

Data And Computer Communications Eighth Edition

Transform your students into smart, savvy consumers of the media. *Mass Communication: Living in a Media World* (Ralph E. Hanson) provides students with comprehensive yet concise coverage of all aspects of mass media, along with insightful analysis, robust pedagogy, and fun, conversational writing. In every chapter of this bestselling text, students will explore the latest developments and current events that are rapidly changing the media landscape. This newly revised Sixth Edition is packed with contemporary examples, engaging infographics, and compelling stories about the ways mass media shape our lives. From start to finish, students will learn the media literacy principles and critical thinking skills they need to become savvy media consumers.

Annotation A comprehensive guide to the technology underlying drives, motors and control units, this title contains a wealth of technical information for the practising drives and electrical engineer.

For a one-semester undergraduate course in operating systems for computer science, computer engineering, and electrical engineering majors. Winner of the 2009 Textbook Excellence Award from the Text and Academic Authors Association (TAA)! *Operating Systems: Internals and Design Principles* is a comprehensive and unified introduction to operating systems. By using several innovative tools, Stallings makes it possible to understand critical core concepts that can be fundamentally challenging. The new edition includes the implementation of web based animations to aid visual learners. At key points in the book, students are directed to view an animation and then are provided with assignments to alter the animation input and analyze the results. The concepts are then enhanced and supported by end-of-chapter case studies of UNIX, Linux and Windows Vista. These provide students with a solid understanding of the key mechanisms of modern operating systems and the types of design tradeoffs and decisions involved in OS design. Because they are embedded into the text as end of chapter material, students are able to apply them right at the point of discussion. This approach is equally useful as a basic reference and as an up-to-date survey of the state of the art.

Think back to a time when paramedics didn't exist. When "drivers" simply brought injured patients to the hospital. When the EMS industry was in its infancy. A time before Nancy Caroline. Dr. Caroline's work transformed EMS and the entire paramedic field. She created the first national standard curriculum for paramedic training in the United States. She also wrote the first paramedic textbook: *Emergency Care in the Streets*. The impact that Dr. Caroline had on EMS and health care spanned across the U.S. and abroad. From establishing EMS systems to training paramedics, to providing better nourishment and health care for orphans, her work had a profound impact on humanity. Throughout her life, Dr. Caroline brought a sense of excitement, joy, and humor to her work. The American Academy of Orthopaedic Surgeons is proud to continue Dr. Caroline's legacy. Her sense of excitement and humor live on in this text, which is dedicated to her. The Sixth Edition honors Dr. Caroline's work with a clear, fun, understandable writing style for which she was known. Welcome back a familiar training companion to your classroom! Say hello to Sidney Sinus, AV Abe, and a cast of memorable characters and amusing anecdotes. Make learning for your students more fun!

The book constitutes selected high quality papers presented in International Conference on Computing, Power and Communication Technologies 2018 (GUCON 2018) organised by Galgotias University, India, in September 2018. It discusses issues in electrical, computer and electronics engineering and technologies. The selected papers are organised into three sections - cloud computing and computer networks; data mining and big data analysis; and bioinformatics and machine learning. In-depth discussions on various issues under these topics provides an interesting compilation for researchers, engineers, and students.

Business Data Communications, 6/e, is ideal for use in Business Data Communications, Data Communications, and introductory Networking for Business courses. *Business Data Communications, 6/e*, covers the fundamentals of data communications, networking, distributed applications, and network management and security. Stallings presents these concepts in a way that relates specifically to the business environment and the concerns of business management and staff, structuring his text around requirements, ingredients, and applications. While making liberal use of real-world case studies and charts and graphs to provide a business perspective, the book also provides the student with a solid grasp of the technical foundation of business data communications. Throughout the text, references to the interactive, online animations supply a powerful tool in understanding complex protocol mechanisms. The Sixth Edition maintains Stallings' superlative support for either a research projects or modeling projects component in the course. The diverse set of projects and student exercises enables the instructor to use the book as a component in a rich and varied learning experience and to tailor a course plan to meet the specific needs of the instructor and students.

Network Management: Principles And Practice is a reference book that comprehensively covers various theoretical and practical concepts of network management. It is divided into four units. The first unit gives an overview of network management. The

Longlisted for the National Book Award New York Times Bestseller A former Wall Street quant sounds an alarm on the mathematical models that pervade modern life -- and threaten to rip apart our social fabric We live in the age of the algorithm. Increasingly, the decisions that affect our lives--where we go to school, whether we get a car loan, how much we pay for health insurance--are being made not by humans, but by mathematical models. In theory, this should lead to greater fairness: Everyone is judged according to the same rules, and bias is eliminated. But as Cathy O'Neil reveals in this urgent and necessary book, the opposite is true. The models being used today are opaque, unregulated, and uncontestable, even when they're wrong. Most

troubling, they reinforce discrimination: If a poor student can't get a loan because a lending model deems him too risky (by virtue of his zip code), he's then cut off from the kind of education that could pull him out of poverty, and a vicious spiral ensues. Models are propping up the lucky and punishing the downtrodden, creating a "toxic cocktail for democracy." Welcome to the dark side of Big Data. Tracing the arc of a person's life, O'Neil exposes the black box models that shape our future, both as individuals and as a society. These "weapons of math destruction" score teachers and students, sort resumes, grant (or deny) loans, evaluate workers, target voters, set parole, and monitor our health. O'Neil calls on modelers to take more responsibility for their algorithms and on policy makers to regulate their use. But in the end, it's up to us to become more savvy about the models that govern our lives. This important book empowers us to ask the tough questions, uncover the truth, and demand change. -- Longlist for National Book Award (Non-Fiction) -- Goodreads, semi-finalist for the 2016 Goodreads Choice Awards (Science and Technology) -- Kirkus, Best Books of 2016 -- New York Times, 100 Notable Books of 2016 (Non-Fiction) -- The Guardian, Best Books of 2016 -- WBUR's "On Point," Best Books of 2016: Staff Picks -- Boston Globe, Best Books of 2016, Non-Fiction

For courses in Language and Culture, Anthropological Linguistics, and Language and Communication. Using data from cultures and languages throughout the world to highlight both similarities and differences in human languages this text explores the many interconnections among language, culture, and communicative meaning. It examines the multi-faceted meanings and uses of language and emphasizes the ways that language encapsulates speakers' meanings and intentions.

The protocols and standards for networking are numerous and complex. Multivendor internetworking, crucial to present day users, requires a grasp of these protocols and standards. Data and Computer Communications: Networking and Internetworking, a comprehensive text/reference, brings clarity to all of the complex issues involved in networking activity, providing excellent instruction for students and an indispensable reference for practitioners. This systematic work answers a vast array of questions about overall network architecture, design, protocols, and deployment issues. It offers a practical, thorough treatment of the applied concepts of data and computer communication systems, including signaling basics, transmission of digital signals, and layered architecture. The book features in-depth discussions of integrated digital networks, integrated services digital networks, and high-speed networks, including currently evolving technologies, such as ATM switching, and their applications in multimedia technology. It also presents the state-of-the-art in Internet technology, its services, and implementations. The balance of old and new networking technologies presents an appealing set of topics for both undergraduate students and computer and networking professionals. This book presents all seven layers of OSI-based networks in great detail, covering services, functions, design issues, interfacing, and protocols. With its introduction to the basic concepts and practical aspects of the field, Data and Computer Communications: Networking and Internetworking helps you keep up with the rapidly growing and dominating computer networking technology.

Appropriate for a first course on computer networking, this textbook describes the architecture and function of the application, transport, network, and link layers of the internet protocol stack, then examines audio and video networking applications, the underpinnings of encryption and network security, and the key issues of network management. This comprehensive guide details available internetworking alternatives. It provides the reader with the most current technologies for WANS and teaches how to effectively implement these technologies on a network.

Effective science teaching requires creativity, imagination, and innovation. In light of concerns about American science literacy, scientists and educators have struggled to teach this discipline more effectively. Science Teaching Reconsidered provides undergraduate science educators with a path to understanding students, accommodating their individual differences, and helping them grasp the methods--and the wonder--of science. What impact does teaching style have? How do I plan a course curriculum? How do I make lectures, classes, and laboratories more effective? How can I tell what students are thinking? Why don't they understand? This handbook provides productive approaches to these and other questions. Written by scientists who are also educators, the handbook offers suggestions for having a greater impact in the classroom and provides resources for further research.

Written by professionals for professionals, this book was originally published as a limited private edition used by engineers, mathematicians, and physicians at ITT. Its title was Reference Data for Radio Engineers. 50 years later, it is still the familiar and dependable reference for engineers worldwide. In this completely updated Eighth Edition, the title has changed to reflect the range of new disciplines. The scope of coverage has been greatly expanded to include data on radio technology, as well as digital electronics, computers, and communications. The result is the combined effort of more than seventy engineers, scientists, educators, and other recognized specialists. You hold in your hands the most respected, reliable, and indispensable reference tool for all technical professionals. No matter what field you work in, this is a book you're sure to refer to again and again.

Reference Data for Engineers is the most respected, reliable, and indispensable reference tool for technical professionals around the globe. Written by professionals for professionals, this book is a complete reference for engineers, covering a broad range of topics. It is the combined effort of 96 engineers, scientists, educators, and other recognized specialists in the fields of electronics, radio, computer, and communications technology. By providing an abundance of information on essential, need-to-know topics without heavy emphasis on complicated mathematics, Reference Data for Engineers is an absolute "must-have" for every engineer who requires comprehensive electrical, electronics, and communications data at his or her fingertips. Featured in the Ninth Edition is updated coverage on intellectual property and patents, probability and design, antennas, power electronics, rectifiers, power supplies, and properties of materials. Useful information on units, constants and conversion factors, active filter design, antennas, integrated circuits, surface acoustic wave design, and digital signal processing is also included. The Ninth Edition also offers new knowledge in the fields of satellite technology, space communication, microwave science, telecommunication, global positioning systems, frequency data, and radar. * Widely acclaimed as the most practical reference ever published for a wide range of electronics and computer professionals, from technicians through post-graduate engineers. * Provides a great way to learn or review the basics of various technologies, with a minimum of tables, equations, and other heavy math.

This book covers neural networks with special emphasis on advanced learning methodologies and applications. It includes practical issues of weight initializations, stalling of learning, and escape from a local minima, which have not been covered by many existing books in this area. Additionally, the book highlights the important feature selection problem, which baffles many neural networks practitioners because of the difficulties handling large datasets. It also contains several interesting IT, engineering and bioinformatics applications.

Thanks to inexpensive computers and data communications, the speed and volume of human communication are exponentially greater than they were even a quarter-century ago. Not since the advent of the

telephone and telegraph in the nineteenth century has information technology changed daily life so radically. We are in the midst of what Gerald Brock calls a second information revolution. Brock traces the complex history of this revolution, from its roots in World War II through the bursting bubble of the Internet economy. As he explains, the revolution sprang from an interdependent series of technological advances, entrepreneurial innovations, and changes to public policy. Innovations in radar, computers, and electronic components for defense projects translated into rapid expansion in the private sector, but some opportunities were blocked by regulatory policies. The contentious political effort to accommodate new technology while protecting beneficiaries of the earlier regulated monopoly eventually resulted in a regulatory structure that facilitated the explosive growth in data communications. Brock synthesizes these complex factors into a readable economic history of the wholesale transformation of the way we exchange and process information.

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Reviews of this book: The Second Information Revolution is important reading for anyone who needs to understand the functioning of American telecommunications, either to be able to analyse today's financial markets or to understand or influence public policy in this area. --Wendy M. Grossman, Times Higher Education Supplement [UK] Reviews of this book: Brock traces a phenomenon he refers to as the 'second information revolution.' According to Brock, there have been two times in history when information technology has dramatically changed daily life. The first 'information revolution' occurred with the advent of the telephone and telegraph, which made communication less expensive and more readily available. The second information revolution is currently in progress...A concise, thorough, and well-written history of the transformation in exchanging and processing of information. --K. A. Coombs, Choice

Introduction, datacommunications, information theory, introduction to local area networks. Internet protocols ...

The mystery is revealed at last in detailed color diagrams and explanations, graphically depicting the technologies that make the Internet work and how they fit together. You'll be able to understand and even one-up your computer geek friends after reading chapters on the Internet's underlying architecture, communication on the Internet, how the Web works, multimedia, and security and parental controls. For anyone interested in the Internet. Annotation copyrighted by Book News, Inc., Portland, OR

Business Data Communications and Security covers the fundamentals of data communications, networking, distributed applications, and network management and security. These concepts are presented in a way that relates specifically to the business environment and the concerns of business management and staff. While making liberal use of real-world case studies and charts and graphs to provide a business perspective, the book also provides the student with a solid grasp of the technical foundation of business data communications. The diverse set of projects and student exercises enables the instructor to use the book as a component in a rich and varied learning experience and to tailor a course plan to meet the specific needs of the instructor and students. The Seventh edition features a new co-author, Dr. Thomas L. Case, Professor and Chair of the Department of Information Systems at Georgia Southern University. New coverage of security-related issues is included in relevant places throughout the book to meet the needs of the IT/IS schools using this book and the growing emphasis on network security. Additionally, the Seventh edition now aligns with the ACM/AIS IS 2010 curriculum model. Data and Computer Communications, Eighth Edition offers a clear, comprehensive, and unified view of the entire fields of data communications, networking, and protocols. William Stallings organizes this massive subject into small, comprehensible elements, building a complete survey of the state-of-the-art, one piece at a time. Stallings has substantially revised this international best-seller to reflect today's latest innovations, from WiFi and 10 Gbps Ethernet to advanced congestion control and IP performance metrics.

This textbook takes a unified view of the fundamentals of wireless communication and explains cutting-edge concepts in a simple and intuitive way. An abundant supply of exercises make it ideal for graduate courses in electrical and computer engineering and it will also be of great interest to practising engineers.

The field of visible light communication (VLC) has diverse applications to the end user including streaming audio, video, high-speed data browsing, voice over internet and online gaming. This comprehensive textbook discusses fundamental aspects, research activities and modulation techniques in the field of VLC. Visible Light Communication: A Comprehensive Theory and Applications with MATLAB® discusses topics including line of sight (LOS) propagation model, non-line of sight (NLOS) propagation model, carrier less amplitude and phase modulation, multiple-input-multiple-output (MIMO), non-linearities of optical sources, orthogonal frequency-division multiple access, non-orthogonal multiple access and single-carrier frequency-division multiple access in depth. Primarily written for senior undergraduate and graduate students in the field of electronics and communication engineering for courses on optical wireless communication and VLC, this book: Provides up-to-date literature in the field of VLC Presents MATLAB codes and simulations to help readers understand simulations Discusses applications of VLC in enabling vehicle to vehicle (V2V) communication Covers topics including radio frequency (RF) based wireless communications and VLC Presents modulation formats along with the derivations of probability of error expressions pertaining to different variants of optical OFDM

Computer and Communication Networks, Second Edition, explains the modern technologies of networking and communications, preparing you to analyze and simulate complex networks, and to design cost-effective networks for emerging requirements. Offering uniquely balanced coverage of basic and advanced topics, it teaches through case studies, realistic examples and exercises, and intuitive illustrations. Nader F. Mir establishes a solid foundation in basic networking concepts; TCP/IP schemes; wireless and LTE networks; Internet applications, such as Web and e-mail; and network security. Then, he delves into both network analysis and advanced networking protocols, VoIP, cloud-based multimedia networking, SDN, and virtualized networks. In this new edition, Mir provides updated, practical, scenario-based

information that many networking books lack, offering a uniquely effective blend of theory and implementation. Drawing on extensive field experience, he presents many contemporary applications and covers key topics that other texts overlook, including P2P and voice/video networking, SDN, information-centric networking, and modern router/switch design. Students, researchers, and networking professionals will find up-to-date, thorough coverage of Packet switching Internet protocols (including IPv6) Networking devices Links and link interfaces LANs, WANs, and Internetworking Multicast routing, and protocols Wide area wireless networks and LTE Transport and end-to-end protocols Network applications and management Network security Network queues and delay analysis Advanced router/switch architecture QoS and scheduling Tunneling, VPNs, and MPLS All-optical networks, WDM, and GMPLS Cloud computing and network virtualization Software defined networking (SDN) VoIP signaling Media exchange and voice/video compression Distributed/cloud-based multimedia networks Mobile ad hoc networks Wireless sensor networks Key features include More than three hundred fifty figures that simplify complex topics Numerous algorithms that summarize key networking protocols and equations Up-to-date case studies illuminating concepts and theory Approximately four hundred exercises and examples honed over Mir's twenty years of teaching networking

Balancing the most technical concepts with practical everyday issues, DATABASE COMMUNICATIONS AND COMPUTER NETWORKS, 8e provides thorough coverage of the basic features, operations, and limitations of different types of computer networks--making it the ideal resource for future business managers, computer programmers, system designers, as well as home computer users. Offering a comprehensive introduction to computer networks and data communications, the book includes coverage of the language of computer networks as well as the effects of data communications on business and society. It provides full coverage of wireless technologies, industry convergence, compression techniques, network security, LAN technologies, VoIP, and error detection and correction. The Eighth Edition also offers up-to-the-minute coverage of near field communications, updated USB interface, lightning interface, and IEEE 802.11 ac and ad wireless standards, firewall updates, router security problems, the Internet of Things, cloud computing, zero-client workstations, and Internet domain names. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Like its predecessors, this fully updated Fifth Edition of Local and Metropolitan Area Networks provides a clear, comprehensive presentation of LAN/MAN technology and the many emerging approaches to high-speed local networking. It meets the needs of today's students by emphasizing both the fundamental principles as well as the critical role of performance in driving LAN/MAN design.

This timely revision of an all-time best-seller in the field features the clarity and scope of a Stallings classic. This comprehensive volume provides the most up-to-date coverage of the essential topics in data communications, networking, Internet technology and protocols, and standards - all in a convenient modular format. Features updated coverage of multimedia, Gigabit and 10 Gbps Ethernet, WiFi/IEEE 802.11 wireless LANs, security, and much more. Ideal for professional reference or self-study. For Product Development personnel, Programmers, Systems Engineers, Network Designers and others involved in the design of data communications and networking products.

For an accessible and comprehensive survey of telecommunications and data communications technologies and services, consult the Telecommunications and Data Communications Handbook, which includes information on origins, evolution and meaningful contemporary applications. Find discussions of technologies set in context, with details on fiber optics, cellular radio, digital carrier systems, TCP/IP, and the Internet. Explore topics like Voice over Internet Protocol (VoIP); 802.16 & WiMAX; Passive Optical Network (PON); 802.11g & Multiple Input Multiple Output (MIMO) in this easily accessible guide without the burden of technical jargon.

Computer Security: Principles and Practice, 2e, is ideal for courses in Computer/Network Security. In recent years, the need for education in computer security and related topics has grown dramatically – and is essential for anyone studying Computer Science or Computer Engineering. This is the only text available to provide integrated, comprehensive, up-to-date coverage of the broad range of topics in this subject. In addition to an extensive pedagogical program, the book provides unparalleled support for both research and modeling projects, giving students a broader perspective. The Text and Academic Authors Association named Computer Security: Principles and Practice, 1e, the winner of the Textbook Excellence Award for the best Computer Science textbook of 2008.

Contemporary Methods for Speech Parameterization offers a general view of short-time cepstrum-based speech parameterization and provides a common ground for further in-depth studies on the subject. Specifically, it offers a comprehensive description, comparative analysis, and empirical performance evaluation of eleven contemporary speech parameterization methods, which compute short-time cepstrum-based speech features. Among these are five discrete wavelet packet transform (DWPT)-based, six discrete Fourier transform (DFT)-based speech features and some of their variants which have been used on the speech recognition, speaker recognition, and other related speech processing tasks. The main similarities and differences in their computation are discussed and empirical results from performance evaluation in common experimental conditions are presented. The recognition accuracy obtained on the monophone recognition, continuous speech recognition and speaker recognition tasks is contrasted against the one obtained for the well-known and widely used Mel Frequency Cepstral Coefficients (MFCC). It is shown that many of these methods lead to speech features that do offer competitive performance on a certain speech processing setup when compared to the venerable MFCC. The last does not target the promotion of certain speech features but instead aims to enhance the common understanding about the advantages and disadvantages of the various speech parameterization techniques available today and to provide the basis for selection of an appropriate speech parameterization in each particular case.

The second edition of a comprehensive introduction to machine learning approaches used in predictive data analytics, covering both theory and practice. Machine learning is often used to build predictive models by extracting patterns from large datasets. These models are used in predictive data analytics applications including price prediction, risk assessment, predicting customer behavior, and document classification. This introductory textbook offers a detailed and focused treatment of the most important machine learning approaches used in predictive data analytics, covering both theoretical concepts and practical applications. Technical and mathematical material is augmented with explanatory worked examples, and case studies illustrate the application of these models in the broader business context. This second edition covers recent developments in machine learning, especially in a new chapter on deep learning, and two new chapters that go beyond predictive analytics to cover unsupervised learning and reinforcement

learning.

Data and Computer Communications Prentice Hall

The Manual of Commercial Methods in Clinical Microbiology 2nd Edition, International Edition reviews in detail the current state of the art in each of the disciplines of clinical microbiology, and reviews the sensitivities, specificities and predictive values, and subsequently the effectiveness, of commercially available methods – both manual and automated. This text allows the user to easily summarize the available methods in any particular field, or for a specific pathogen – for example, what to use for an Influenza test, a Legionella test, or what instrument to use for identification or for an antibiotic susceptibility test. The Manual of Commercial Methods in Clinical Microbiology, 2nd Edition, International Edition presents a wealth of relevant information to clinical pathologists, directors and supervisors of clinical microbiology, infectious disease physicians, point-of-care laboratories, professionals using industrial applications of diagnostic microbiology and other healthcare providers. The content will allow professionals to analyze all commercially available methods to determine which works best in their particular laboratory, hospital, clinic, or setting. Updated to appeal to an international audience, The Manual of Commercial Methods in Clinical Microbiology, 2nd Edition, International Edition is an invaluable reference to those in the health science and medical fields.

Foundations of Modern Networking is a comprehensive, unified survey of modern networking technology and applications for today's professionals, managers, and students. Dr. William Stallings offers clear and well-organized coverage of five key technologies that are transforming networks: Software-Defined Networks (SDN), Network Functions Virtualization (NFV), Quality of Experience (QoE), the Internet of Things (IoT), and cloudbased services. Dr. Stallings reviews current network ecosystems and the challenges they face—from Big Data and mobility to security and complexity. Next, he offers complete, self-contained coverage of each new set of technologies: how they work, how they are architected, and how they can be applied to solve real problems. Dr. Stallings presents a chapter-length analysis of emerging security issues in modern networks. He concludes with an up-to date discussion of networking careers, including important recent changes in roles and skill requirements. Coverage: Elements of the modern networking ecosystem: technologies, architecture, services, and applications Evolving requirements of current network environments SDN: concepts, rationale, applications, and standards across data, control, and application planes OpenFlow, OpenDaylight, and other key SDN technologies Network functions virtualization: concepts, technology, applications, and software defined infrastructure Ensuring customer Quality of Experience (QoE) with interactive video and multimedia network traffic Cloud networking: services, deployment models, architecture, and linkages to SDN and NFV IoT and fog computing in depth: key components of IoT-enabled devices, model architectures, and example implementations Securing SDN, NFV, cloud, and IoT environments Career preparation and ongoing education for tomorrow's networking careers Key Features: Strong coverage of unifying principles and practical techniques More than a hundred figures that clarify key concepts Web support at williamstallings.com/Network/ QR codes throughout, linking to the website and other resources Keyword/acronym lists, recommended readings, and glossary Margin note definitions of key words throughout the text

This two-volume book presents an unusually diverse selection of research papers, covering all major topics in the fields of information and communication technologies and related sciences. It provides a wide-angle snapshot of current themes in information and power engineering, pursuing a cross-disciplinary approach to do so. The book gathers revised contributions that were presented at the 2018 International Conference: Sciences of Electronics, Technologies of Information and Telecommunication (SETIT'18), held on 20–22 December 2018 in Hammamet, Tunisia. This eighth installment of the event attracted a wealth of submissions, and the papers presented here were selected by a committee of experts and underwent additional, painstaking revision. Topics covered include: · Information Processing · Human-Machine Interaction · Computer Science · Telecommunications and Networks · Signal Processing · Electronics · Image and Video This broad-scoped approach is becoming increasingly popular in scientific publishing. Its aim is to encourage scholars and professionals to overcome disciplinary barriers, as demanded by current trends in the industry and in the consumer market, which are rapidly leading toward a convergence of data-driven applications, computation, telecommunication, and energy awareness. Given its coverage, the book will benefit graduate students, researchers and practitioners who need to keep up with the latest technological advances.

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