1. Record Nr. UNINA9910455988903321 Autore Manner Jennifer A. Titolo Spectrum wars: the policy and technology debate / / Jennifer A. Manner Pubbl/distr/stampa Boston:,: Artech House,, ©2003 [Piscatagay, New Jersey]:,: IEEE Xplore,, [2003] **ISBN** 1-58053-628-X Descrizione fisica 1 online resource (208 p.) Collana Artech House telecommunications library Disciplina 384.54/524 Soggetti Radio frequency allocation Cell phone systems Electronic books. Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references (p. 173-176) and index. Nota di contenuto Contents vii: Acknowledgments xiii: Introduction xv: 1 An Overview 1: Introduction 2; An overview 4; Spectrum terminology 8; A brief background of spectrum management 11; Companies, governments, and other interests 16; Two unique battles for the spectrum resource for new services 21; Conclusion 29; 2 Spectrum Primer 33; Overview of technical characteristics of the radiocommunications spectrum resource 34; Spectrum scarcity and harmful interference 37; The allocation scheme 40; Key technical considerations when evaluating spectrum use 42: Other considerations 46 3 Radio Communications Spectrum and Telecommunications Players 49Wireless versus wireline network solutions 49; Factors impacting the use of the spectrum resource 63; Conclusion 69; 4 The Regulatory Regime Governing Spectrum 71; Why is the radiocommunications spectrum resource regulated? 71; The goals of spectrum regulation 74; The governing regulatory bodies 76: The impact of regional organizations on spectrum regulation 81; The international spectrum allocation process 83; Conclusion 89; 5 Domestic Regulation of Spectrum, Part I: International Representation 93 Overview of the domestic regulation of the radiocommunications

> spectrum resource 93Participation in the international arena 94; 6 Domestic Regulation of Spectrum, Part II: Allocation, Assignment, and

Use 105; Overview 105; Important cornerstones of domestic regulation 107; The domestic allocation of frequency bands to individual services 110; The assignment and authorization of spectrum to specific users 116; The implementation and enforcement of technical and operating rules 127; The regulation of secondary markets 128; Conclusion 129; 7 Solutions to Harmful Interference 131; Overview 131 Spectrum conflict: the potential for harmful interference 133Minimizing the potential for conflicts 135; Regulatory mechanisms to adopt rules governing cofrequency sharing, frequency band segmentation, and relocation 140; Relocation of existing users 147; 8 Secondary Markets for Spectrum 151; The increasing use of secondary markets 151; Advantages and disadvantages to the use of secondary spectrum markets 152; Types of secondary spectrum market regimes 155; Creating a regime governing secondary markets for spectrum 158; Conclusion 161

9 Impact of the Telecommunications Financial Crisis 163Key reasons for the telecommunications financial meltdown 165; Impact of the telecommunications meltdown 166; The rebuilding of an industry 168; Appendix A: List of Web Addresses 173; About the Author 177; Index 179

## Sommario/riassunto

Staking a claim in the radiocommunications spectrum is of critical importance as more and more telecommunications companies turn to wireless services to sustain profitability, and in some cases even maintain viability. To ensure your company wins the battle for this limited resource, this unique new book helps you ... Thoroughly understand the radiocommunications spectrum resource, how it is allocated, and the regulatory regime governing it. Formulate efficient, cost-effective plans for obtaining access and approval to operate in frequency. Master the lobbying, technical, regulatory, legal, and political skills needed for success. Comprehend the growing variety of difficult policy challenges in the spectrum arena, including the use of secondary spectrum markets. Gain valuable insight into how telecom's financial meltdown is impacting the battle for spectrum. Radiocommunications spectrum is a limited resource and there will always be a struggle over how it is allocated and utilized. Spectrum Wars: The Policy and Technology Debate is insurance, helping you and your company succeed in this struggle.