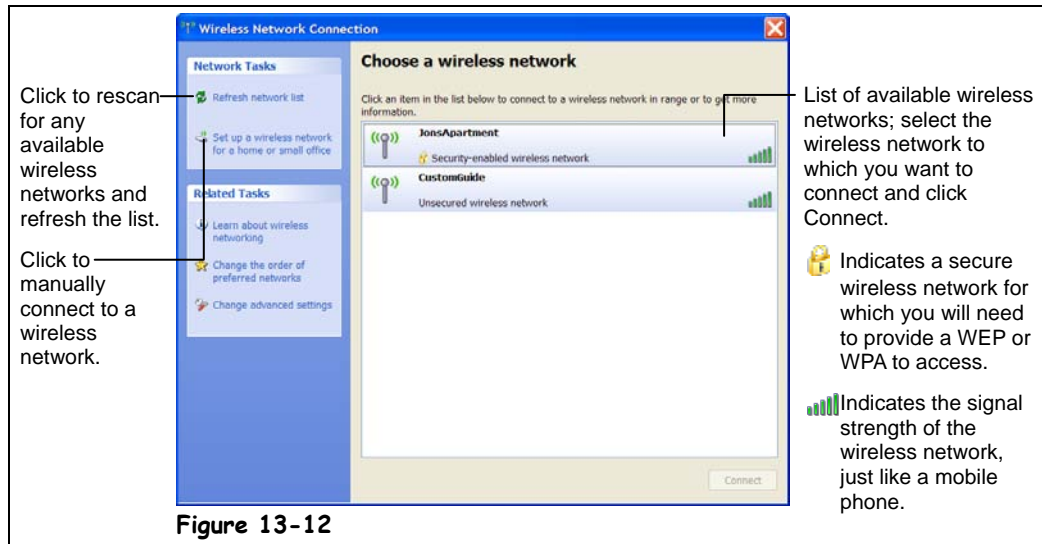


Lesson 13-6: Connecting to a Wireless Network

Figure 13-12


The Wireless Network Connection dialog box lists the available wireless networks to which you can connect.



You've decided to take your laptop to the local coffee shop to get some work done away from the distractions at home or the office. You've just turned on your computer and are beginning to enjoy your café latte when you notice the "Free Wireless Internet" sign. Wow – since you have a newer WiFi enabled notebook computer, you decide to check your e-mail. But how do you connect to the coffee shop's wireless network—or any wireless network, for that matter—to access the Internet? This lesson explains how.

1. Click the **Start** button and select **Control Panel** from the menu. Click the **Network and Internet Connections** category. Then click **Network Connections**.
2. Select the **Wireless Network Connection** icon then select the **View Available Wireless Networks** task from the **Network Tasks** menu.

A list of wireless networks within range appears, as shown in Figure 13-12.

Wireless Security Indicator: Wireless network hotspots can be open or secure. If a hotspot is open, anyone with a wireless network card can access the hotspot. If the hotspot is secure, an  icon will appear next to it and you will usually need to know the *WEP* key to connect to it. WEP stands for Wired Equivalent Privacy, and it is a way to encrypt the information that a wireless network sends through the air. Table 13-4: *Common WiFi Encryption Standards* describes the more common wireless encryption standards you'll come across.

Signal Strength Indicator: These bars indicate the signal strength of the wireless network, just like a mobile phone does. And, just like a mobile phone, a full set of bars means you'll get a stronger and more reliable connection, fewer bars means a weaker, slower, and more unreliable connection.



Wireless Network Connection

3. Select the desired wireless network from the list that appears and click **Connect**.

A couple of things can happen now, depending on whether or not the wireless network is open or secure. If the wireless network is open, Windows XP should be able to connect to it.

If the network key is provided automatically by your network the connection will be made automatically, otherwise you will need to enter and confirm the WEP or WPA key. If you don't have the key you won't be able to connect to the wireless network.

4. If prompted, enter and confirm the WEP or WPA key and click **Connect**.

If the signal strength is strong enough, if you've entered the right WEP or WPA key, and if your computer and the network are using compatible wireless standards (see Table 13-3: *WiFi Network Standards* for a description of these) you should be connected to the wireless network. That's a lot of "ifs", which means there is a good chance something could go wrong when you're connecting to a wireless network. If you are having problems connecting to the wireless network, check the following:

- Is your WiFi card turned on?
- Does your WiFi card support the same wireless network standard as the network? For example, if you have a 802.11b WiFi card you won't be able to connect to a 802.11a wireless network. See Table 13-3: *WiFi Network Standards* for a list of wireless network standards.
- Did you enter the correct WEP or WPA key?
- Is the WiFi signal strong enough? If the Signal Strength Indicator only displays a single bar, you may have problems connecting to the wireless network.


More and more wireless networks are encrypted, as they should be, to prevent unauthorized users from eavesdropping. The following table lists some of the more common WiFi encryption standards in use.

Table 13-4: Common WiFi Encryption Standards

Security Standard	Description
Open	An open wireless network has no security whatsoever, therefore anyone with a WiFi card can access it. Open wireless networks or "hotspots" can be found in a growing number of coffee shops, hotels, and other public areas.
WEP / Shared	WEP stands for Wired Equivalent Privacy and is the most common way to encrypt the information that a wireless network sends through the air. There are two variations of WEP: 64-bit encryption (really 40-bit) and 128-bit encryption (really 104-bit). 40-bit encryption was the original standard but it was easily broken. 128-bit encryption is more secure and is what most wireless networks use. You must have the right WEP key or "pass phrase" to gain access to a WEP protected network.
WPA	WPA stands for WiFi Protected Access and is a new security wireless standard that addresses some of the shortcomings of WEP and has better authentication and encryption features. The problem with WPA is it's so new that some older WiFi devices don't support it.
WPA-PSK	A variation of WPA is called WPA-SPK stands for WiFi Protected Access – Pre Shared Key. WPA-PSK is a simplified but still powerful form of WPA suitable for home wireless networks.

Quick Reference

To Connect to an Existing Wireless Network or HotSpot:

1. Click the **Start button** and select **Control Panel** from the menu. Click the **Network and Internet Connections** category then click **Network Connections**.
2. Select the **Wireless Network Connection** icon then select the  **View Available Wireless Networks** task from the Network Tasks menu.
3. Select the desired wireless network and click **Connect**.
4. If prompted, enter and confirm the WEP or WPA key and click **Connect**.

Wireless (WiFi) Encryption Standards:

- **Open**
No security; anyone can connect to the network.
- **WEP/Shared**
Most common encryption standard.
- **WPA**
A newer, more secure encryption standard but not as widely supported as WEP.