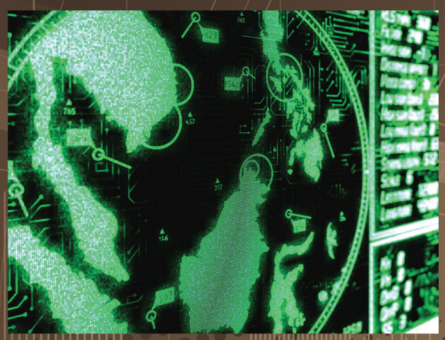
Tactical Wireless Communications and Networks

Design Concepts and Challenges



George F. Elmasry

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TACTICAL WIRELESS COMMUNICATIONS AND NETWORKS

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George F. Elmasry
XPRT Solutions, Inc., A DSCI Company, NJ, USA

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Contents

About the Author

Dr. George F. Elmasry was born in Egypt and received a Bachelor of Science in Electrical Engineering from Alexandria University, Egypt in 1985. He then continued on to receive a Master of Science and a Ph.D. in Electrical Engineering from New Jersey Institute of Technology (NJIT) in 1993 and 1999 respectively. He has 20 years of industrial experience in commercial and defense telecommunications and is currently leading XPRT Solutions – a DSCI Company which specializes in research and development of communications systems with an emphasis on Department of Defense Cyber, Command, Control, Communications, Computers, and Combat-support (C6) space.

Dr. Elmasry has an interdisciplinary background in electrical and computer engineering and computer science. He has much experience in many areas of these fields, including research, patenting, publication, and grant proposal activities. He has an in-depth knowledge of commercial and tactical telecommunication systems, experience with technical task leads, and team building for middle and upper management. Dr. Elmasry has over 50 publications and patents, which pertain to network management, network operations, quality of service and resource management, network and transport layer coding, joint source and channel coding, source coding, modeling and simulation of large-scale networks, security and information assurance, cross layer signaling, topology management, multidimensional interleaving, and spread spectrum communications.

In addition to his publications and patents, Dr. Elmasry has been a member of the technical committee for the annual Military Communication Conference (Milcom) since 2003, where he has led session organization, paper reviews, and session chairing. Dr. Elmasry is also a senior member of the Institute of Electrical and Electronics Engineers (IEEE), a member of the Armed Forces Communications and Electronics Association (AFCEA) International, a member of Sigma Xi, and a member of Alpha Epsilon Lambda – NJIT graduate-student honor society. Dr. Elmasry holds countless awards, including the prestigious Hashimoto Award for achievement and academic excellence in electrical and computer engineering.

Foreword

This textbook authored by Dr. George Elmasry, is the definitive text on the subject of tactical wireless networks. Dr. Elmasry, General Manager of XPRT Solutions, Inc., a subsidiary of DSCI, is an author of numerous peer reviewed papers, inventor, and patent holder, and recognized authority regarding the subject matter. The text provides a comprehensive view and unique insight in its treatment of tactical wireless networks by bridging theory with practical examples. In creating this work, Dr. Elmasry has succeeded in creating a thorough and reliable reference source for network engineers and scientists.

Steven DeChiaro
CEO and Chairman of the Board, DSCI