945-55

Casemate Publishers As World War Two drew to a close, jet-powered aircraft were beginning to be introduced into service. To take advantage of this major development it was necessary for all the worlds air powers to rethink combat tactics and develop the means of handling these faster and generally larger aircraft in the air, on land and especially at sea. As this modern breed approached and finally broke the sound barrier, so did landing and takeoff speeds. The decade after the war saw rapid developments in the design of both naval aircraft and their seaborne bases the aircraft carrier. The first jet to land aboard a carrier was a modified de Havilland Vampire in 1945 on H.M.S. Ocean. Progress was rapid and the application of British inventions such as the angled flight-deck, steam catapult and mirror landing sight soon became adopted by the major navies of the world. Naval aircraft too became more sophisticated by the addition of high-lift flap systems and strengthened undercarriages to allow them to operate more safely at sea. The author describes the development of these improvements and then their operational advantages in the Korean War and Suez. He goes on to describe the US development of a potential nuclear carrier-borne bomber, the French Navy and its withdrawal from Vietnam in 1954 and then the use of naval aircraft for anti-submarine work.

COMPATIBILITY OF LAND SAR PROCEDURES WITH SEARCH THEORY

The widely-accepted science of search theory as described by Koopman (1946, 1980), Stone (1989) and others was incorporated into the first edition of the National Search and Rescue Manual in 1959 after the U.S. Coast Guard provided the first comprehensive application to civil SAR in the 1950s. Applied search theory quickly gained acceptance by maritime SAR agencies worldwide and has remained in global use ever since. Various practical improvements and modifications to search planning techniques and data have been made over the years, but the application of the underlying theory remains unchanged, as shown in the International Aeronautical and Maritime Search and Rescue Manual (IAMSAR Manual, 1999) and recognized globally as the standard text on aeronautical and maritime SAR operations and methods.

TELECOMMUNICATIONS ENGINEERING AND CONSTRUCTION MANUAL

ESA BULLETIN

MOBILE SATELLITE COMMUNICATIONS

PRINCIPLES AND TRENDS

John Wiley & Sons Demand for Mobile Satellite Service (MSS) is on the increase, with a huge surge of interest in mobile

communications in recent years and high-paced advancements in the supporting system architectures, devices and applications. This thoroughly revised and updated book provides a comprehensive guide to the MSS technologies and emerging trends. It takes a system level approach, giving in-depth treatment of technical and business related issues. The author, a leading professional in the area, draws on his extensive experience in industry and research, to provide the reader with a sound and informed understanding of the technology. Mobile Satellite Communications includes introductory material for the reader new to the field, in addition to exploring prevalent system concepts, architecture, practices and trends for the more experienced. An in-depth review of scientific principles merged with business models and regulatory considerations presents a balanced perspective of commercial mobile satellite systems. This book will be of interest to practicing engineers in mobile satellite communications and mobile broadcasting, research and development professionals working in these areas, mobile satellite service providers and operators. Academics and students studying satellite systems/technology, specialists in other classes of satellite systems, technical and marketing managers, strategists and planners of telecommunication systems: individuals interested in mobile communications, satellite and telecommunications/broadcasting technology will also find this book insightful. Key Features: Comprehensive treatment of mobile satellite communications topics, including radio link aspects, satellite constellations, architectural and operational aspects, as well as business planning models, MSS radio interface standards, spectrum forecast methodologies and system examples. Addresses related themes such as mobile broadcasting, mobile VSATs, search and rescue, and navigation systems. Introduces emerging technologies such as mobile broadband, television broadcasting to handheld units, advanced capacity enhancement techniques, hybrid system architecture concepts, including a rich sample of research topics such as multiple input multiple output, satellite-based ad-hoc networks, and highlights initiatives in the use of Q/V frequency bands. Includes revision questions at the end of each chapter. An accompanying website for interaction (www.satellitesandyou.com).

RULES AND REGULATIONS

HIGH-ALTITUDE PLATFORMS FOR WIRELESS COMMUNICATIONS

John Wiley & Sons Provides an introduction to High-Altitude Platform Stations (HAPS) technology and its applications for wireless communications High-altitude platform stations offer a promising new technology that combines the benefits of terrestrial and satellite communication systems for delivering broadband communications to users at a low cost. They are easily deployable and easy to maintain, which is why they offer a good alternative for network operators who need to find ways to get more coverage to satisfy the increasing demand for more capacity. HAPS are usually balloons, airships or unmanned aerial systems (UAS) located in the stratosphere. An enormous interest has grown worldwide to examine their use not only for broadband communications, but also for emergency services, navigation, traffic monitoring, cellular, etc. Key features include: Unique book focusing on emerging HAPS technology and its applications Provides a thorough overview of the technology including HAPS-based communications systems, antennas for HAPS, radio propagation and channel modelling issues and HAPS networking aspects Presents various HAPS-related projects and initiatives developed throughout the world (North America, Europe and Asia-Pacific) Features a comprehensive overview on both aeronautical and telecommunications regulatory aspects, which will affect the deployment and future developments in the field of HAPS High-Altitude Platform Systems for Wireless Communications will prove essential reading for postgraduate students in the field of HAPS, engineers, developers and designers involved in the design and maintenance of HAPS, aerospace engineers, and communications system planners and researchers.

ARMY AVIATION'S PACIFIC REBALANCE: EVOLUTION TOWARDS MARITIME OPERATIONS - CASE STUDIES OF UPHOLD DEMOCRACY HAITIAN LIBERATION 1994, EAST TIMOR CRISIS

Independently Published U.S. Army Aviation provides essential movement capabilities to maneuver and joint force commanders. Transitioning from exclusively land-based operations to potential maritime operations in the U.S. Pacific command area of responsibility, Army Aviation faces increased demands to overcome geographical complexities to support joint operations. This monograph examines historical maritime operations where Army Aviation's maritime applications provided commanders with increased options to achieve mission success. Army Aviation operations in the maritime domain pose unique challenges which require innovative adaptations of doctrine, organization, and training to overcome these operational challenges. Through continued doctrinal development and joint, multinational training exercises Army Aviation can augment existing maritime capabilities to increase the U.S. military's operational capacity in the U.S. Pacific command area of responsibility. Contents: 1. Introduction 2. Aviation/Amphibious Capability: Doctrine, Organization, Training, and Equipment 3. Case Study #1: Operation Uphold Democracy: Haitian Liberation 1994 4. Case Study #2: Operation Stabilise: East Timor Crisis 1999 5. Case Study #3: Operation Tomodachi: Fukushima Nuclear Disaster 2011 6. Contemporary Multinational Operations: U.S. Army Aviation with Pacific Partners 7. Conclusion In 2011, the United States government introduced the "Pivot to the Pacific" to rebalance its strategic focus following a decade of emphasis on the Middle East and Southwest Asia. To do so, the United States intends to rebalance its diplomatic, economic, and military focus toward increased emphasis on Asia-Pacific regional threats and opportunities. Militarily, the Pacific region's maritime-dominated environment requires reprioritization from the land-based competence earned in Iraq and Afghanistan. The U.S. Pacific Command's (USPACOM) expansive Area of Responsibility (AOR) ranges from dispersed islands to densely populated urban centers. For United States Army Aviation, the Pacific rebalance requires a broadened approach to its core competencies to increase its interoperability between land and maritime environments. U.S. Army Aviation proved its integral capability to project power throughout a land-based operational environment. To match this capability in the U.S. Pacific Command's maritime area of responsibility, U.S. Army Aviation must evolve to maintain its ability to support joint maneuver forces in maritime dominated environments. Operations Iraqi and Enduring Freedom's land-based theaters allowed combat aviation brigades (CABs) to maximize Army rotary wing capabilities via central location. This placement enabled commanders' to project combat forces throughout the depth of the operational environment and maximize centralized support. In future operations, the USPACOM AOR's dispersion will likely impede centralized aviation support in maritime-dominated operational environments. To overcome geographic impediments, the Army develop "innovative and collaborative" approaches to its doctrine, training, and ability to organize to fulfill its core competencies in support the U.S. Pacific Command area of responsibility.

GNSS MARKETS AND APPLICATIONS

Artech House Publishers 1. Introduction 2. A brief history of today's GNSS 3. Future GNSS and SBAS 4. GNSS business and markets 5. Government policies for GNSS 6. Future GNSS markets 7. Air and space applications 8. Maritime applications 9. Land applications 10. Mapping and surveying, geodesy, and timing applications 11. Military applications 12. The GNSS industry.