

Contents

1	Introduction	1
1.1	Spectrum Management	2
1.2	Cognitive Radio	3
1.3	Spectrum Sharing	4
	References	5
2	Opportunistic Spectrum Access	7
2.1	Sensing Based Opportunistic Spectrum Access	7
2.1.1	Spectrum Sensing	7
2.1.2	Spectrum Access and Spectrum Handoff	10
2.1.3	Challenges for the OSA Architecture	12
2.2	Geo-Location Based Spectrum Access	12
2.2.1	TV Band Usage	13
2.2.2	TV White Space Availability	13
2.2.3	TV White Space Access	14
	References	16
3	Incentivized Cooperative Dynamic Spectrum Access	17
3.1	Introduction	17
3.2	The IC-DSA Architecture	18
3.3	Analysis of IC-DSA Performance	19
3.4	A New Network Coding Scheme	23
3.5	Numerical Results	27
	References	31
4	Dynamic Spectrum Co-Access	33
4.1	Introduction	33
4.2	DSCA with One PU Node Pair and One SU Node Pair	34
4.2.1	Coexistence Constraints	36
4.3	DSCA with a Multi-Hop PU Network	37
4.4	Region of Coexistence	40

4.5	Coexistence Links Selection	42
4.6	Performance Evaluation	43
	References	47
5	On-Demand Spectrum Access	49
5.1	Introduction	49
5.2	Spectrum Service.....	50
5.3	Band Allocation for PP-SB-IE Service	53
5.4	Band Allocation for PP-SB-IM Service	55
5.4.1	Analysis of Band Allocation for PP-SB-IM Service	60
5.5	Performance Evaluation	62
	References	64
6	Conclusions	65
	Reference	66

Spectrum Sharing for Wireless Communications

Xin, C.; Song, M.

2015, VIII, 66 p. 36 illus., Softcover

ISBN: 978-3-319-13802-2