



Wireless Home Networking **Simplified**

- The full-color, fully illustrated, **simple** guide to wireless home networking
- **Step-by-step** instructions: Plan, install, secure, optimize, and troubleshoot your wireless network
- Discover all the **fun** things you can do with your wireless network



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COVER

make your wireless network pretty secure. For an additional source of information about more general home network security, pick up a copy of *Home Network Security Simplified* (Cisco Press, 2006), which covers ten easy things you can do to make your home network more secure.

Okay, Now the Wireless Part

The wired Ethernet protocol and LANs had been around for a long time before wireless networking became practical. In fact, the world had pretty much standardized on wired Ethernet long before any of the wireless networking companies were even formed (the technology was there, but, as we mentioned earlier, there was no commercial need). In addition, the number of computers using wired Ethernet had exploded, and other devices were being connected to the network as well.

This meant that if someone wanted to have computers communicate over a wireless connection, they were going to have to create a standard that worked with, or at least be compatible with, the wired Ethernet standard. The millions of existing computers were not going to change the way that they communicated just because some nerds wanted to check their e-mail while sitting on the toilet. (Okay, we can't prove it, but we suspect this was one of the driving forces behind the whole wireless thing.)



Note

Other types of cableless connections include, infrared, Bluetooth, and power-line. Just to be clear, these are not what we refer to as a “wireless network.” Most of these technologies are point-to-point, meaning computer to printer, or mobile phone to headset. They have very limited capabilities for multidevice networks. When we say “wireless networking” throughout the rest of this book, we are referring to Wi-Fi.

Challenges for Wireless Communication

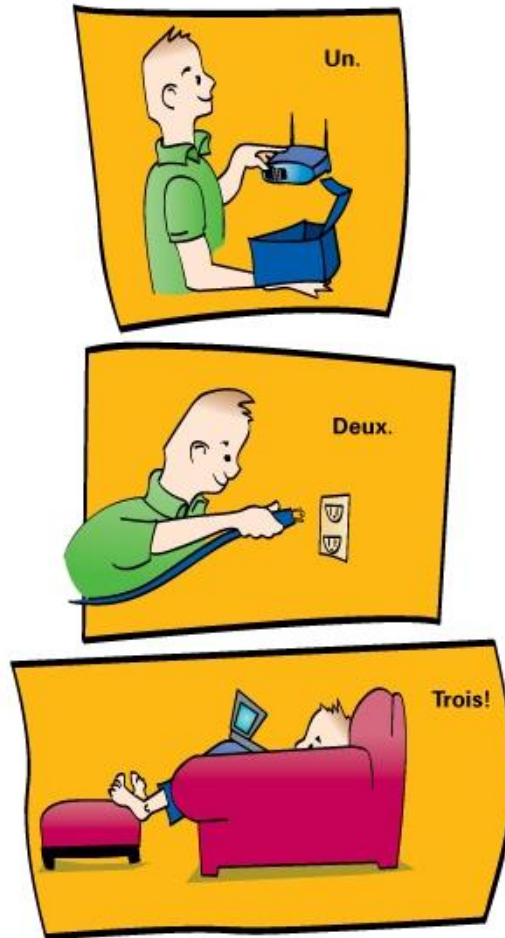
To make wireless communication practical, the engineers had some problems to overcome, despite the fact that the basic technology had been around for a long time.

Chapter 7. Wireless Router Setup

The wireless router is really the brains, or at least the heart, of your home network. The wireless router provides a number of functions, including

- Enabling several computers to connect to your home network either through a wired Ethernet cable or a wireless signal
- Providing a gateway to your broadband Internet connection so that several computers can share it
- Enforcing security policies to protect your home network from unauthorized access

This chapter provides the steps necessary to set up your wireless router, starting with connecting the wireless router to your broadband service. [Chapter 8, “Wireless NIC Setup,”](#) then walks you through getting wireless NICs to join the wireless network, to get your wireless home network up and running.



The starting assumption is that you already have a broadband Internet connection set up, either to a single computer in your house or with a wired home router. If you do not, we recommend that you read through *Home Networking Simplified*.



Note

It is possible to build a home network without wireless, using a wired router and Ethernet cables. It's also possible to build a home network without a router at all, using ad hoc networking and Internet connection sharing on one of your computers. Both of these types of home networks have significant disadvantages.