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field. This book explores the evolving technical options and opportunities of satellite networks. Designed to be a self-contained reference, the book includes background technical material in an introductory chapter that will serve as a primer to satellite communications. The text discusses advances in modulation techniques, such as DBV-S2 extensions (DVS-S2X); spotbeam-based geosynchronous and medium earth orbit High Throughput Satellite (HTS) technologies and Internet applications; enhanced mobility services with aeronautical and maritime applications; Machine to Machine (M2M) satellite applications; emerging ultra HD technologies; and electric propulsion. The author surveys the latest innovations and service strategies and the resulting implications, which involves: . Discussing advances in modulation techniques and HTS spotbeam technologies. Surveying emerging high speed aeronautical mobility services and maritime and other terrestrial mobility services. Assessing M2M (machine-to-machine) applications, emerging Ultra HD video technologies and new space technology. Satellite communication is an integral part of the larger fields of commercial, television/media, government, and military communications, because of its multicast/broadcast capabilities, mobility, reliability, and global reach. High Throughput Satellites) are expected to revolutionize the field during this decade, providing very high speed, yet cost-effective, Internet access and connectivity anywhere in the world, in rural areas, in the air, and at sea. M2M connectivity, enabled by satellite communications, connects trucks on transcontinental trips, aircraft in real-time-telemetry aggregation, and mercantile ships. A comprehensive analysis of the new advances in satellite communications, Innovations in Satellite Communications Technology is a reference for telecommunications and satellite providers and end-users, technology investors, logistic professionals, and more. Daniel Minoli has worked extensively in satellite, internet, video, and VoIP engineering, design, and implementations at SES, AT&T, Telcordia (Ericsson), and Bell telephone Laboratories. He taught at Stevens Institute of Technology, NYU's Information Technology Institute and at Rutgers University. Mr. Minoli has authored columns for ComputerWorld, NetworkWorld, and Network Computing magazines. He often serves as an Expert Witness in patent infringement/invalidity lawsuits. He is the author of more than ten Wiley publications.