

1. Record Nr.	UNINA9910830477403321
Titolo	The radio spectrum [[electronic resource]] : managing a strategic resource / / edited by Jean-Marc Chaduc, Gerard Pogorel
Pubbl/distr/stampa	London, : ISTE Hoboken, NJ, : Wiley, 2008
ISBN	1-282-16485-6 9786612164859 0-470-61094-8 0-470-39352-1
Descrizione fisica	1 online resource (322 p.)
Collana	ISTE ; ; v.9
Altri autori (Persone)	ChaducJean-Marc PogorelGerard
Disciplina	384.54/524 384.54524
Soggetti	Radio frequency allocation - Management Resource allocation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	The Radio Spectrum; Table of Contents; Acknowledgement and Credits; Introduction; Part 1. The Basis of Spectrum Management; Chapter 1. A Bit of History, Physics and Mathematics; 1.1. Waves; 1.2. Propagation; 1.3. Directivity; 1.4. Link evaluation; Chapter 2. Telecommunications; 2.1. Modulation and bandwidth; 2.2. Bandwidth and noise; 2.3. C/N (or C/I) and S/Nm; 2.4. Multiplex, multiple access; 2.5. A balance between carrier power, noise and interferences; Chapter 3. Geography and Radio Communications: Radio Network Engineering; 3.1. Regions and countries 3.2. Radio implementation in the field3.3. Propagation on the Earth; 3.4. Space, orbits, satellite systems; 3.5. Terrestrial network coverage; 3.6. Coverage strategies; 3.7. Radio site protection; Chapter 4. Spectrum Sharing, Bases and Actors; 4.1. Radio frequencies: common goods; 4.2. Regulatory services for spectrum sharing by the ITU (allocation frequency tables); 4.3. The role of states in sharing the spectrum; 4.4. How to plan new applications and compatible services;

4.5. Regulation, harmonization, planning; 4.6. Is the spectrum resource scarce?; 4.7. Spectrum sharing: a summary
Chapter 5. Some Regulated Services 5.1. The fixed service; 5.2. Mobile services; 5.3. Broadcasting; 5.4. Satellite services; 5.5. Geo and non-geo systems; 5.6. Some other regulatory services; Chapter 6. Recent Evolutions of Radio Services; 6.1. A family snapshot; 6.2. Enthusiastic telecommunications; 6.3. Hesitant broadcasters; 6.4. The promises of radiolocation; 6.5. Limits of the spectrum planning efficiency; Chapter 7. Regulatory Instruments for Spectrum Sharing; 7.1. Frequency allocation tables; 7.2. Plans; 7.3. Coordination; 7.4. Technical limits
Chapter 8. Frequency Assignment: A Contract 8.1. Contracting parties; 8.2. Common bands and assignments; 8.3. Exclusive bands: preferential sub-bands; 8.4. Assignment procedures; 8.5. External requirements: site constraints; 8.6. Satellite systems; Chapter 9. Spectrum Monitoring; 9.1. Spectrum monitoring technical tools; 9.1.1. HF band monitoring; 9.1.2. Metric and decimetric band monitoring; 9.1.3. Microwave monitoring; 9.1.4. Satellite monitoring; 9.1.5. Mobile monitoring stations; 9.1.6. Airborne monitoring means; 9.2. Radio station inspections: major events
9.3. Claim for interference: legal prosecutions 9.4. "Radio landscape" description; 9.5. Terminals; Part 2. Managers and their Practices; Chapter 10. New Technical Perspectives and Impact on Spectrum Management; 10.1. Spread spectrum technologies; 10.2. OFDM and MIMO; 10.3. Ultra wideband; 10.4. Dynamic spectrum access technologies; 10.5. Software-defined radio; 10.6. Cognitive radio; 10.7. Intersystem control; 10.8. Mesh networks; Chapter 11. The International Telecommunication Union (ITU); 11.1. The ITU today; 11.2. Radio Regulations; 11.2.1. The vocabulary of radiocommunications
11.2.2. Table of frequency allocations

Sommario/riassunto

Radio frequencies have become a basic resource for the development of the information society. In fact, radio waves are a mandatory vehicle in order to carry the message to customers and a truly worldwide communication needs their properties. Given the market demands for more and more frequencies, means have to be found to share this limited resource most effectively and to continuously improve its efficiency. Radio spectrum management is thus a major objective for our modern world. This book describes the current tools for spectrum management with their fundamental technical and legal basis
