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International Conference, ICOIN 2007, Estoril, Portugal, January 23-25, 2007, Revised Selected Papers

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Minimum Expected Number of Hops Routing for IEEE 802.11 Based Ad Hoc Networks

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Resource, Mobility, and Security Management in Wireless Networks and Mobile Communications

Intelligent Information Technology

NETWORKING 2007. Ad Hoc and Sensor Networks, Wireless Networks, Next Generation Internet

Mobile Ad Hoc Networking

Fundamentals of Data Communication Networks

Fundamental Concepts on Wireless LAN and the IEEE 802.11 Protocol

Study of MPEG-4 Traffic Over IEEE 802.11 Ad Hoc Networks

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6th International IFIP-TC6 Networking Conference, Atlanta, GA, USA, May 14-18, 2007, Proceedings

Ad-hoc, Mobile and Wireless Networks

802.11n and 802.11ac

IFIP 19th World Computer Congress, TC-6, IFIP Interactive Conference on Ad-Hoc Networking, August 20-25, 2006, Santiago, Chile

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From Wireless LANs to 4G Networks

Ieee 802.11 Ad Hoc Networks Performance Measurements

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## ANAYA JUNE

Mobile Ad-hoc and Sensor Networks Springer

Here are the refereed proceedings of the 5th International Conference on Ad-Hoc Networks and Wireless, ADHOC-NOW 2006, held in Ottawa, Canada, August 2006. The book presents 25 revised full papers and 10 revised short papers together with abstracts of 2 invited talks, in sections on routing in sensor networks, Routing in MANET, short papers on routing, security, wireless MAC, short papers on security, QoS and TCP, and upper layer issues.

[International Conference, ICOIN 2007, Estoril, Portugal, January 23-25, 2007, Revised Selected Papers](#) CRC Press

This paper presents an analytical model to predict energy consumption in saturated IEEE 802.11 single-hop ad hoc networks under ideal channel conditions. The model we introduce takes into account the different operational modes of the IEEE 802.11 DCF MAC, and is validated against packet level simulations. In contrast to previous works that attempted to characterize the energy consumption of IEEE 802.11 cards in isolated, contention-free channels (i.e., single sender/receiver pair), this paper investigates the extreme opposite case, i.e., when nodes need to contend for channel access under saturation conditions. In such scenarios, our main findings include: (1) contrary to what most previous results indicate, the radio's transmit mode has marginal impact on overall energy consumption, while other modes (receive, idle, etc.) are responsible for most of the energy consumed; (2) the energy cost to transmit useful data increases almost linearly with the network size; and (3) transmitting large payloads is more energy efficient under saturation conditions.

**Recent Trends and Advances in Artificial Intelligence and Internet of Things** Springer Science & Business Media

The 7th International Conference on Information Technology (CIT 2004) was held in Hyderabad, India, during December 20-23, 2004. The CIT 2004 was a forum where researchers from various areas of information technology and its applications could stimulate and exchange ideas on technological advancements. CIT, organized by the Orissa Information Technology Society (OITS), has emerged as one of the major international conferences in India and is fast becoming the premier forum for the presentation of the latest research and development in the critical area of information technology. The last six conferences attracted reputed researchers from around the world, and CIT 2004 took this trend forward. This conference focused on the latest research findings on all topics in the area of information technology. Although the natural focus was on computer science issues, research results contributed from management, business and other disciplines formed an integral part. We received more than 200 papers from over 27 countries in the areas of computational intelligence, neural networks, mobile and adhoc networks, security, databases, software engineering, signal and image processing, and Internet and WWW-based computing. The programme committee, consisting of eminent researchers, academicians and practitioners, finally selected 43 full papers on the basis of reviewer grades. This proceedings contains the research papers selected for presentation at the conference and this is the first time that the proceedings have been published in the Lecture Notes in Computer Science (LNCS) series. The poster papers are being printed as a separate conference proceedings.

**Ad-Hoc Networking** Springer Science & Business Media

This book constitutes the refereed proceedings of the First International Conference on Mobile Ad-hoc and Sensor Networks, MSN 2005, held in Wuhan, China in December 2005. The volume also contains 12 papers of the MSN workshop on Modeling and the Security in the Next Generation Mobile Information Systems (MSNG 2005). The 112 revised full papers were carefully reviewed and

selected from a total of 512 submissions. The papers address all current topical areas in mobile ad hoc and sensor networks such as network architecture and protocols, software platforms and development tools, self-organization and synchronization, routing and data dissemination, failure resilience and fault isolation, energy management, data, information, and signal processing, security and privacy, network planning, provisioning, and deployment, network modeling and performance evaluation, developments and applications, as well as integration with other systems.

*First International Conference, MSN 2005, Wuhan, China, December 13-15, 2005, Proceedings* CRC Press

This book constitutes the thoroughly refereed post-conference proceedings of the First International ICST Conference on Wireless Communications and Applications, ICWCA 2011, held in Sanya, China, in August 2011. The 43 revised full papers presented were carefully reviewed and selected from around 90 submissions and cover a wide range of topics as mobile ad hoc networks, sensor networks, network architectural design, network protocol design, local area networks, MAC, routing, and transport protocols, quality of service provisioning, reliability and fault tolerance issues, resource allocation and management, signal processing, medical imaging, data aggregation techniques, security and privacy issues, wireless computing and applications for wireless network as smart grid, agriculture, health care, smart home, conditional monitoring, etc.

**First International Conference, ICWCA 2011, Sanya, China, August 1-3, 2011, Revised Selected Papers** CRC Press

Study of MPEG-4 Traffic Over IEEE 802.11 Ad Hoc Networks Intelligent Information Technology 7th International Conference on Information Technology, CIT 2004, Hyderabad, India, December 20-23, 2004, Proceedings Springer

[Distributed Admission Control for IEEE 802.11 Ad Hoc Networks](#) Study of MPEG-4 Traffic Over IEEE 802.11 Ad Hoc Networks Intelligent Information Technology 7th International Conference on Information Technology, CIT 2004, Hyderabad, India, December 20-23, 2004, Proceedings

One of the factors that significantly affects the performance of wireless networks is fading. There are several techniques to overcome the detrimental effects of multipath fading, the most common being to provide diversity, i.e. statistically independent channels from the source to the destination.

*Minimum Expected Number of Hops Routing for IEEE 802.11 Based Ad Hoc Networks* Springer  
IEEE 802.11 has very poor performance in terms of throughput and transmission delay when the traffic load reaches the saturation condition. Admission control must be provided in order to guarantee the service of existing traffic. Unfortunately, the normalized saturation throughput is variable corresponding to different traffic statistics (i.e. bit-rate and average packet length). Therefore it does not perform well if the station admits traffic simply based on certain threshold of the normalized throughput. Most existing analytical models for IEEE 802.11 MAC adopt quite strict assumptions of saturation conditions and simplified traffic scenarios. Nevertheless, it is more realistic to analyze the non-saturation condition under heterogeneous traffic scenarios. Moreover, an accurate analytical model under non-saturation condition is critical for the correctness of admission control decisions. In this paper, (1) we propose a unified analytical model which is the first model capable of analyzing performance under both non-saturation and saturation conditions; (2) we then introduce a new performance criterion, saturation coefficient  $C_{n,sat}$ , which reflects the degree of saturation experienced by any specific station; (3) finally we propose a distributed admission control scheme for IEEE 802.11 based on this criterion. With this scheme, any station can make local decision on whether admitting/rejecting a new traffic. The accuracy of the proposed analytical model and performance of the proposed admission control scheme are validated by simulations.

*Third International ICST Conference, ADHOCNETS 2011, Paris, France, September 21-23, 2011, Revised Selected Papers* Springer

Wireless mesh networks (WMN) encompass a new area of technology set to play an important role in



the next generation wireless mobile networks. WMN is characterized by dynamic self-organization, self-configuration, and self-healing to enable flexible integration, quick deployment, easy maintenance, low costs, high scalability, and reliable services.

*Advances in Computer, Information, and Systems Sciences, and Engineering* Springer Science & Business Media

What every electrical engineering student and technical professional needs to know about data exchange across networks While most electrical engineering students learn how the individual components that make up data communication technologies work, they rarely learn how the parts work together in complete data communication networks. In part, this is due to the fact that until now there have been no texts on data communication networking written for undergraduate electrical engineering students. Based on the author's years of classroom experience, *Fundamentals of Data Communication Networks* fills that gap in the pedagogical literature, providing readers with a much-needed overview of all relevant aspects of data communication networking, addressed from the perspective of the various technologies involved. The demand for information exchange in networks continues to grow at a staggering rate, and that demand will continue to mount exponentially as the number of interconnected IoT-enabled devices grows to an expected twenty-six billion by the year 2020. Never has it been more urgent for engineering students to understand the fundamental science and technology behind data communication, and this book, the first of its kind, gives them that understanding. To achieve this goal, the book: Combines signal theory, data protocols, and wireless networking concepts into one text Explores the full range of issues that affect common processes such as media downloads and online games Addresses services for the network layer, the transport layer, and the application layer Investigates multiple access schemes and local area networks with coverage of services for the physical layer and the data link layer Describes mobile communication networks and critical issues in network security Includes problem sets in each chapter to test and fine-tune readers' understanding *Fundamentals of Data Communication Networks* is a must-read for advanced undergraduates and graduate students in electrical and computer engineering. It is also a valuable working resource for researchers, electrical engineers, and technical professionals.

*5th International IFIP-TC6 Networking Conference, Coimbra, Portugal, May 15-19, 2006, Proceedings* Springer

Organized into three parts, Resource, Mobility, and Security Management in Wireless Networks and Mobile Communications examines the inherent constraint of limited bandwidth and unreliable time-varying physical link in the wireless system, discusses the demand to realize the service continuity in the single-hop or multi-hop wireless networks, and explores trusted communication in mobile computing scenarios. Focusing on the background, technique survey, protocol design, and analytical methods, the book discusses standards in 802.11x/3G/4G, HotSpot Wireless, Bluetooth sensor networks, and access control in wireless Ad Hoc networks. Other topics include call admission control (CAC), routing, multicast, medium access control (MAC), scheduling, bandwidth adaptation, handoff management, location management, network mobility, secure routing, key management, authentication, security, privacy, and performance simulation and analysis. This book is a comprehensive source of information on basic concepts, major issues, design approaches, future research directions, and the interaction between these components. With its broad coverage allowing for easy cross reference, the book also provides detailed techniques for eliminating bandwidth insufficiency, increasing location management performance, and decreasing the associated authentication traffic. Features: Offers competitive, self-contained information on resource, mobility, and security management in wireless networks Explains the interaction and coupling among the most important components in wireless networks Examines background, applications, and standard protocols Addresses challenges and solutions in key management of wireless sensor networks Covers how to provide effective and efficient authentication and key agreements for cellular access security

*Information Networking. Towards Ubiquitous Networking and Services* McGraw Hill Professional

The 7th International Conference on Adhoc, Mobile and Wireless Networks (AdHoc-NOW 2008) was held at INRIA Sophia Antipolis - Méditerranée, on the French Riviera, during September 10-12, 2008. The six previous conferences in the series were held in Morelia (2007), Ottawa (2006), Cancun (2005), Vancouver (2004), Montreal (2003) and Toronto (2002). The purpose of this conference is to provide a forum for researchers from academia/industry and practitioners to meet and exchange ideas regarding recent developments in the areas of ad-hoc wireless networks. AdHoc-NOW 2008 received 110 submissions submitted by authors from the following 33 countries: Algeria, Australia, Austria, Belgium, Brazil, Canada, China, the Czech Republic, Denmark, Finland, France, Germany, Greece, India, Iran, Israel, Italy, Japan, Luxembourg, Macedonia, Norway, Pakistan, Poland, Slovakia, South Africa, South Korea, Sri Lanka, Sudan, Switzerland, Taiwan, Tunisia, the UK and the USA. Each paper was assigned to three members of the Technical Program Committee (TPC). Based on the reviews, we decided to accept 39 submissions as regular papers, 24 of them with 25 minutes' oral presentation time, and 15 as poster presentations. All of the accepted papers appear in this volume. We thank the three invited speakers at this conference, Srdjan Krco (Ersson, Ireland), Xuemin (Sherman) Shen (University of Waterloo, Canada), and Stephan Olariu (Old Dominion University, USA) for accepting our invitation to share their insights on new developments in their research areas.

*Resource, Mobility, and Security Management in Wireless Networks and Mobile Communications* ProQuest

The Handbook of Information Security is a definitive 3-volume handbook that offers coverage of both established and cutting-edge theories and developments on information and computer security. The text contains 180 articles from over 200 leading experts, providing the benchmark resource for information security, network security, information privacy, and information warfare.

**Intelligent Information Technology** CRC Press

This book constitutes the thoroughly refereed post-conference proceedings of the International

Conference on Information Networking, ICOIN 2007, held in Estoril, Portugal, in January 2007. The 82 revised full papers included in the volume were carefully selected and improved during two rounds of reviewing and revision from a total of 302 submissions. Topics covered include sensor networks; ad-hoc, mobile and wireless networks; optical networks; peer-to-peer networks and systems; routing; transport protocols; quality of service; network design and capacity planning; resource management; performance monitoring; network management; next generation Internet; and networked applications and services.

*NETWORKING 2007. Ad Hoc and Sensor Networks, Wireless Networks, Next Generation Internet* Springer Science & Business Media

This book constitutes the refereed proceedings of the Third International Conference on Mobile Ad-hoc and Sensor Networks, MSN 2007, held in Beijing, China, in December 2007. The papers address all current issues in mobile ad hoc and sensor networks and are organized in topical sections on routing, network protocols, energy efficiency, data processing, self-organization and synchronization, deployment and application, as well as security.

*Mobile Ad Hoc Networking* CRC Press

This book contains the refereed proceedings of the 1st IFIP-TC6 Working Conference on Wireless-On-Demand Network Systems, WONS 2004. It was sponsored by the IFIP Working Groups 6.3 (Performance of Computer and Communication Networks) and 6.8 (Mobile and Wireless Communications), and aimed at becoming a premier international forum for discussions between researchers and practitioners interested in the evolution of Wireless Internet Access toward on-demand networking. Ad hoc, routing, localization, resource management, security, applications, performance and analytical models were topics covered in depth by technical papers in this book. The conference received 77 submissions from 22 countries, showing the worldwide interest. With so many papers to choose from, the Technical Program Committee's job, providing a conference program with the highest quality, was challenging and time consuming. We finally selected 25 full papers for presentation in the conference technical sessions. To give researchers the opportunity to present the novel ideas they are starting to explore, we included in the technical program a poster session devoted to presenting preliminary research results: 7 short papers were selected for presentation in this session. Accepted papers and posters came from 15 different countries. The technical program also included a keynote speech "Ad Hoc Wireless Networks: Protocols and Applications" by Prof. Mario Gerla, and a panel session devoted to the discussion of the conference topics between academics and industry representatives. This event would not have been possible without the enthusiasm and hard work of a number of colleagues. A special thanks to the TPC members, and all the referees, for their invaluable help in reviewing the papers for WONS 2004.

*Fundamentals of Data Communication Networks* Springer Science & Business Media

This book constitutes the refereed proceedings of the 12th International Joint Conference on E-Business and Telecommunications, ICETE 2015, held in Colmar, France, in July 2015. ICETE is a joint international conference integrating four major areas of knowledge that are divided into six corresponding conferences: International Conference on Data Communication Networking, DCNET; International Conference on E-Business, ICE-B; International Conference on Optical Communication Systems, OPTICS; International Conference on Security and Cryptography, SECRIPT; International Conference on Wireless Information Systems, WINSYS; and International Conference on Signal Processing and Multimedia, SIGMAP. The 23 full papers presented together with an invited paper in this volume were carefully reviewed and selected from 218 submissions. The papers cover the following key areas of e-business and telecommunications: data communication networking; e-business; optical communication systems; security and cryptography; signal processing and multimedia applications; wireless information networks and systems.

**Fundamental Concepts on Wireless LAN and the IEEE 802.11 Protocol** Dereje Yohannes

This book contains the refereed proceedings of the Fourth Annual Mediterranean Ad Hoc Networking Workshop, Med-Hoc-Net 2005. Med-Hoc-Net 2005 consolidated the success of the previous editions of the workshop series. It aimed to serve as a platform for researchers from academia, research, laboratories, and industry from all over the world to share their ideas, views, results, and experiences in the field of ad-hoc networking.

*Study of MPEG-4 Traffic Over IEEE 802.11 Ad Hoc Networks* Springer Science & Business Media

Position-based routing was originally developed for packet radio networks in the 1980s [6]. It received renewed interest during the last few years as a method for routing in mobile wireless ad hoc and sensor networks [1, 2, 4]. The general idea of it is to select the next hop based on position information such that the packet is forwarded in the geographical direction of the destination. Position-based routing can be divided into two main components: the location service and position-based forwarding. The location service [5, 13] is used for mapping the unique identifier (for example an IP address) of a node to its geographical position. In mobile ad hoc networks, providing accurate location service for position based routing, with low communication overhead, appears to be more difficult task than routing itself [13]. In case of sensor networks, however, destination is a sink or base station whose position is made available to source sensors by flooding. Position-based forwarding is performed by a node to select one of its neighbors as the next hop the packet should be forwarded to. Usually, the following information is required for the forwarding decision: the node's own geographical position, the position of all neighbors within transmission range and the position of the destination. Based on this information, the forwarding node selects one of its neighbors as the next hop such that the packet makes progress toward the geographical position of the destination.

**Proceedings of IETA 2005, TeNe 2005 and EIAE 2005** Springer

This book is the refereed proceedings of the Third International Conference on Ubiquitous Intelligence and Computing, UIC 2006, held in Wuhan, China. The book presents 117 revised full papers together with a keynote paper were carefully reviewed and selected from 382 submissions. The papers are organized in topical sections on smart objects and embedded systems; smart spaces, environments, and platforms; ad-hoc and intelligent networks; sensor networks, and more.

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