Setting Wireless Access Points

Unlike cabled networks, wireless networks don't need a separate switch. If all you want to do is network a group of wireless computers and the computers are close to one another, you just purchase a wireless adapter for each computer and — *voilà!* — instant network.

But what if you already have an existing cabled network? Suppose that you work at an office with 15 computers all cabled up nicely, and you just want to add a couple of wireless notebook computers to the network. Or suppose that you have two computers in your den connected with network cable, but you want to link up a computer in your bedroom without pulling cable through the attic.

That's where a WAP comes in. A WAP actually performs two functions:

- It acts as a central connection point for all your computers that have wireless network adapters. In effect, the WAP performs the same function that a network switch performs for a wired network.
- It links your wireless network to your existing wired network so that your wired computer and your wireless computers get along like one big happy family. This sounds like the makings of a Dr. Seuss story. ("Now the wireless sneeches had hubs without wires. But the twisted-pair sneeches had cables to thires. . . .")


TIP

Wireless access points are sometimes just called access points (APs), which is basically a box with an antenna (or often a pair of antennae) and an RJ-45 Ethernet port. You plug the AP into a network cable and then plug the other end of the cable into a hub or switch, and your wireless network should be able to connect to your cabled network.

Figure 8-3 shows how an access point acts as a central connection point for wireless computers and also how it bridges your wireless network to your wired network.

Infrastructure mode

When you set up a wireless network with an AP, you're creating an *infrastructure mode network:* The AP provides a permanent infrastructure for the network. The APs are installed at fixed physical locations, so the network has relatively stable boundaries. Whenever a mobile computer wanders into the range of one of the APs, it has come into the sphere of the network and can connect.