In recent years, the use of Web-mediated digital technologies has constantly grown in importance, reshaping the communication landscape in all professional activities. Web 2.0 applications and platforms have evolved dramatically, exceeding all expectations, and have had an impact on all areas of activity, from personal and social to political and economic. A crucial role in this radical transformation has been played by social media, i.e. online resources enabling users to connect, interact, and share contents. They have changed social relations profoundly on an individual level, but also in their professional dimensions, transforming the dynamics of how professionals work, share knowledge and relate to each other and to their clients. This book explores online professional blogging and networking platforms, discussing methodological issues involved in analysing webmediated professional communication in a genre- and discourse- analytical perspective, with a focus on the structural and textual properties of genres on the Internet. The discursive objects investigated include professional weblogs, and in particular law blogs, professional groups on Facebook and LinkedIn, and LinkedIn job ads. Among the aspects examined are continuity with pre-existing traditional genres, generic integrity, and the debated

status of social networking sites as platform users' communities of practice. The Complete, Modern Guide to Developing Well-Performing Signal Processing Algorithms In Fundamentals of Statistical Signal Processing, Volume III: Practical Algorithm Development, author Steven M. Kay shows how to convert theories of statistical signal processing estimation and detection into software algorithms that can be implemented on digital computers. This final volume of Kay's threevolume guide builds on the comprehensive theoretical coverage in the first two volumes. Here, Kay helps readers develop strong intuition and expertise in designing well-performing algorithms that solve real-world problems. Kay begins by reviewing methodologies for developing signal processing algorithms, including mathematical modeling, computer simulation, and performance evaluation. He links concepts to practice by presenting useful analytical results and implementations for design, evaluation, and testing. Next, he highlights specific algorithms that have "stood the test of time," offers realistic examples from several key application areas, and introduces useful extensions. Finally, he guides readers through translating mathematical algorithms into MATLAB® code and verifying solutions. Topics covered include Step by step approach to the design of algorithms Comparing and choosing signal and noise models Performance evaluation, metrics, tradeoffs, testing, and documentation Optimal

approaches using the "big theorems" Algorithms for estimation, detection, and spectral estimation Complete case studies: Radar Doppler center frequency estimation, magnetic signal detection, and heart rate monitoring Exercises are presented throughout, with full solutions. This new volume is invaluable to engineers, scientists, and advanced students in every discipline that relies on signal processing; researchers will especially appreciate its timely overview of the state of the practical art. Volume III complements Dr. Kay's Fundamentals of Statistical Signal Processing, Volume I: Estimation Theory (Prentice Hall, 1993; ISBN-13: 978-0-13-345711-7), and Volume II: Detection Theory (Prentice Hall, 1998; ISBN-13: 978-0-13-504135-2).

Required reading for anyone interested in the profound relationship between digital technology and society Digital technology has become an undeniable facet of our social lives, defining our governments, communities, and personal identities. Yet with these technologies in ongoing evolution, it is difficult to gauge the full extent of their societal impact, leaving researchers and policy makers with the challenge of staying up-to-date on a field that is constantly in flux. The Oxford Handbook of Digital Technology and Society provides students, researchers, and practitioners across the technology and social science sectors with a comprehensive overview of the foundations for understanding the various

relationships between digital technology and society. Combining robust computeraided reviews of current literature from the UK Economic and Social Research Council's commissioned project "Ways of Being in a Digital Age" with newly commissioned chapters, this handbook illustrates the upcoming research questions and challenges facing the social sciences as they address the societal impacts of digital media and technologies across seven broad categories: citizenship and politics, communities and identities, communication and relationships, health and well-being, economy and sustainability, data and representation, and governance and security. Individual chapters feature important practical and ethical explorations into topics such as technology and the aging, digital literacies, work-home boundary, machines in the workforce, digital censorship and surveillance, big data governance and regulation, and technology in the public sector. The Oxford Handbook of Digital Technology and Society will equip readers with the necessary starting points and provocations in the field so that scholars and policy makers can effectively assess future research, practice, and policy.

Digital Transmission – A Simulation-Aided Introduction with VisSim/Comm is a book in which basic principles of digital communication, mainly pertaining to the physical layer, are emphasized. Nevertheless, these principles can serve as the

fundamentals that will help the reader to understand more advanced topics and the associated technology. In this book, each topic is addressed in two different and complementary ways: theoretically and by simulation. The theoretical approach encompasses common subjects covering principles of digital transmission, like notions of probability and stochastic processes, signals and systems, baseband and passband signaling, signal-space representation, spread spectrum, multi-carrier and ultra wideband transmission, carrier and symboltiming recovery, information theory and error-correcting codes. The simulation approach revisits the same subjects, focusing on the capabilities of the communication system simulation software VisSim/Comm on helping the reader to fulfill the gap between the theory and its practical meaning. The presentation of the theory is made easier with the help of 357 illustrations. A total of 101 simulation files supplied in the accompanying CD support the simulation-oriented approach. A full evaluation version and a viewer-only version of VisSim/Comm are also supplied in the CD.

ICTs and Sustainable Solutions for the Digital Divide: Theory and Perspectives focuses on Information and Communication Technologies for Development (ICT4D), which includes any technology used for communication and information. This publication researches the social side of computing, the users, and the

design of systems that meet the needs of "ordinary" users.

Organizations, worldwide, have adopted practical and applied approaches for mitigating risks and managing information security program. Considering complexities of a large-scale, distributed IT environments, security should be proactively planned for and prepared ahead, rather than as used as reactions to changes in the landscape. Strategic and Practical Approaches for Information Security Governance: Technologies and Applied Solutions presents high-quality research papers and practice articles on management and governance issues in the field of information security. The main focus of the book is to provide an organization with insights into practical and applied solutions, frameworks, technologies and practices on technological and organizational factors. The book aims to be a collection of knowledge for professionals, scholars, researchers and academicians working in this field that is fast evolving and growing as an area of information assurance

A comprehensive review of position location technology — from fundamental theory to advanced practical applications Positioning systems and location technologies have become significant components of modern life, used in a multitude of areas such as law enforcement and security, road safety and navigation, personnel and object tracking, and many more. Position location

systems have greatly reduced societal vulnerabilities and enhanced the quality of life for billions of people around the globe — yet limited resources are available to researchers and students in this important field. The Handbook of Position Location: Theory, Practice, and Advances fills this gap, providing a comprehensive overview of both fundamental and cutting-edge techniques and introducing practical methods of advanced localization and positioning. Now in its second edition, this handbook offers broad and in-depth coverage of essential topics including Time of Arrival (TOA) and Direction of Arrival (DOA) based positioning, Received Signal Strength (RSS) based positioning, network localization, and others. Topics such as GPS, autonomous vehicle applications, and visible light localization are examined, while major revisions to chapters such as body area network positioning and digital signal processing for GNSS receivers reflect current and emerging advances in the field. This new edition: Presents new and revised chapters on topics including localization error evaluation, Kalman filtering, positioning in inhomogeneous media, and Global Positioning (GPS) in harsh environments Offers MATLAB examples to demonstrate fundamental algorithms for positioning and provides online access to all MATLAB code Allows practicing engineers and graduate students to keep pace with contemporary research and new technologies Contains numerous

application-based examples including the application of localization to drone navigation, capsule endoscopy localization, and satellite navigation and localization Reviews unique applications of position location systems, including GNSS and RFID-based localization systems The Handbook of Position Location: Theory, Practice, and Advances is valuable resource for practicing engineers and researchers seeking to keep pace with current developments in the field, graduate students in need of clear and accurate course material, and university instructors teaching the fundamentals of wireless localization.

This accessible guide contains everything you need to get up to speed on the theory and implementation of MIMO techniques.

19 years GATE Electronics & Communication Engineering Topic-wise Solved Papers (2000 - 18) The book covers fully solved past 19 years question papers from the year 2000 to the year 2018. The salient features are: The book has 3 sections - General Aptitude, Engineering Mathematics and Technical Section. Each section has been divided into Topics. Each chapter has 3 parts - Quick Revision Material, Past questions and the Solutions. The Quick Revision Material list the main points and the formulas of the chapter which will help the students in revising the chapter quickly. The Past questions in each chapter have been divided into 5 types: 1. Conceptual MCQs 2. Problem based MCQs 3. Common Data Type MCQs 4. Linked Answer Type MCQs 5.

Numerical Answer Questions The questions have been followed by detailed solutions to each and every question. In all the book contains 2000+ MILESTONE questions for GATE Electronics & Communication Engineering.

Offers concise, practical knowledge on modern communication systems to help students transition smoothly into the workplace and beyond This book presents the most relevant concepts and technologies of today's communication systems and presents them in a concise and intuitive manner. It covers advanced topics such as Orthogonal Frequency-Division Multiplexing (OFDM) and Multiple-Input Multiple-Output (MIMO) Technology, which are enabling technologies for modern communication systems such as WiFi (including the latest enhancements) and LTE-Advanced. Following a brief introduction to the field, Digital Communication for Practicing Engineers immerses readers in the theories and technologies that engineers deal with. It starts off with Shannon Theorem and Information Theory, before moving on to basic modules of a communication system, including modulation, statistical detection, channel coding, synchronization, and equalization. The next part of the book discusses advanced topics such as OFDM and MIMO, and introduces several emerging technologies in the context of 5G cellular system radio interface. The book closes by outlining several current research areas in digital communications. In addition, this text: Breaks down the subject into self-contained lectures, which can be read individually or as a whole Focuses on the pros and cons of widely used techniques, while providing

references for detailed mathematical analysis Follows the current technology trends, including advanced topics such as OFDM and MIMO Touches on content this is not usually contained in textbooks such as cyclo-stationary symbol timing recovery, adaptive self-interference canceler, and Tomlinson-Harashima precoder Includes many illustrations, homework problems, and examples Digital Communication for Practicing Engineers is an ideal guide for graduate students and professionals in digital communication looking to understand, work with, and adapt to the current and future technology.

School counseling strategies that promote student success! So much is expected to prepare today's students for success—academic achievement, career and college readiness, emotional and social competency, just to name a few. School counselors can make an enormous positive difference in children's lives. In a succinct Q&A format, the authors provide school counselors and educational leaders with: 101 solutions to common counseling issues across the K–12 spectrum on topics ranging from data-driven counseling to bullying, collaboration, and equity Stories of school counselors and educational leaders who have successfully implemented these solutions Numerous print and digital resources for further exploration

"This set of books represents a detailed compendium of authoritative, research-based entries that define the contemporary state of knowledge on technology"--Provided by publisher.

Describing digital communications principles required for comprehension, analysis, design, advanced R&D and maintenance/operation of present and future generations of digital wireless, cellular and mobile systems, this book presents architectures, hardware and software designs and solutions to common problems. Includes market data and forecast of world-wide growth of wireless systems.

Offers the most complete, up-to-date coverage available on the principles of digital communications. Focuses on basic issues, relating theory to practice wherever possible. Numerous examples, worked out in detail, have been included to help the reader develop an intuitive grasp of the theory. Topics covered include the sampling process, digital modulation techniques, error-control coding, robust quantization for pulse-code modulation, coding speech at low bit radio, information theoretic concepts, coding and computer communication. Because the book covers a broad range of topics in digital communications, it should satisfy a variety of backgrounds and interests. ??Holt,Rinchart and Winston 1983??????. -- ??: Modern digital and analog communication systems/B. P. Lathi

The director of communication is an impassioned profession that discovers which strategies are the best and the most intelligent. There are few manuals, and there are some that offer general and sparsely updated information about the change that new technologies imply. We find the literature isolated that can be directly useful. However, we will say that there is no single recipe for DirCom or $\frac{Page}{Page}$ 11/24

communication consultants. Each one will offer different models according to the variables or factors that seem to them to be able to rectify the direction of a company according to his or her personal mood.

Electrical Trade Principles is a theoretical text that addresses the three key qualifications in the UE11 Electrotechnology Training Package; Certificate II in Electrotechnology (Career Start), Certificate III in Electrotechnology Electrician; and Certificate IV in Electrotechnology – Systems Electrician. The text helps students progress through the course and satisfactorily complete the Capstone Assessment, making them eligible to apply for an electrician's licence. Premium online teaching and learning tools are available on the MindTap platform. Learn more about the online tools cengage.com.au/learning-solutions The best fully integrated study system available for Exam N10-005 Prepare for CompTIA Network+ Exam N10-005 with McGraw-Hill—a Gold-Level CompTIA Authorized Partner offering Authorized CompTIA Approved Quality Content to give you the competitive edge on exam day. With hundreds of practice questions and hands-on exercises, CompTIA Network+ Certification Study Guide, Fifth Edition covers what you need to know--and shows you how to prepare--for this challenging exam. 100% complete coverage of all official objectives for exam N10-005 Exam Readiness checklist--you're ready for the exam when all

objectives on the list are checked off Inside the Exam sections highlight key exam topics covered Two-Minute Drills for quick review at the end of every chapter Simulated exam questions match the format, tone, topics, and difficulty of the real exam Covers all the exam topics, including: Basic Network Concepts * Network Protocols and Standards * Networking Components * TCP/IP Fundamentals * TCP/IP Utilities * Configuring Network Services * Wireless Networking * Remote Access and VPN Connectivity * Wide Area Network Technologies * Implementing a Network * Maintaining and Supporting a Network * Network Security * Troubleshooting the Network CD-ROM includes: Complete MasterExam practice testing engine, featuring: One full practice exam Detailed answers with explanations Score Report performance assessment tool More than one hour of video training from the author Glossary with key terms Lab Book PDF with solutions with free online registration: Bonus downloadable MasterExam practice test Adobe Digital Editions free eBook download (subject to Adobe's system requirements)

This volume interrogates the intertwining of the local and the digital in environmental communication. It starts by introducing a wave metaphor to tease out major shifts in the field, and situates the intersections of local places and digital networks in the beginning of a third wave. Investigations that feature the

centrality of place and digital communication platforms show how we today, as researchers and practitioners, communicate the environment. Contributions identify the need for critical approaches that engage with the wider consequences of this changing media landscape, unpacking local and global tensions in environmental communication research. This empirical case study collection from different parts of the world shows that environmental activists and citizens creatively use digital technologies for campaign purposes. It identifies new environmental communication challenges and opportunities, as well as practices, of environmental activists, NGOs, citizens and local communities, in the fight for social and environmental justice.

This book discusses the fundamental aspects of multiple-source Optical Wireless Applications, including Visible Light Communications (VLC). Moreover, the authors explore VLC performance in several conventional household layouts and investigate the impact of these layouts on VLC. Multiple sources increase multipath distortion. Multi-input- Multi-Output (MIMO) techniques will be included as they provide either reliability improvement or bandwidth efficiency increase. Based on these topics, the book further explores VLC performance in real applications, such as aircraft cabin wireless communications. In addition, the authors describe the Lambertian emitting pattern of LEDs and the diffused

features in indoor environments. Based on the theory, they trace light pulses to establish a MIMO indoor wireless channel model on specific sources layout. Next, they generate test data to simulate BER distribution in a room and calculate the outage. Furthermore, addresses the performance improvement when MIMO techniques are applied. Lastly, the authors investigate VLC performance in specific applications, including for aircraft on-board wireless communications. Finally, the pitfalls of MIMO systems are discussed.

"The International Encyclopedia of Digital Communication and Society" offers critical assessments of theoretical and applied research on digitally-mediated communication, a central area of study in the 21st century. - Examines topics with unprecedented breadth and depth, with the aim of bringing together international and interdisciplinary perspectives - Organized in an accessible A-Z format with over 150 entries on key topics ranging from 2,000 to 10,000 words -Addresses a full range of topics including digitally-mediated social media, commercial applications and online gaming, to law and policy analysis and information and communication technologies for development - Published with a regularly updated online edition which will ensure readers are kept abreast of the latest developments in research- Part of "The Wiley Blackwell-ICA International Encyclopedias of Communication" series, published in conjunction with the

"International Communication Association"

Digital Communications is a classic book in the area that is designed to be used as a senior or graduate level text. The text is flexible and can easily be used in a one semester course or there is enough depth to cover two semesters. Its comprehensive nature makes it a great book for students to keep for reference in their professional careers. This all-inclusive guide delivers an outstanding introduction to the analysis and design of digital communication systems. Includes expert coverage of new topics: Turbocodes, Turboequalization, Antenna Arrays, Digital Cellular Systems, and Iterative Detection. Convenient, sequential organization begins with a look at the history and classification of channel models and builds from there.

"This self-study text for practicing engineers and scientists explains the mathematical tools that are required for advanced technological applications, but are often not covered in undergraduate school. The authors (University of Central Florida) describe special functions, matrix methods, vector operations, the transformation laws of tensors, the analytic functions of a complex variable, integral transforms, partial differential equations, probability theory, and random processes. The book could also serve as a supplemental graduate text."--Memento.

Whether you are a music publisher or songwriter looking to maximize the value of your music catalog, or a producer, ad agency, or internet music service seeking to clear music rights for products, performances, and other uses, the new Fifth Edition of Kohn On Music Licensing offers you comprehensive and authoritative quidance. This one-of-a-kind resource takes you through the various music licensing processes, type-by-type and step-by-step. In clear, coherent language, the author, a seasoned attorney and executive in both the entertainment and hightech industries, provides detailed explanations of the many kinds of music licenses, identifies the critical issues addressed in each, and offers valuable strategy and guidance to both rights owners and prospective licensees. Kohn on Music Licensing, Fifth Edition: Walks the reader through the history of the music publishing business, from Tin Pan Alley to the user-generated content phenomena of the present. Dissects the songwriter agreement, providing the reader with a clause-by-clause analysis and offering the best negotiating strategies to achieve the best possible outcome for their clients. Analyses the newly enacted Music Modernization Act, signed into law in September 2018, which significantly changed the way music is licensed in sound recordings in the United States. Guides the reader through the complexities of co-publishing agreements, administration agreements, and international subpublishing

agreements, with a report on the rapidly changing music licensing landscape in Europe. Takes on the intricacies of licensing music in sound recordings, from the traditional CD format to the newer delivery methods, including downloads, streams, ringtones and ringbacks--including the rates and terms used in the U.S., Canada and the United Kingdom. Confronts the pitfalls of licensing music for audiovisual works (synchronization licenses) using history as a guide, from the early talkies through streaming internet content. Explores new media and its impact on the licensing process. Technological developments have forced the industry to rethink licenses when dealing with video games, computer software, karaoke, and digital print (including downloadable sheet music, lyric database websites, and digital guitar tabs.. Sizes up the digital sampling controversy and offers up suggestions for negotiating licenses for digital samples. Explores the ever-evolving concept of Fair Use and its application to the music industry. Provides the reader with a look at the landscape of licensing fees, including "going rates" for synch, print, radio & TV advertising, new media, and other licenses, to assist in negotiating the best rates for their clients. Proven tips and suggestions, along with the most up-to-date analysis, are given for the technical aspects of music licensing, from the perspective of both the rights owners and prospective licensees, including How to "clear" a license Advice on maximizing

the value of your music copyrights Formalities of licensing Duration of copyright, renewal and termination of grants Typical fees And much more Every chapter of Kohn on Music Licensing has been completely updated in this expanded Fifth Edition. New topics include: The Music Modernization Act, enacted in 2018, which changed the way music is licensed in sound recordings in the United States. Mechanical license fee regimes, including rates for ringtones and ondemand streaming for U.S., Canada, and U.K. Webcasting rates in the U.S., Canada, and U.K. A discussion of the right of publicity in the context of digital sampling. Print License chapter has an updated discussion on adaptation right as well as examines terms for digital print, digital guitar tabs, etc. Custom musical arrangements are also covered. Synch License chapter now covers terms for downloading and streaming of video. Previous Edition: Kohn on Music Licensing, Fourth Edition, ISBN: 9780735590908

"Number Theory in Science and Communication" is a well-known introduction for non-mathematicians to this fascinating and useful branch of applied mathematics. It stresses intuitive understanding rather than abstract theory and highlights important concepts such as continued fractions, the golden ratio, quadratic residues and Chinese remainders, trapdoor functions, pseudo primes and primitive elements. Their applications to problems in the real world are one of the

main themes of the book. This revised fifth edition is augmented by recent advances in coding theory, permutations and derangements and a chapter in quantum cryptography. From reviews of earlier editions — "I continue to find [Schroeder's] Number Theory a goldmine of valuable information. It is a marvelous book, in touch with the most recent applications of number theory and written with great clarity and humor.' Philip Morrison (Scientific American) "A light-hearted and readable volume with a wide range of applications to which the author has been a productive contributor — useful mathematics outside the formalities of theorem and proof." Martin Gardner

The emergence of 'new media' and social media is widely discussed in contemporary society. However, media and public communication are mostly analyzed within particular theoretical frameworks and within specific disciplinary fields. Such approaches have created polarized views on media and communication, and fail to create an understanding of the interdependencies between these fields. This book expertly synthesizes competing theories and disciplinary viewpoints, integrates scholarly and cutting edge research, and examines international data from fast-growing markets including China, to provide a comprehensive, holistic view of the twenty-first century (r) evolution in media and public communication. The book identifies how the changes are

located in practices rather than technologies and that these practices are emergent in highly significant ways. Engaging and accessible, the book is essential reading for media scholars and communication professionals, and a valuable text for courses in media studies, journalism, advertising, public relations, and organisational and political communication. ???????????????????????????;AM, FM???????;????????????????????? This text is suitable for students with or without prior knowledge of probability theory. Only after laying a solid foundation in how communication systems work do the authors delve into analyses that require probability theory and random processes. Revised and updated throughout, the fifthedition features over 200 fully worked-through examples incorporating current technology, MATLAB codes throughout, and a full review of key signals and systems concepts. The book provides Step-by-step Chapter-wise Solutions to the 3 Most Important requirements of the students - NCERT Book + Exemplar Book + Past 10 Years Solutions for CBSE Class 12. The 5th Edition of the book is divided into 3 sections. • Section 1 - NCERT Exercise - consists of solutions to all Intext and chapter exercises. • Section 2 - Past Year Questions of Past 10 years with Solutions. • Section 3 - Exemplar Problems - Solutions to select NCERT Exemplar problems. The contribution of tourism to create an inclusive society requires the adoption of new

approaches and strategies that promote the accessibility of tourism destinations, allowing all people, regardless of their health condition, to enjoy tourism experiences. To accomplish this objective, it is of utmost relevance to promote the active involvement of all stakeholders of the tourism system (demand, supply, government entities, and educational institutions) in the creation of accessible and adapted tourism products. However, the scarce literature in this area suggests that the people working in the tourism industry are not usually aware of several needs and travel constraints of persons with disabilities and that the information delivered by traditional information sources to this market is frequently inadequate, inaccurate, or incomplete. Therefore, the information and communication technologies (ICTs) may have a crucial role to overcome the several travel constraints that these people face to plan and carry out a tourism trip as well as to enable supply agents to develop accessible tourism products. Despite this, although in recent years research regarding accessible tourism has increased, the number of studies on the contributions of ICTs for the development of accessible research is scarce. ICT Tools and Applications for Accessible Tourism provides theoretical and practical contributions for accessible tourism in the growing tourism market for social responsibility issues and as an excellent business opportunity. Chapters within this critical reference source cover the academic discussion of global accessible tourism, increased knowledge of disabilities, ICTs that can be used, and emerging technologies. This book is intended for all practitioners in the tourism industry

along with IT specialists, government officials, policymakers, marketers, researchers, academicians, and students who are interested in the latest tools, technologies, and research on accessible tourism.

This best-selling, easy to read book offers the most complete discussion on the theories and principles behind today's most advanced communications systems. Throughout, Haykin emphasizes the statistical underpinnings of communication theory in a complete and detailed manner. Readers are guided though topics ranging from pulse modulation and passband digital transmission to random processes and error-control coding. The fifth edition has also been revised to include an extensive treatment of digital communications.

The limitations of satellites create a large gap in assistive directional technologies, especially indoors. The methods and advances in alternate directional technologies is allowing for new systems to fill the gaps caused by the limitations of GPS systems. Positioning and Navigation in Complex Environments is a critical scholarly resource that examines the methodologies and advances in technologies that allow for indoor navigation. Featuring insight on a broad scope of topics, such as multipath mitigation, Global Navigation Satellite System (GNSS), and multi-sensor integration, this book is directed toward data scientists, engineers, government agencies, researchers, and graduate-level students.

"This book should be used by human resource managers, corporate educators,

instructional designers, consultants and researchers who want to discover how people use virtual realities for corporate education"--Provided by publisher.

Features more than seven thousand entries covering topics, terms, and concepts in math, science, and technology.

Networking Explained 2e offers a comprehensive overview of computer networking, with new chapters and sections to cover the latest developments in the field, including voice and data wireless networking, multimedia networking, and network convergence. Gallo and Hancock provide a sophisticated introduction to their subject in a clear, readable format. These two top networking experts answer hundreds of questions about hardware, software, standards, and future directions in network technology. Wireless networks Convergence of voice and data Multimedia networking Copyright: ca7d4734ffc811a67757ecd74904e877