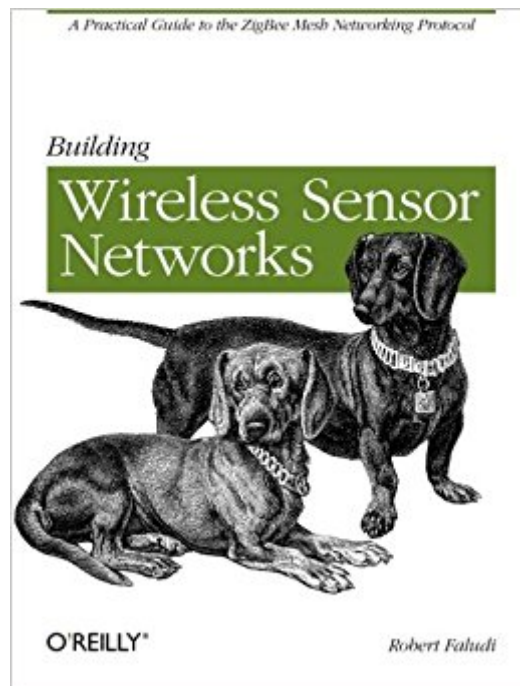




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# Building Wireless Sensor Networks: With ZigBee, XBee, Arduino, And Processing



## Synopsis

Get ready to create distributed sensor systems and intelligent interactive devices using the ZigBee wireless networking protocol and Series 2 XBee radios. By the time you're halfway through this fast-paced, hands-on guide, you'll have built a series of useful projects, including a complete ZigBee wireless network that delivers remotely sensed data. Radio networking is creating revolutions in volcano monitoring, performance art, clean energy, and consumer electronics. As you follow the examples in each chapter, you'll learn how to tackle inspiring projects of your own. This practical guide is ideal for inventors, hackers, crafters, students, hobbyists, and scientists. Investigate an assortment of practical and intriguing project ideas Prep your ZigBee toolbox with an extensive shopping list of parts and programs Create a simple, working ZigBee network with XBee radios in less than two hours -- for under \$100 Use the Arduino open source electronics prototyping platform to build a series of increasingly complex projects Get familiar with XBee's API mode for creating sensor networks Build fully scalable sensing and actuation systems with inexpensive components Learn about power management, source routing, and other XBee technical nuances Make gateways that connect with neighboring networks, including the Internet

## Book Information

Paperback: 322 pages

Publisher: O'Reilly Media; 1 edition (January 3, 2011)

Language: English

ISBN-10: 0596807732

ISBN-13: 978-0596807733

Product Dimensions: 7 x 0.9 x 9.2 inches

Shipping Weight: 15.5 ounces (View shipping rates and policies)

Average Customer Review: 4.4 out of 5 stars 69 customer reviews

Best Sellers Rank: #318,318 in Books (See Top 100 in Books) #24 in [Books > Computers & Technology > Networking & Cloud Computing > Wireless Networks](#) #52 in [Books > Computers & Technology > Hardware & DIY > Internet & Networking](#) #126 in [Books > Computers & Technology > Hardware & DIY > Single Board Computers](#)

## Customer Reviews

A Practical Guide to the ZigBee Mesh Networking Protocol

Robert Faludi is an NYU Professor, SVA professor, and an expert consultant on commercial

projects, including large-scale home energy monitoring. His work has appeared in The New York Times, CNet, Good Morning America, and elsewhere. He is a co-creator of the LilyPad XBee wearable radios, and Botanicalls, a system that allows thirsty plants to place phone calls for human help.

Good place to start. I was having a hard time finding much information on the Internet for Zigbee introduction/explanation so I went ahead and ordered this book. The version of XCTU is out of date and the interface has completely changed, however the information is detailed enough to find everything you need. I'm sure it saved me a lot of time.

This is a fantastic book. It is so clearly written that I couldn't believe that I'd spent so much of my time and money trying to understand XBees before falling to finding this. I recommend this before any other book on building wireless networks. Money well spent.

A great book for getting started with using XBee modules for wireless sensor communication. If you have experience prototyping with circuits and microcontrollers (Arduino), much of the info will be redundant. However, you can do as I did and follow along while replacing the simple projects with your personal, more complex projects.

Unlike other books, this book is intended for a user of ZigBee radios, NOT ZigBee protocol stack developers. This book does exactly what it was written to do, it provides a basis for using ZigBee (series 2) radios with a microcontroller. The book covers basic AT command setup (modem like commands used for the simplest of ZigBee communications) as well as API (direct computer ZigBee commands) usage. It does not assume any advanced knowledge of ZigBee or wireless communications. As a matter of fact it presents some information in an over simplified manner. This, however, is done with a great writing style and not all irritating to more advanced users (that is, you can skim the text for what you need). I would highly recommend this book to anyone just starting out with ZigBee radios. I would also note that this book does not cover the series 1 radios, which are not series 2 compatible, though the same principals apply.

Good basic information, but out of date concerning available hardware.

This book came highly recommended for series 2 xbee modules. It's a good read and very thorough

in explaining the fine details on these complicated modules. Be aware though, many people complain it is not good for the simpler xbee series 1 modules, this is true, as those modules are not nearly as complicated as series 2! Overall the book was a good reference that i would highly recommend.

Good for an introduction, but it lacks the good explanation the moment it gets to the chapter of using Processing.

Faludi is funny and clear, but doesn't treat the reader like a child. 10/10. Not new to Arduino but new to XBee/ZigBee, learned a lot from this book.

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