### Contents

1. Engineering Review of the IEEE 802.22 Standard on Cognitive Radio .......................... 1  
   Shrishail Hiremath, Amit Kumar Mishra and Sarat Kumar Patra

2. A Review of Hardware Platforms for Whitespace Communication ................................. 33  
   Ojonav Hazarika and Amit Kumar Mishra

3. A Study on White and Gray Spaces in India ........................................... 49  
   Kalpana Naidu, Yuva Kumar, B.M. Baveja, Rakesh Naik, Boli Sridhar, Shyam Ponnappa, Mohammed Zafar Ali Khan, S.N. Merchant and U.B. Desai

4. The Television White Space Opportunity in Southern Africa: From Field Measurements to Quantifying White Spaces ............................................. 75  
   Albert A. Lysko, Moshe T. Masonta and David Lloyd Johnson

5. Spectrum Sensing for Cognitive Radio Networks ........................................ 117  
   Srinu Sesham and Samrat L. Sabat

   Luzango Mfupe, Fisseha Mekuria, Litsietsi Montsi and Mjumo Mzyece

7. White RHINO—A New SDR Platform for Whitespace Communication .......................... 195  
   Ojonav Hazarika and Amit Kumar Mishra
8 TV White Space Channel Estimation and Equalisation: Challenges and Solutions ........................................... 221
Vimal Bhatia

9 VillageLink: A Channel Allocation Technique for Wide-Area White Space Networks .................................... 249
Veljko Pejovic, David Lloyd Johnson, Mariya Zheleva,
Elizabeth M. Belding and Albert Lysko

10 A Non-cooperative TV White Space Broadband Market Model for Rural Entrepreneurs ............................. 281
Sindiso Mpenyu Nleya, Antoine Bagula, Marco Zennaro
and Ermanno Pietrosemoli
White Space Communication
Advances, Developments and Engineering Challenges
Mishra, A.K.; Johnson, D.L. (Eds.)
2015, XII, 295 p. 159 illus., 125 illus. in color.,
Hardcover
ISBN: 978-3-319-08746-7