FIGURE 8-4: A typical wireless router.

Roaming Capabilities

You can use two or more wireless access points to create a large wireless network in which computer users can roam from area to area and still be connected to the wireless network. As the user moves out of the range of one access point, another access point automatically picks up the user and takes over without interrupting the user's network service.

To set up two or more access points for roaming, you must carefully place the access points so that all areas of the office or building that are being networked are in range of at least one of the access points. Then just make sure that all the computers and access points use the same SSID.

Two or more access points joined for roaming, along with all the wireless computers connected to any of the access points, form an *Extended Service Set* (ESS). The access points in the ESS are usually connected to a wired network.

One limitation of roaming is that each access point in an ESS must be on the same TCP/IP subnet. That way, a computer that roams from one access point to another within the ESS retains the same IP address. If the access points had a different subnet, a roaming computer would have to change IP addresses when it moved from one access point to another.

Wireless bridging

Another use for wireless APs is to bridge separate subnets that can't easily be connected by cable. Suppose that you have two office buildings that are only about