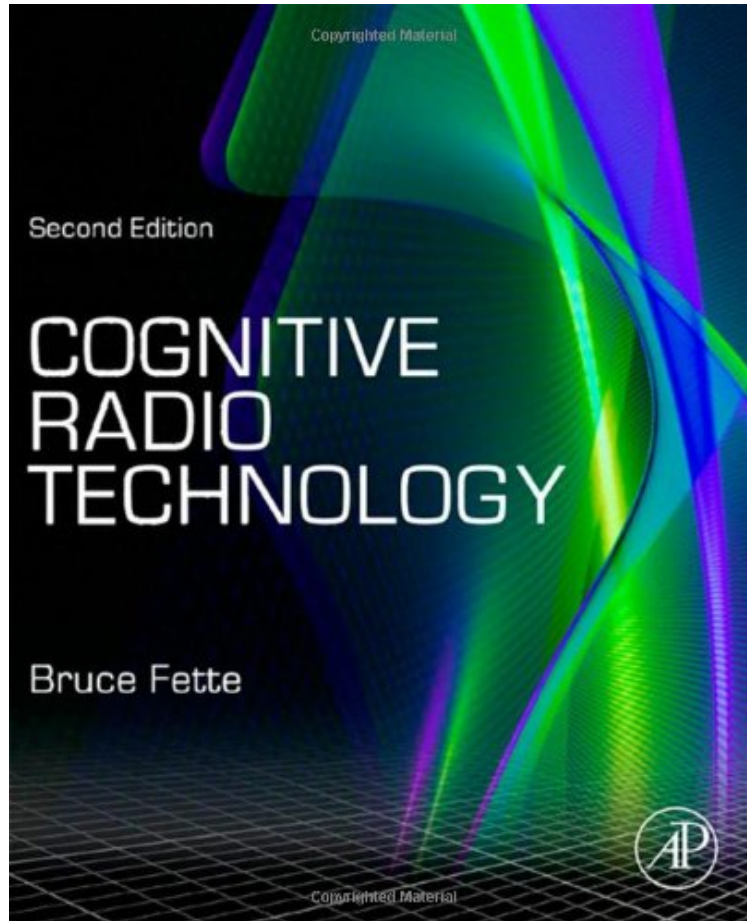


(Free download) Cognitive Radio Technology, Second Edition

## Cognitive Radio Technology, Second Edition

*From Academic Press*

*\*Download PDF | ePub | DOC | audiobook | ebooks*



DOWNLOAD



READ ONLINE

#1787610 in Books 2009-04-06Ingredients: Example IngredientsOriginal language:EnglishPDF # 1 9.30 x 1.40 x 7.60l, 3.45 #File Name: 0123745357848 pages | File size: 22.Mb

**From Academic Press : Cognitive Radio Technology, Second Edition** before purchasing it in order to gage whether or not it would be worth my time, and all praised Cognitive Radio Technology, Second Edition:

1 of 1 people found the following review helpful. more efficient spectrum useBy W BoudvilleThis 2nd edition is a lengthy expansion of the 1st, after only a few years. The increase reflects the wealth of progress in this field. Roughly, the last third of this book is the new material.The chapters explore various aspects of cognitive radio and, importantly, cognitive networks. The latter do not necessarily need the use of cognitive radios as their nodes. The book makes the important point that a CN can have special nodes with enhanced processing logic that makes the network a CN.It is useful to describe what the book omits. Specifically, the use of mesh networks of homogeneous transceivers. There has been work on this, but typically it assumes that the radios are the sole users of a frequency range. Which is all nice and well. But the book tackles the more general case where there is a secondary user [or a bunch of these], that wants to use a spectral range currently occupied by a primary user. The realm of CR is where the PU does not use all of that range all of the time. To a large extent, CR can be thought of as enabling secondary users to fit into the temporal and

spatial gaps in a PU's usage. 3 of 4 people found the following review helpful. Fette, Cognitive Radio TEchnology, 2nd Ed. By Peter G. Cook Two years ago I received my copy of Fette's First Edition, and wrote a review indicating that it would be a useful reference for participants in the maturing Software Defined Radio and emerging Cognitive Radio technology. As I pick up my copy of the original book, a massive number of bookmarks and plethora of underlining attest to the accuracy of that prediction. As a regular participant in the Software Defined Radio Forum's work in this area, I habitually reach for this book to understand the context of our ongoing technical work. The Second Edition adds eight new chapters to the previous sixteen; it constrains the size of the book to an additional 206 pages by using a smaller typeface (which actually improves readability). Page composition is also improved with an appealing layout and very helpful headers: the Chapter name on the left, and section name on the facing pages. This book is not a bedtime read; rather it is encyclopedic in its approach. Individual articles are derived from the work context of authors, who are authoritative in their own areas. Reading technical journals is made difficult (as observed by Thomas Kuhn) by the convention that the reader is fully knowledgeable about the topic under discussion. This volume takes material that would be (or already has been) published, and provides a context for it. Fette has retained his "book-end" approach, with the first and last (moved from 16th to 24th) chapters in which he explains the relevance of the material in each chapter. Then each article has introductory and conclusionary material often not included in published papers. The new chapters address topics such as Cognitive antennas, Spectrum Sensing, Rendezvous, and Networking. They significantly increase the book's utility. In looking over the discussion of Policy-Driven CR Architecture, for example, I found myself drawn to the website of the Maude language; an excursion that provides an example of how the articles can be used as an introduction to a topic, with updates and expansions obtained by using references and browsing websites. The classical means of making a scientific discipline clear and consistent (again according to Kuhn) is through textbooks. But the contemporary velocity of technological advancement renders that approach impractical, so this book provides timely information by not waiting for issue resolution. There is something here for virtually everyone working in the area, from high-level overviews to mind-consuming mathematical depth. Many of our legacy information institutions are rocking from advances in (or misuse of?) Cognitive functionality (e.g. banks); this book provides valuable insight into the specific technologies that will arm us to cope with the impending information tsunami.

This book gives a thorough knowledge of cognitive radio concepts, principles, standards, spectrum policy issues and product implementation details. In addition to 16 chapters covering all the basics of cognitive radio, this new edition has eight brand-new chapters covering cognitive radio in multiple antenna systems, policy language and policy engine, spectrum sensing, rendezvous techniques, spectrum consumption models, protocols for adaptation, cognitive networking, and information on the latest standards, making it an indispensable resource for the RF and wireless engineer. The new edition of this cutting edge reference, which gives a thorough knowledge of principles, implementation details, standards, policy issues in one volume, enables the RF and wireless engineer to master and apply today's cognitive radio technologies. Bruce Fette, PhD, is Chief Scientist in the Communications Networking Division of General Dynamics C4 Systems in Scottsdale, AZ. He worked with the Software Defined Radio (SDR) Forum from its inception, currently performing the role of Technical Chair, and is a panelist for the IEEE Conference on Acoustics Speech and Signal Processing Industrial Technology Track. He currently heads the General Dynamics Signal Processing Center of Excellence in the Communication Networks Division. Dr. Fette has 36 patents and has been awarded the "Distinguished Innovator Award". \* Foreword and a chapter contribution by Joe Mitola, the creator of the field\* Discussion of cognitive aids to the user, spectrum owner, network operator\* Explanation of capabilities such as time position awareness, speech and language awareness, multi-objective radio and network optimization, and supporting database infrastructure\* Detailed information on product implementation to aid product developers\* Thorough descriptions of each cognitive radio component technology provided by leaders of their respective fields, and the latest in high performance analysis implementation techniques \* Explanations of the complex architecture and terminology of the current standards activities\* Discussions of market opportunities created by cognitive radio technology