



## **FAU Wireless Connectivity For Windows Vista**

*Updated: September 7, 2007*

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# 1

## Connect to fausecure

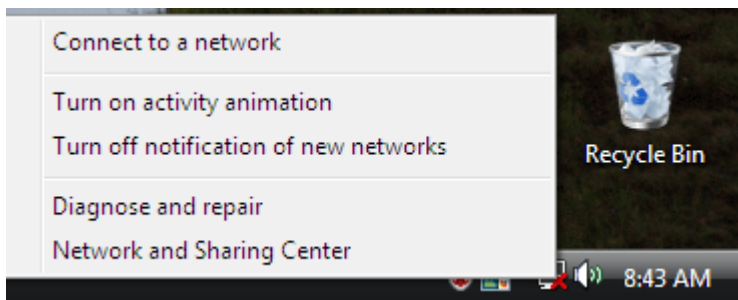


FIGURE 1.1

1. Right-click on the Network Connections icon located in the System Tray. This is the area at the bottom, right corner of your desktop next to the clock. A pop-up window will appear (Figure 1.1). Click on Network and Sharing Center.

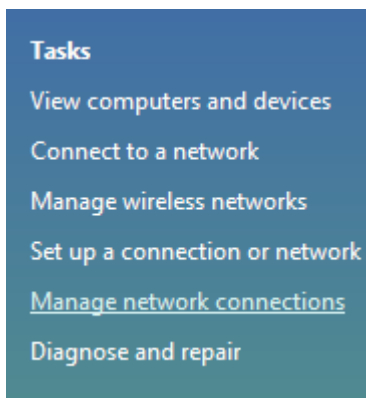


FIGURE 1.2

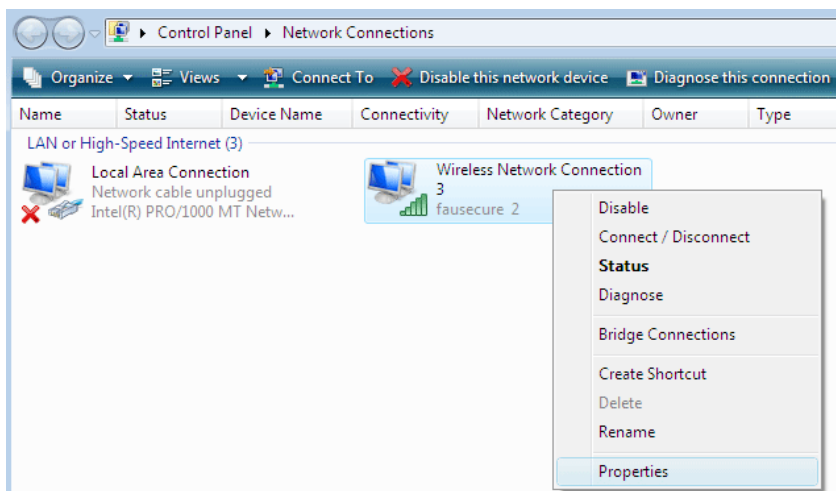
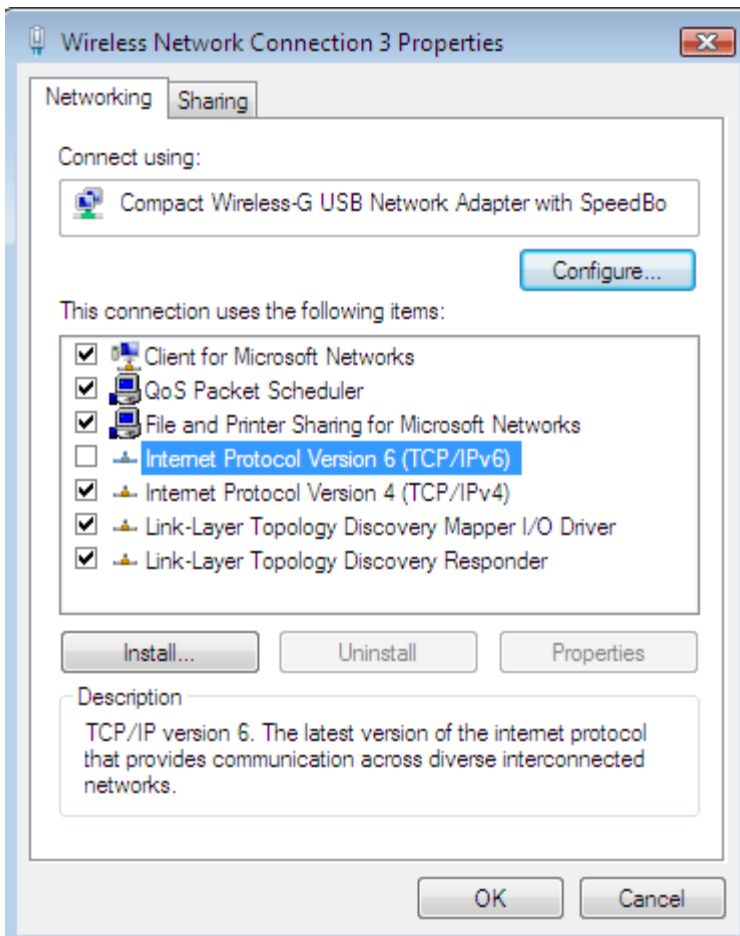


FIGURE 1.3



**FIGURE 1.4**

2. Disable TCP/IPv6. FAU is not currently utilizing TCP/IPv6. By default, this is enabled. We have found that deselecting this may improve your connectivity chances.

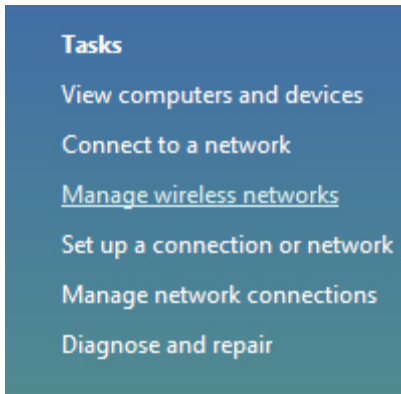
a. Right-click on the Network Connections icon in the System Tray (lower-right corner; next to the computer clock).

b. Click on Network and Sharing Center. Click on Manage Network Connections (Figure 1.2).

c. In the dropdown menu, click on Properties (Figure 1.3).

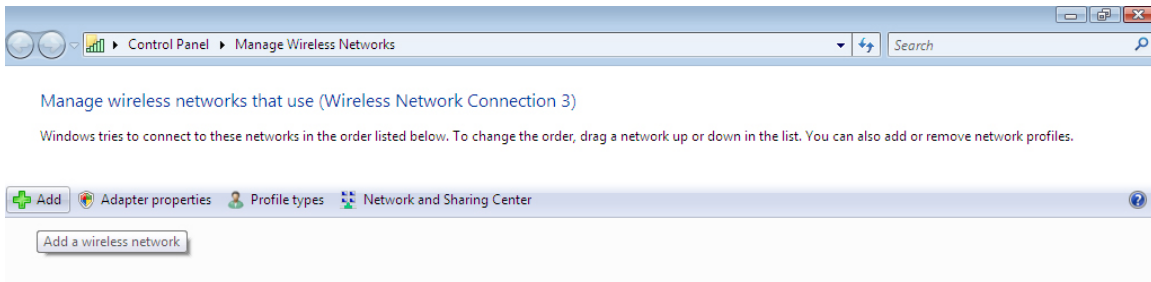
d. Uncheck Internet Protocol Version 6 (TCP/IPv6) (Figure 1.4).

e. Click OK when completed. Close the Network Connections window. This will return you to the Network and Sharing Center window.



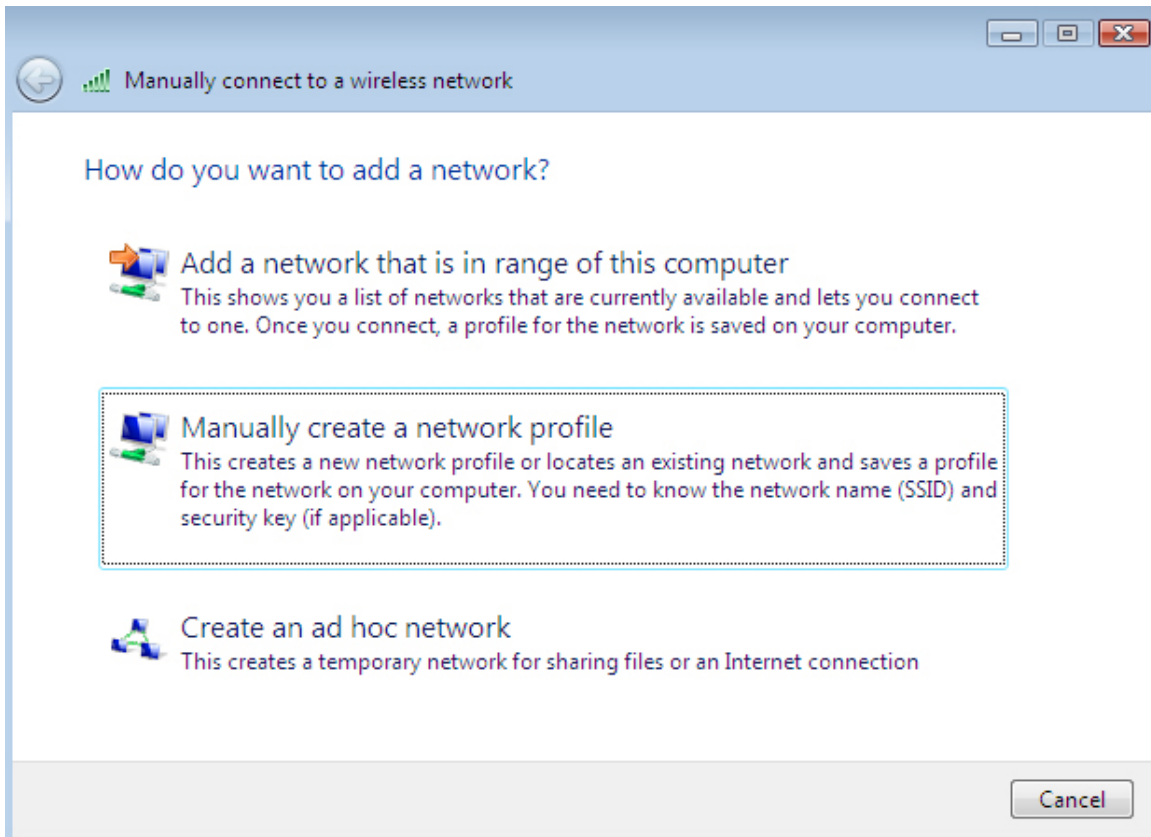
**FIGURE 1.5**

3. In the Network and Sharing Center window (Figure 1.5), click on Manage Wireless Networks.



**FIGURE 1.6**

4. In the Manage Wireless Networks window (Figure 1.6), click on the Add button.



**FIGURE 1.7**

5. How do you want to add a network (Figure 1.7)? Click on “Manually create a network profile” (2<sup>nd</sup> choice).

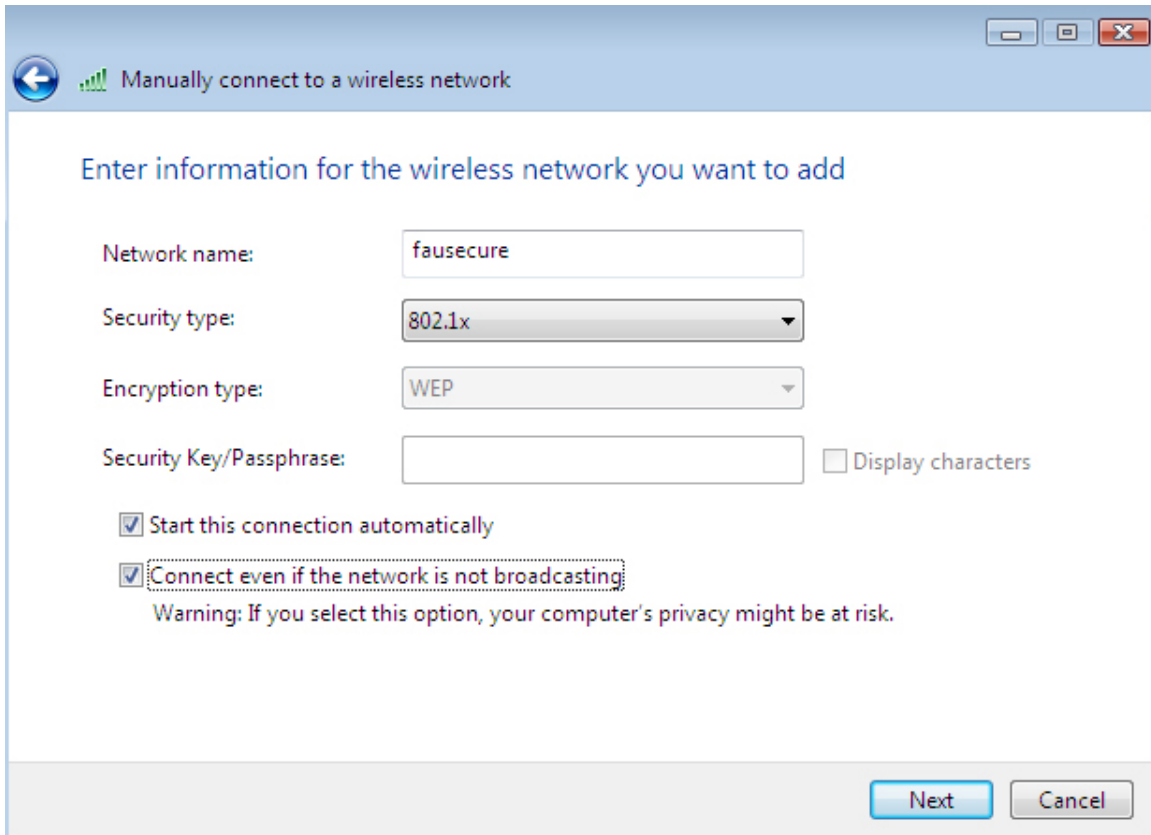


FIGURE 1.8

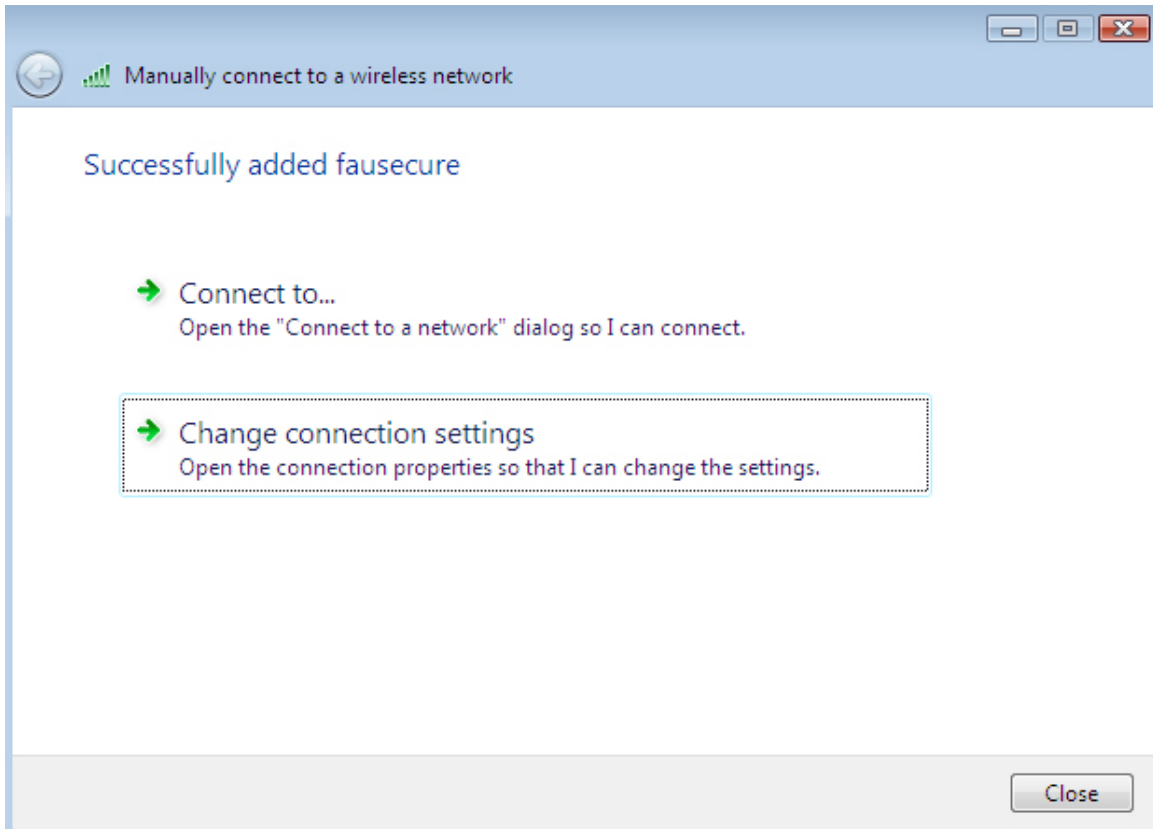
6. Enter the wireless network information (Figure 1.8).

**Network name:** *fausecure* ((( This must be typed in lowercase. )))

**Security type:** *802.1x*.

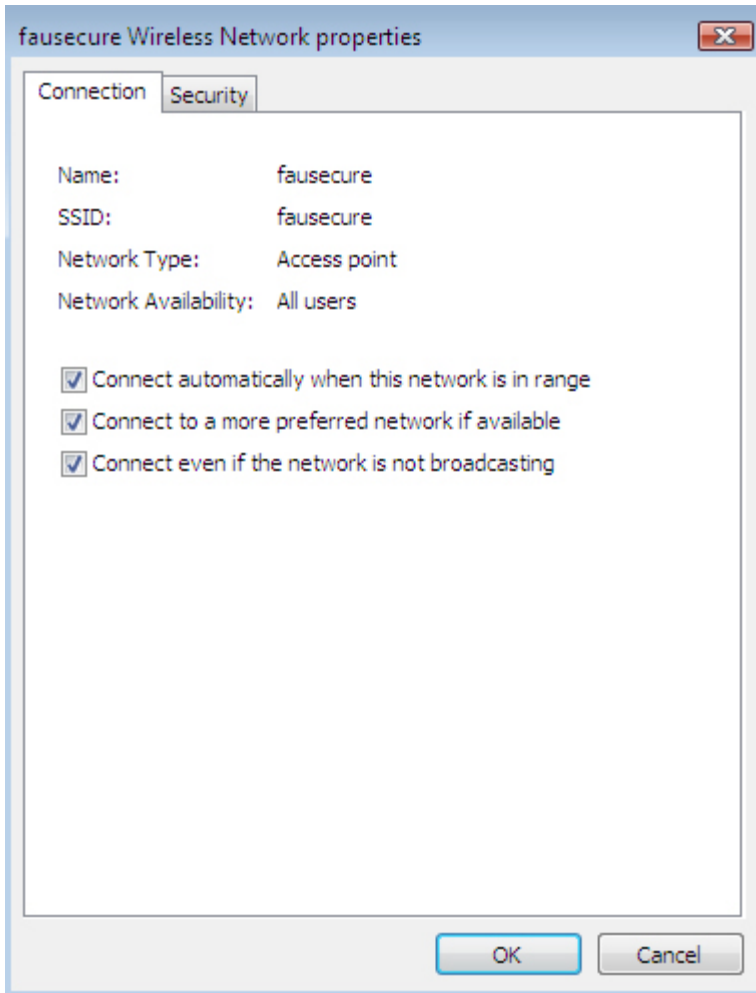
**Start this connection automatically:** *checked*

**Connect even if the network is not broadcasting:** *checked*



**FIGURE 1.9**

7. Once the fausecure connection has been added successfully (Figure 1.9), choose “Change connection settings.”



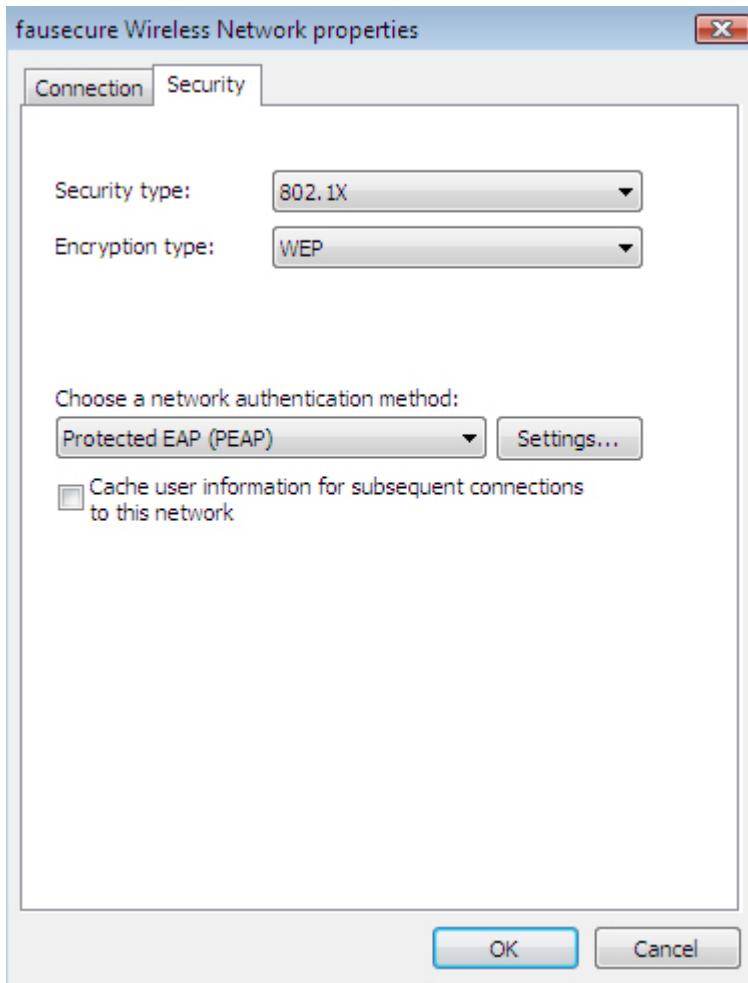
**FIGURE 1.10**

8. Under the Connection tab in the Wireless Network Properties window (Figure 1.10), be sure all 3 checkboxes (“Connect automatically when this network is in range”, “Connect to a more preferred network if available”, and “Connect even if the network is not broadcasting”) are checked.

**Connect automatically when this network is in range:** *checked*

**Connect to a more preferred network if available:** *checked*

**Connect even if the network is not broadcasting:** *checked*

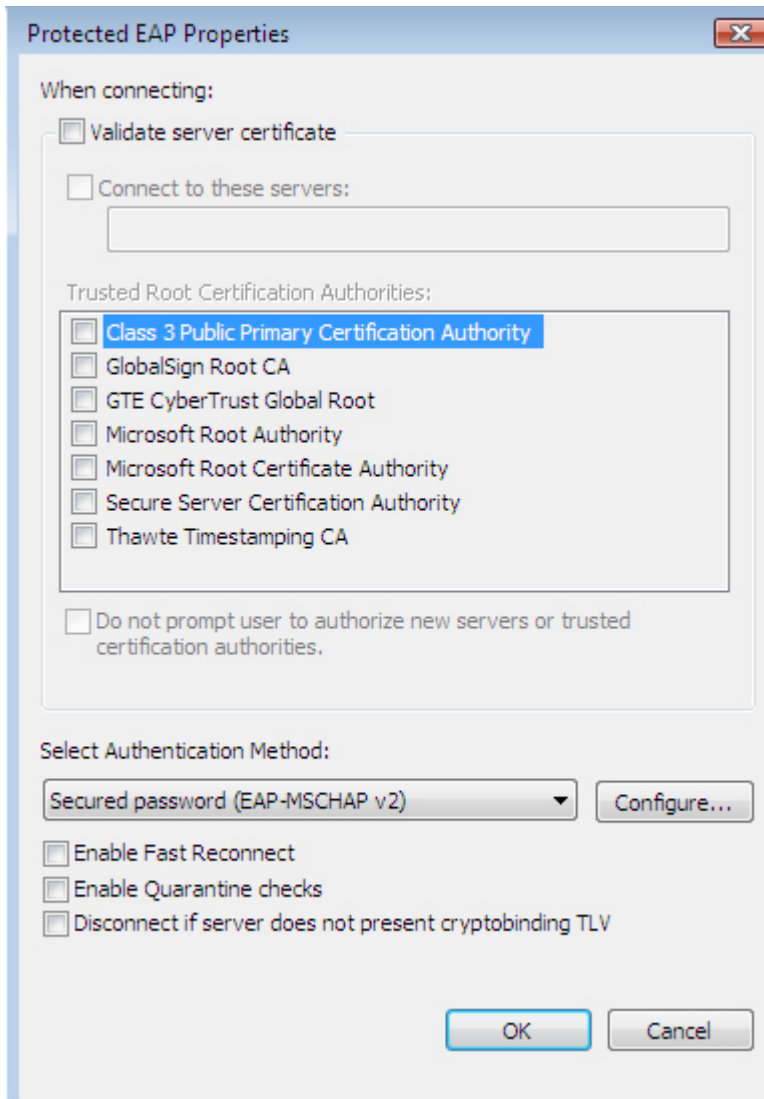


**FIGURE 1.11**

9. Under the Security tab in the Wireless Network Properties window (Figure 1.11), uncheck the single checkbox that appears (“Cache user information for subsequent connections to this network”).

**Cache user information for subsequent connections to this network:** *Unchecked*

10. Click on the Settings button.



**FIGURE 1.12**

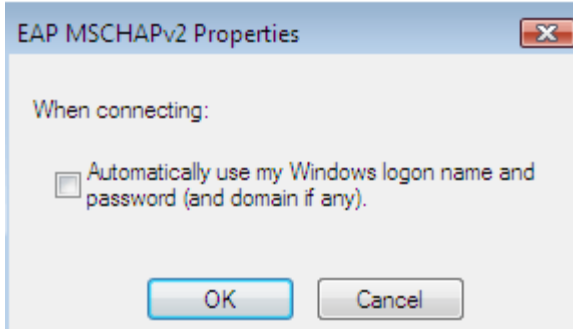
11. In the Protected EAP Properties window (Figure 1.12), enter the information (below) in the corresponding fields. Click on the Configure button when done.

**Validate Server Certificate:** *Unchecked*

**Select Authentication Method:** *Secured Password (EAP-MSCHAP v2)*

**Enable Fast Reconnect:** *Unchecked*

12. Click on the Configure button.



**FIGURE 1.13**

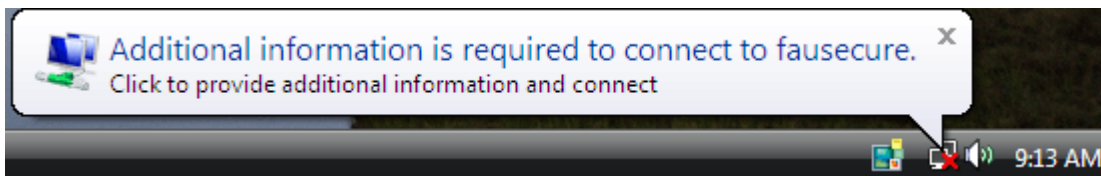
13. In the EAP MSCHAPv2 Properties window (Figure 1.13), uncheck the single checkbox (“Automatically Use My Windows Logon Name and Password (and Domain if Any).”).

**Automatically Use My Windows Logon Name and Password (and Domain if Any):** *Unchecked*

14. In the EAP MSCHAPv2 Properties window, click the OK button.

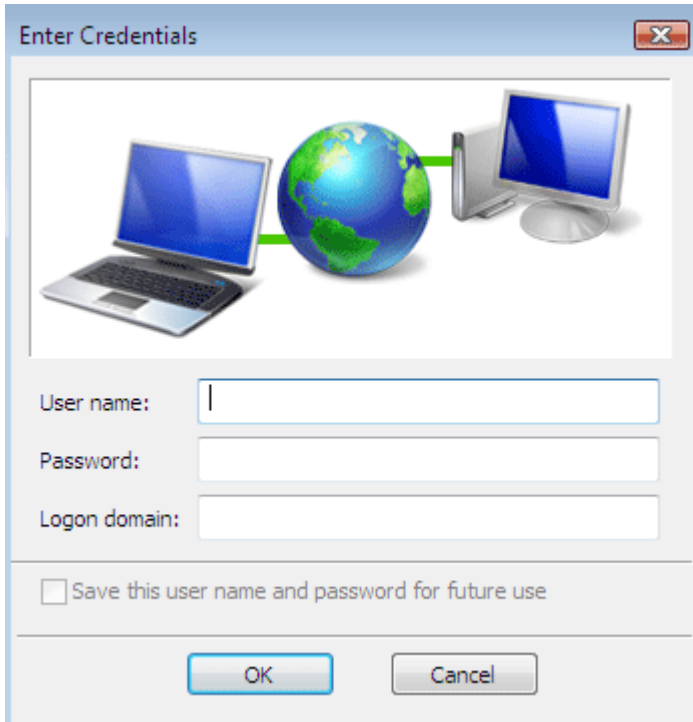
15. In the Protected EAP Properties window, click the OK button.

16. In the Wireless Network Properties window, click the OK button.



**FIGURE 1.14**

17. Windows should begin communicating with FAU servers. You should get a balloon window (“Additional Information is Required to Connect to fausecure.”) (Figure 1.14). Click on the balloon window.



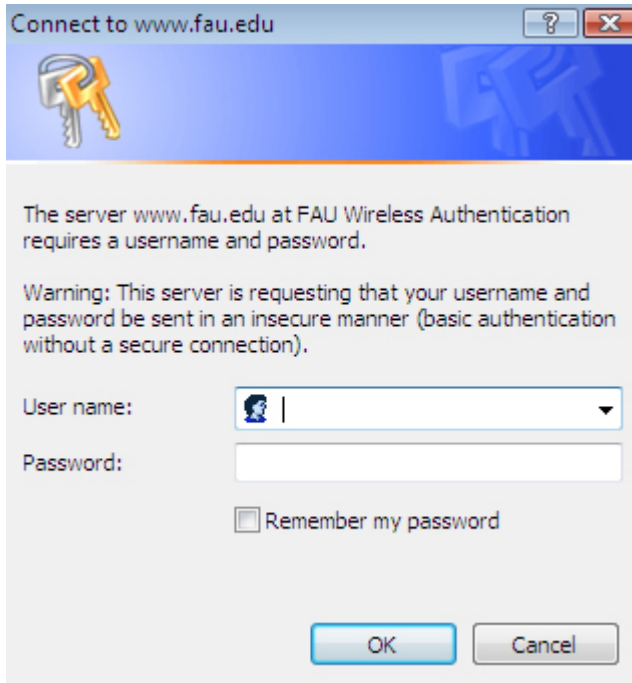
**FIGURE 1.15**

18. This will open an Enter Credentials authentication window (Figure 1.15). Enter your FAUNetID (username) and your Network Access account password. Leave the Logon Domain field blank. Click the OK button when done.



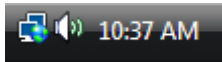
**FIGURE 1.16**

19. Note the connection icon in the System Tray (lower right corner). The icon should change from having a red "X" (meaning no connection exists) to either a limited connection icon (yellow triangle with exclamation point) or computer only icon (partial connection exists) (Figure 1.16). Open a web browser such as Internet Explorer or FireFox at this time.



**FIGURE 1.17**

20. An FAU Wireless Authentication window (Figure 1.17) should appear. Enter the same faunetid/password pair you entered in Step 18.



**FIGURE 1.18**

21. Once the connection is made, the Network Connections icon in the System Tray will change (Figure 1.18) showing a globe. This means your computer is connected to the internet. You should see the web site based on the home page configured in your web browser.

# 2

## Connect to fau

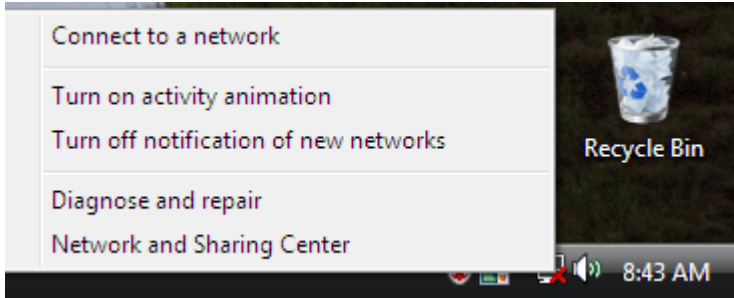


FIGURE 2.1

1. Right-click on the Network Connections icon located in the System Tray. This is the area at the bottom, right corner of your desktop next to the clock. A pop-up window will appear (Figure 2.1). Click on Network and Sharing Center.

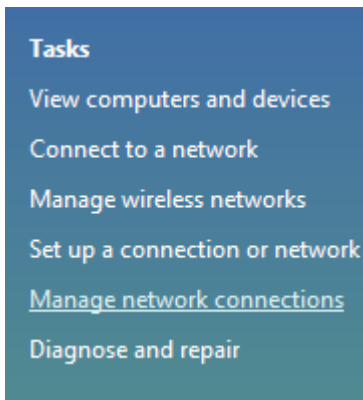


FIGURE 2.2

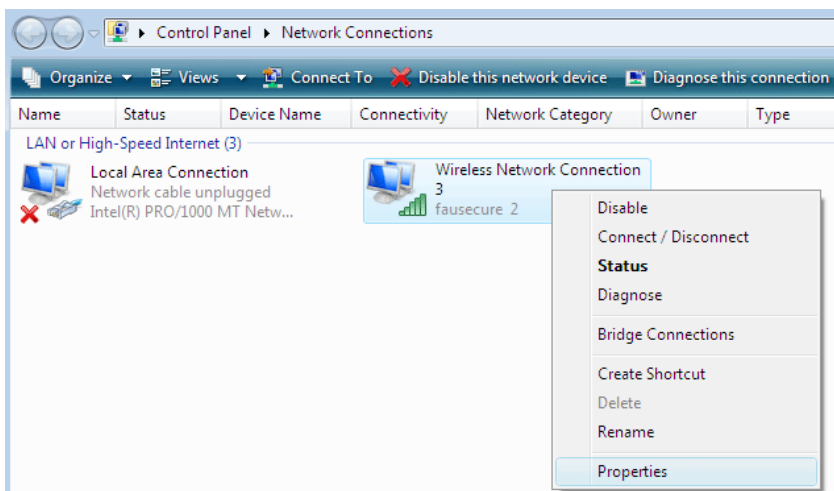
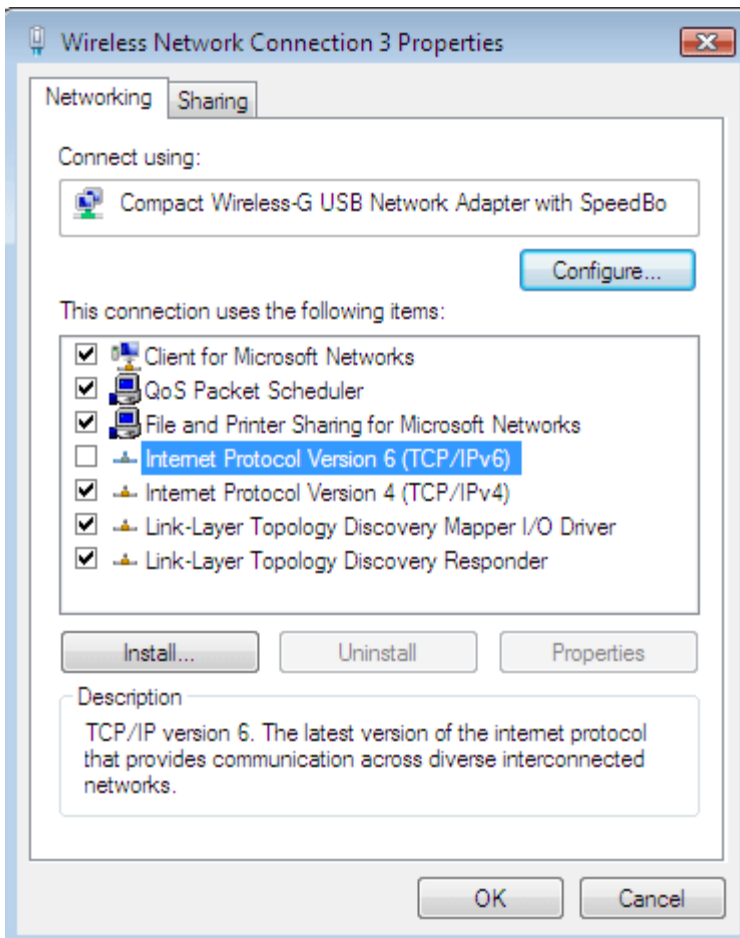


FIGURE 2.3



**FIGURE 2.4**

2. Disable TCP/IPv6. FAU is not currently utilizing TCP/IPv6. By default, this is enabled. We have found that deselecting this may improve your connectivity chances.

- a. Right-click on the Network Connections icon in the System Tray (lower-right corner; next to the computer clock).
- b. Click on Network and Sharing Center. Click on Manage Network Connections (Figure 2.2).
- c. In the dropdown menu, click on Properties (Figure 2.3).
- d. Uncheck Internet Protocol Version 6 (TCP/IPv6) (Figure 2.4).
- e. Click OK when completed. Close the Network Connections window. This will return you to the Network and Sharing Center window.

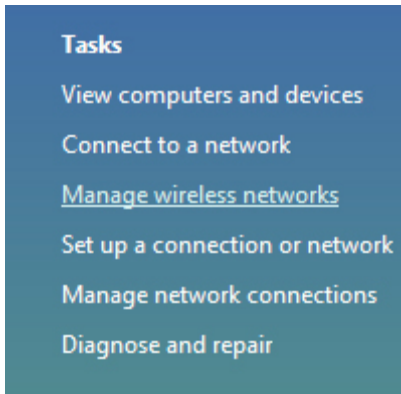


FIGURE 2.5

3. In the Network and Sharing Center window (Figure 2.5), click on Manage Wireless Networks.

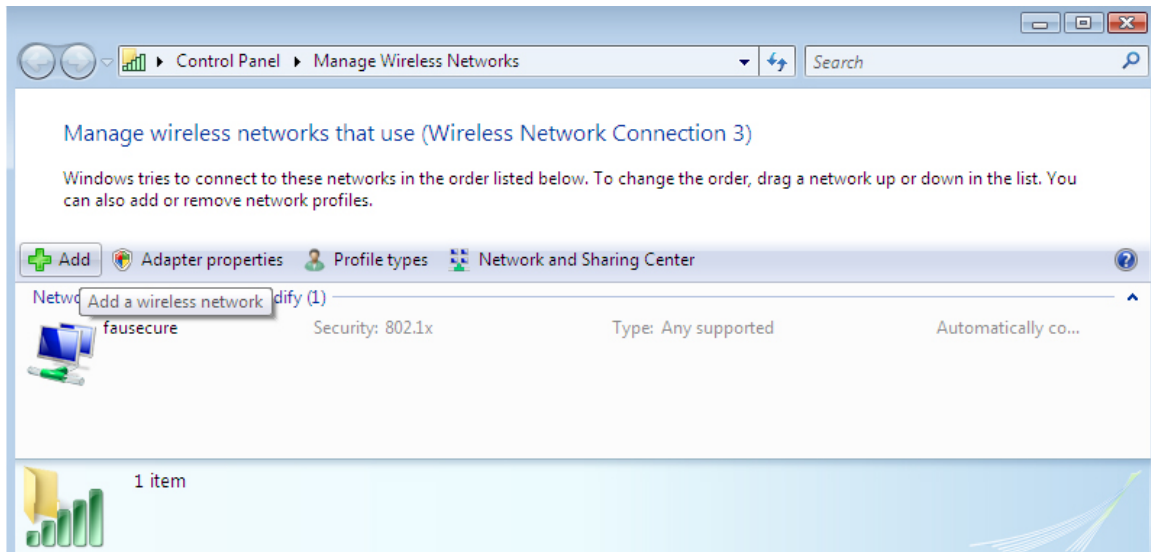
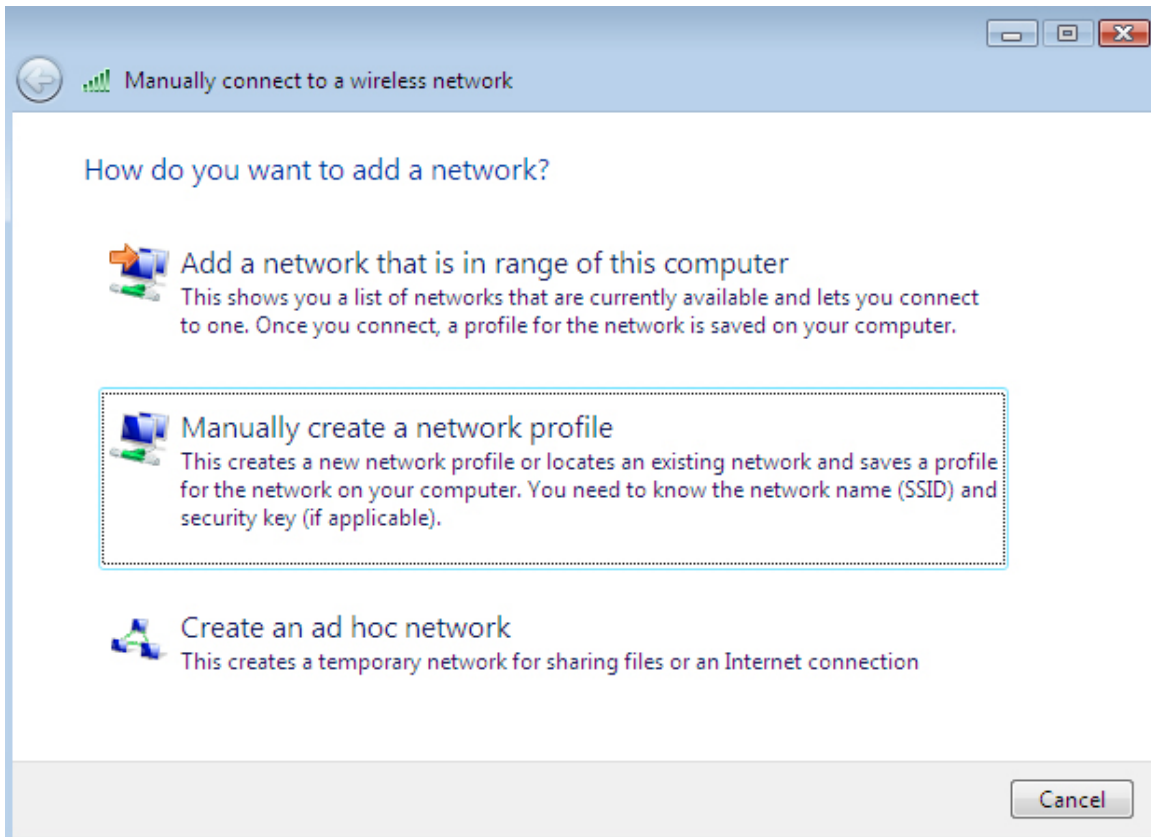


FIGURE 2.6

4. In the Manage Wireless Networks window (Figure 2.6), click on the Add button.



**FIGURE 2.7**

5. How do you want to add a network (Figure 2.7)? Click on “Manually create a network profile” (2<sup>nd</sup> choice).

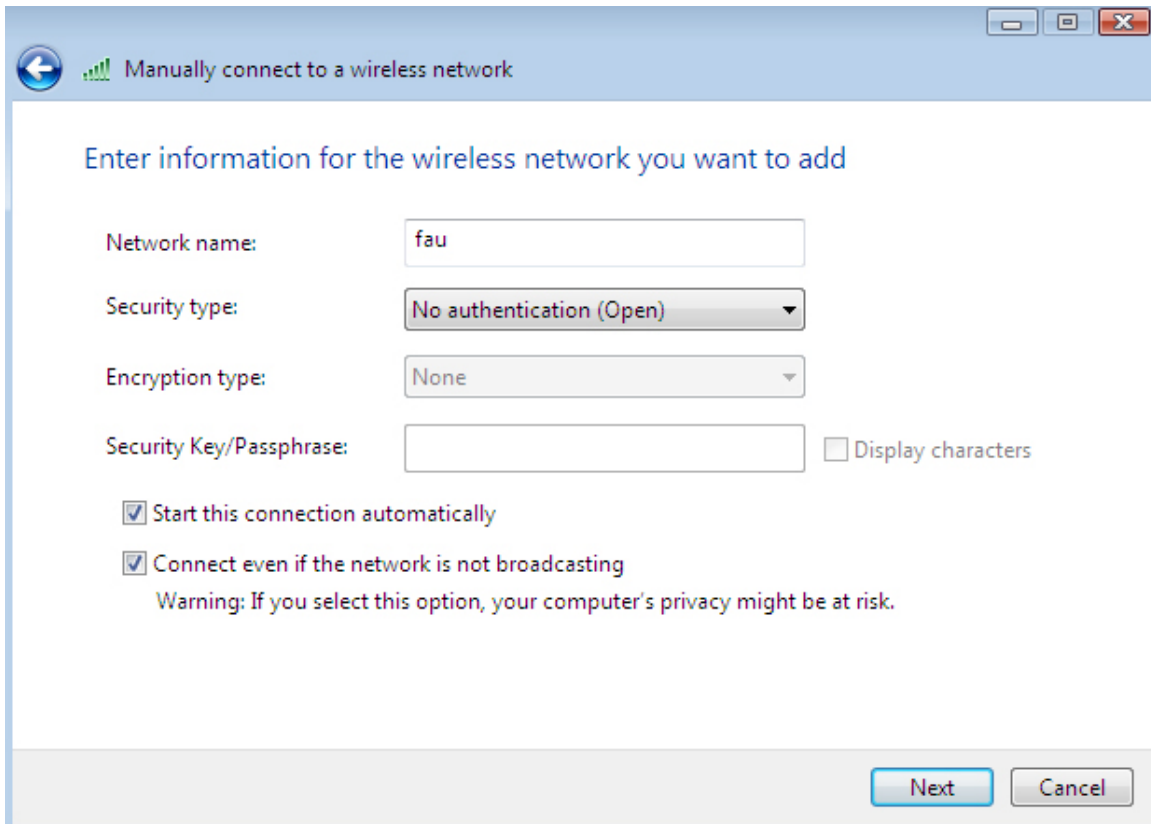


FIGURE 2.8

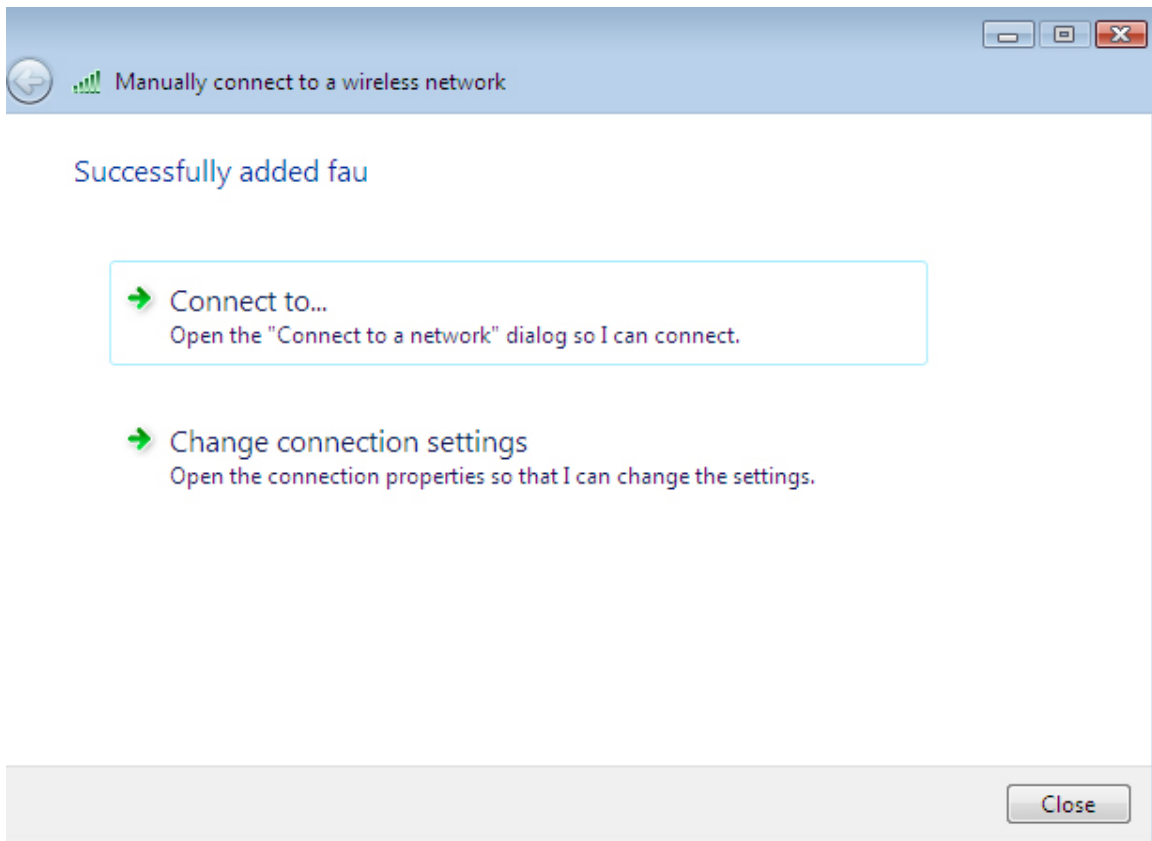
6. In the Manually Connect to a Wireless Network window (Figure 2.8), enter the information (below) in the corresponding fields. Click on the Next button when done.

**Network name:** *fau* ((( This must be typed in lowercase. )))

**Security type:** *No Authentication (Open)*

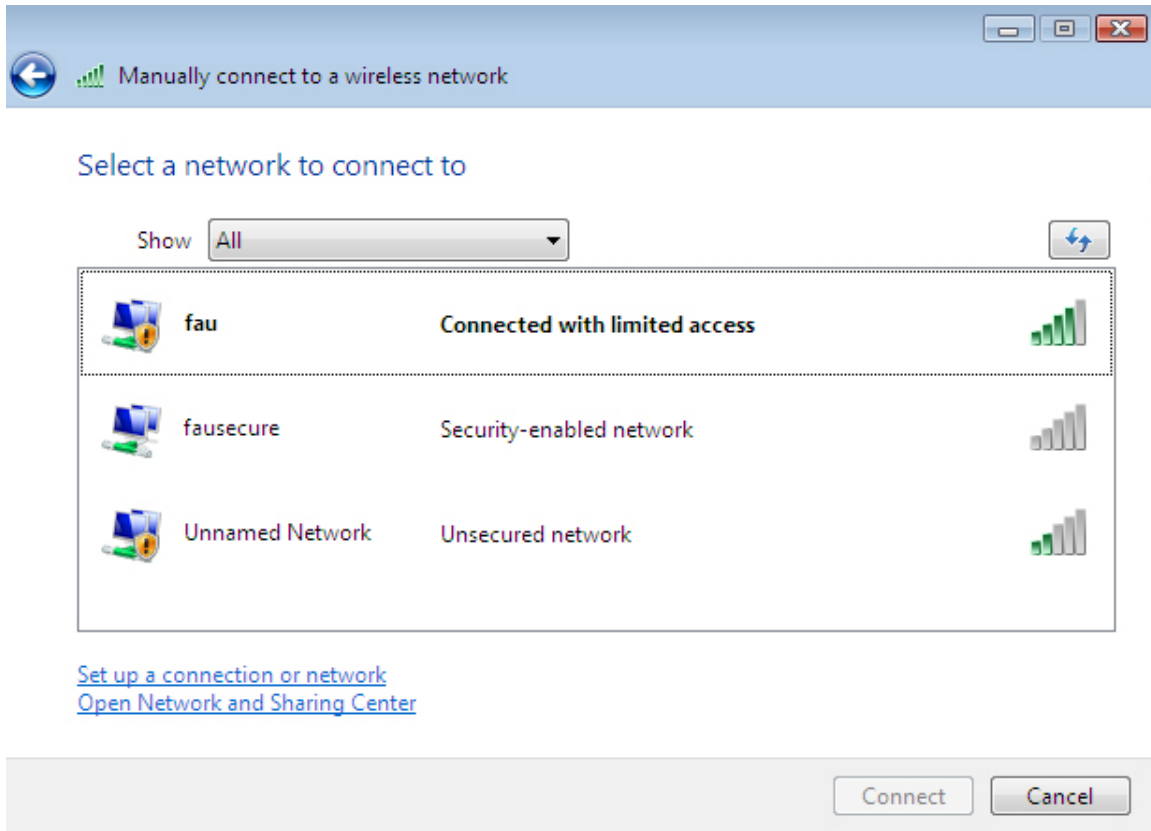
**Start this connection automatically:** *Checked*

**Connect even if the network is not broadcasting:** *Checked*



**FIGURE 2.9**

7. In the Manually Connect to a Wireless Network window (Figure 2.9), click on "Connect To."



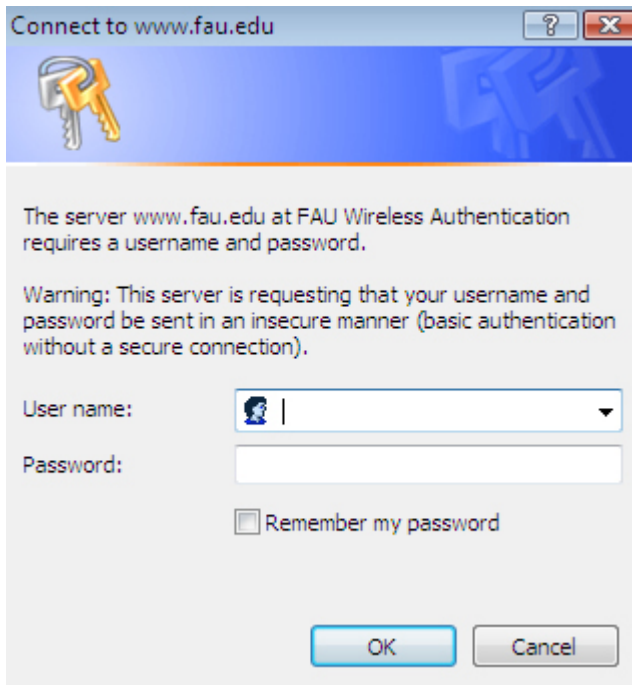
**FIGURE 2.10**

8. In the Manually Connect to a Wireless Network window (Figure 2.10), click once to highlight the “fau” wireless connection. Then, click on the Connect button.



**FIGURE 2.11**

9. Note the connection icon in the System Tray (lower right corner). The icon should change from having a red “X” (meaning no connection exists) to either a limited connection icon (yellow triangle with exclamation point) or computer only icon (partial connection exists) (Figure 2.11). Open a web browser such as Internet Explorer or FireFox at this time.



**FIGURE 2.12**

10. An FAU Wireless Authentication window (Figure 2.12) should appear. Enter your FAUNetID (username) and your Network Access account password. Click the OK button when done.



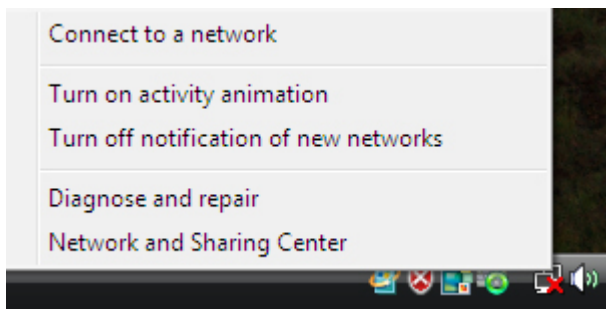
**FIGURE 2.13**

11. Once the connection is made, the Network Connections icon in the System Tray will change (Figure 2.13) showing a globe. This means you're connected to the internet. You should see the web site based on the home page configured in your web browser.

# 3

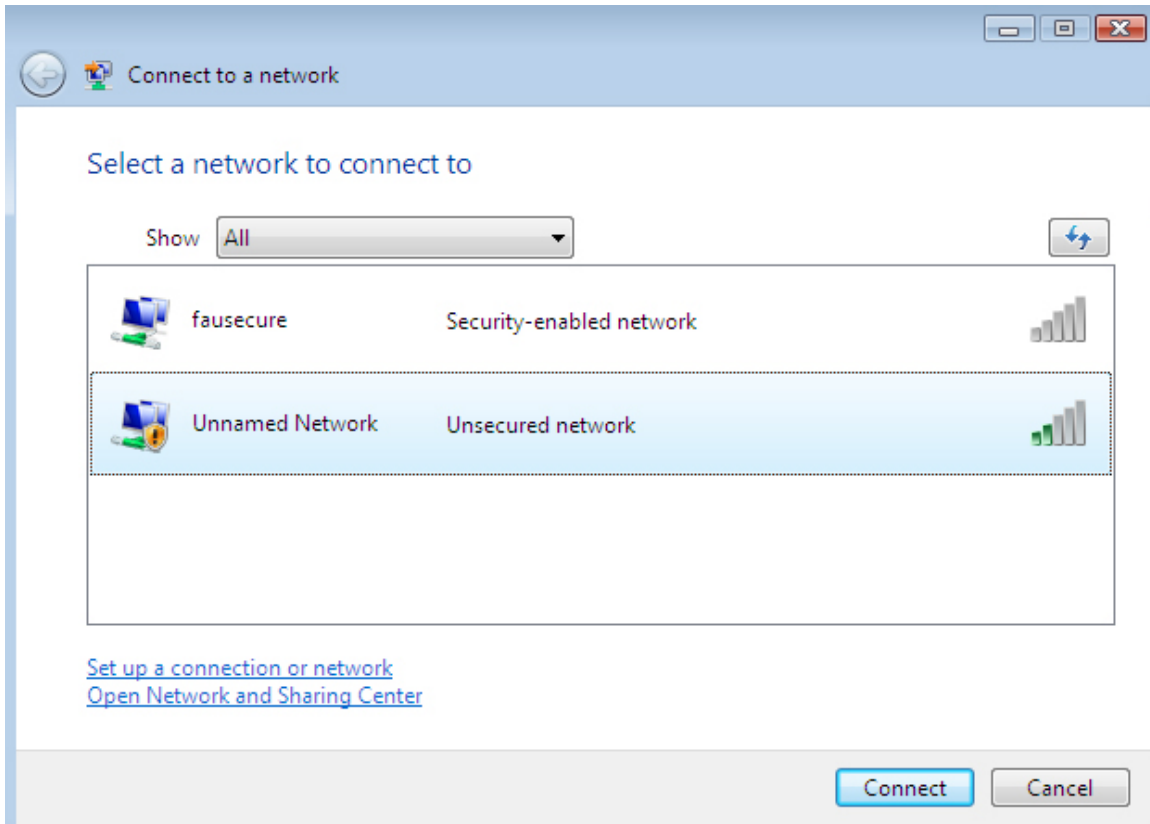
## Alternate Connection

This section shows an alternate way of connecting to our wireless network. Often, we use method to connect to “fau” when we are unable to make a clean connection to “fausecure.”



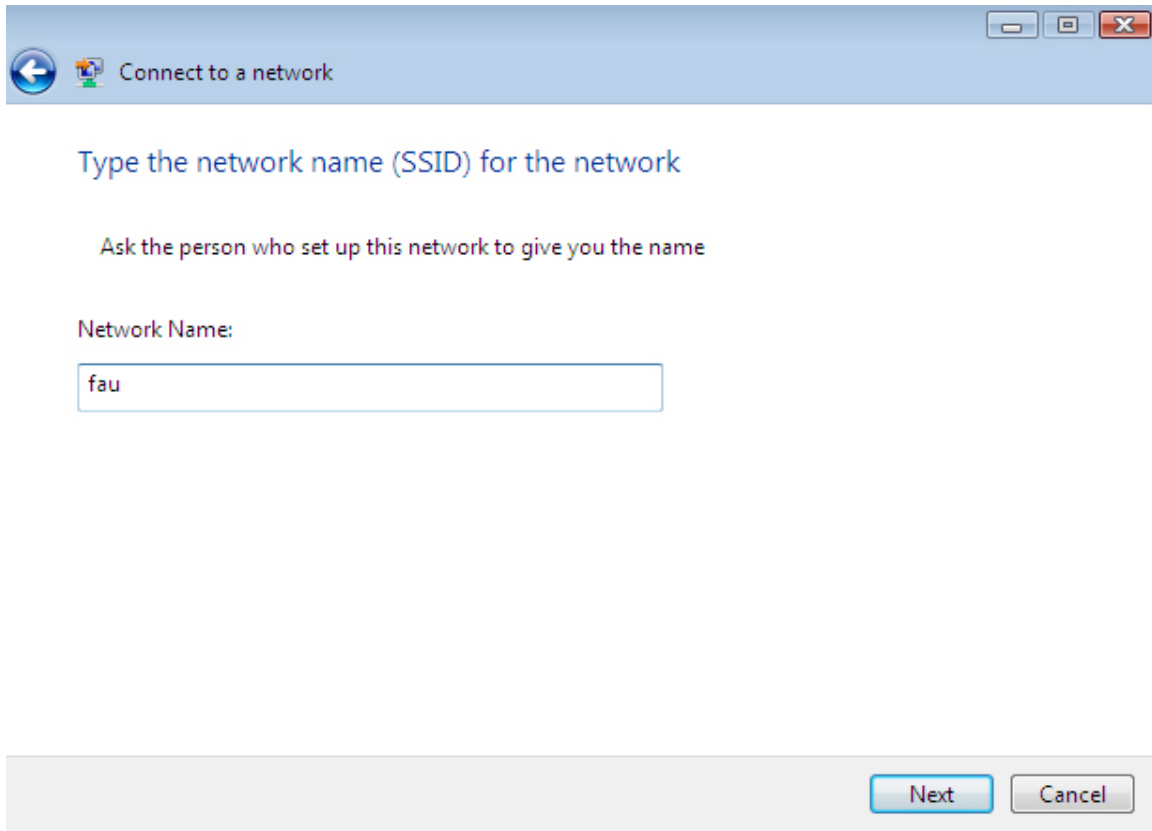
**FIGURE 3.1**

1. Right-click on the Network Connections icon in the System Tray (lower right corner) (Figure 3.1).
2. Click on “Connect to a network.”



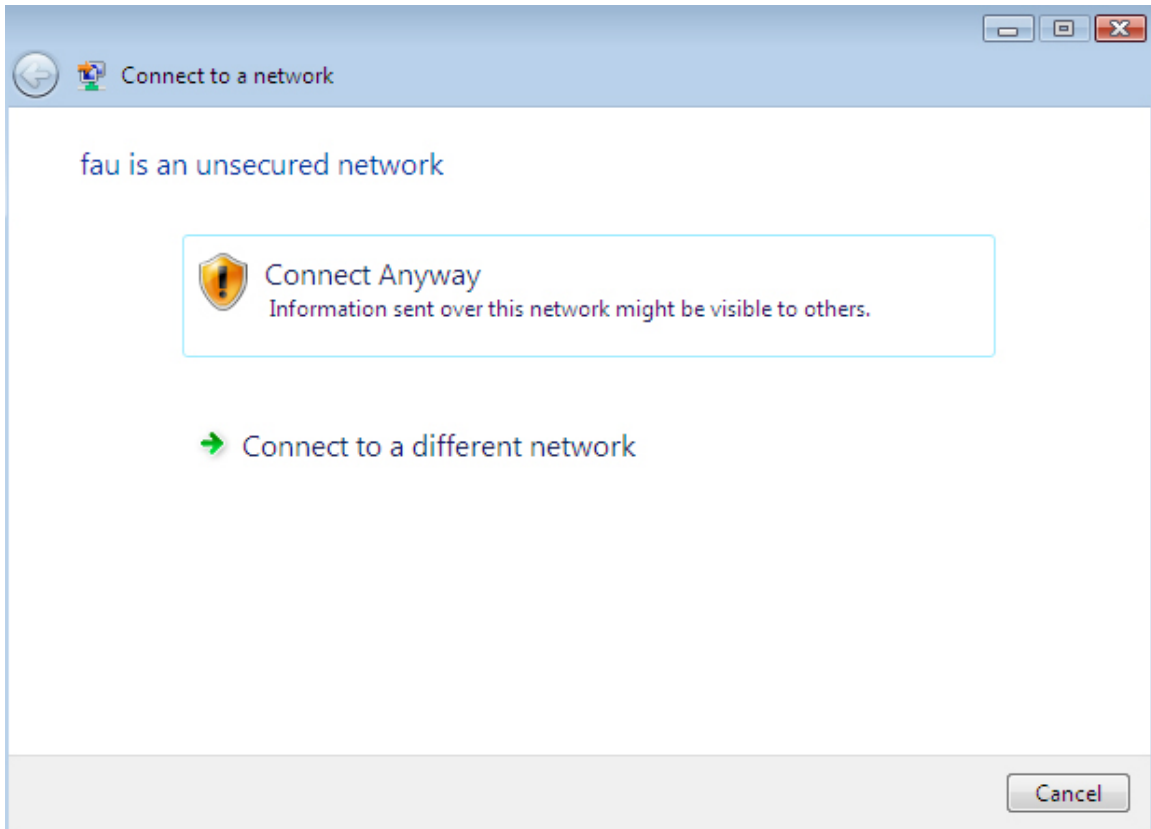
**FIGURE 3.2**

2. The SSID on either of FAU's wireless networks ("fau" and "fausecure") are not broadcasted. If your system does not recognize the signal it receives, then you will not see the SSID appear in the Connect to a Network window (Figure 3.2). Instead, you should see the unknown network displayed as "Unnamed Network – Unsecured Network."
- Click once to choose "Unnamed Network – Unsecured Network."
  - Click on the Connect button.



**FIGURE 3.3**

3. Enter "fau" into the Network Name box (Figure 3.3). Be sure to type this in lowercase.
4. Click the Next button when done.



**FIGURE 3.4**

5. A window will appear cautioning about “fau” being an unsecured network (Figure 3.4). Click on “Connect Anyway.”

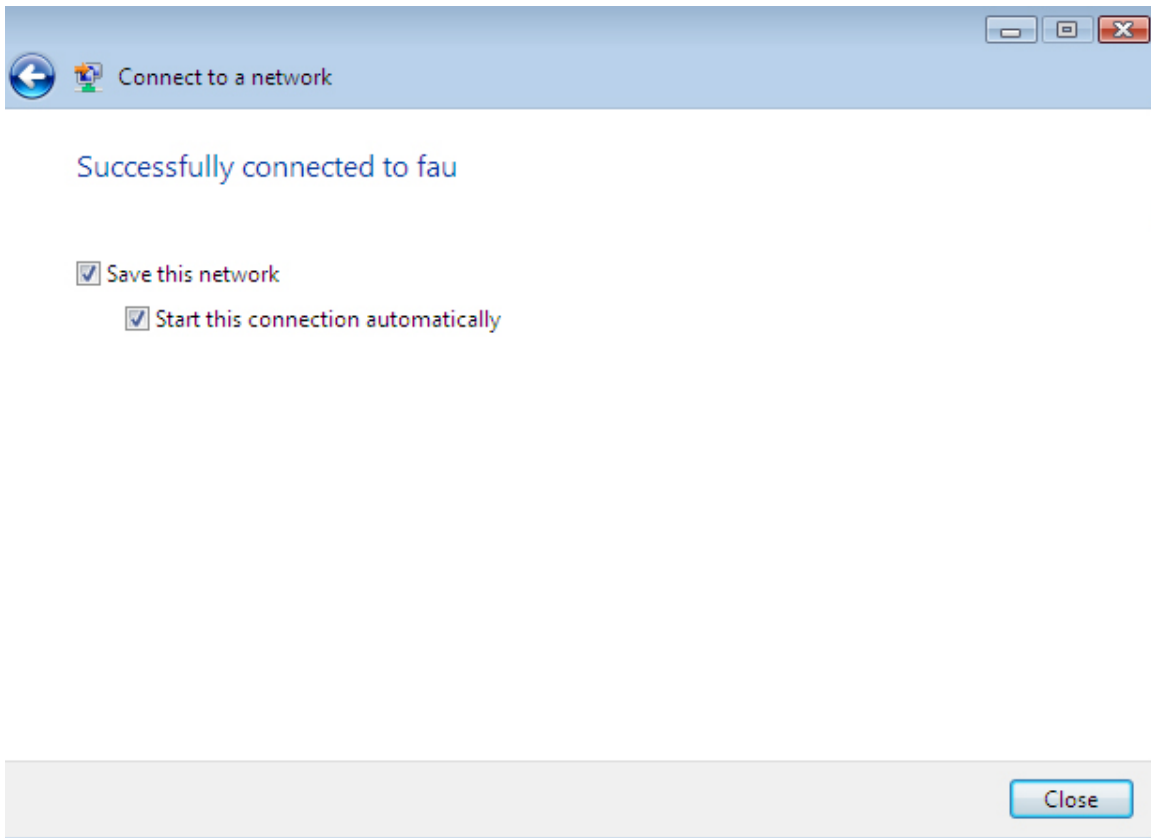


FIGURE 3.5

6. Once a successful connection is made, check both boxes that appear (Figure 3.5).

**Save this network:** *checked*

**Start this connection automatically:** *checked*

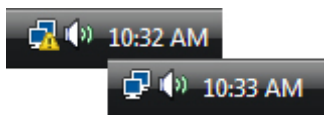
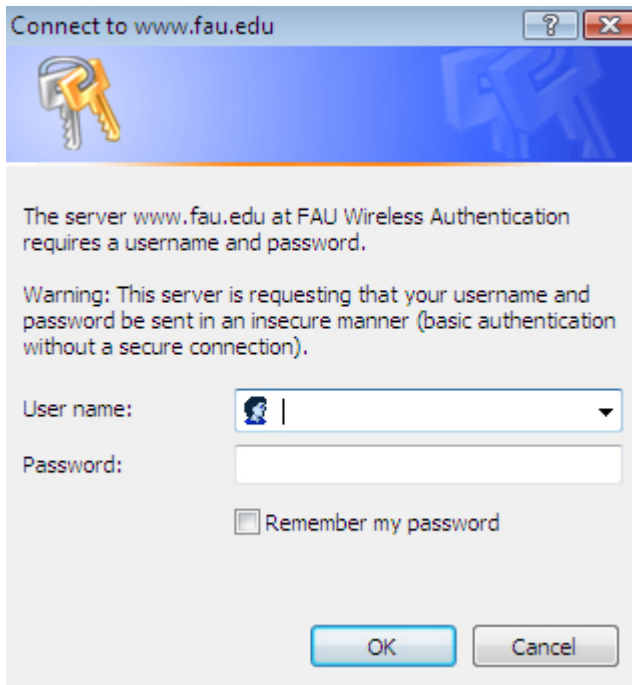


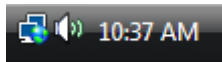
FIGURE 3.6

7. Note the connection icon in the System Tray (lower right corner). The icon should change from having a red "X" (meaning no connection exists) to either a limited connection icon (yellow triangle with exclamation point) or computer only icon (partial connection exists) (Figure 3.6). Open a web browser such as Internet Explorer or FireFox at this time.



**FIGURE 3.7**

8. An FAU Wireless Authentication window (Figure 3.7) should appear. Enter your FAUNetID (username) and your Network Access account password. Click the OK button when done.



**FIGURE 3.8**

9. Once the connection is made, the Network Connections icon in the System Tray will change (Figure 3.8) showing a globe. This means you're connected to the internet. You should see the web site based on the home page configured in your web browser.

# 4

## Troubleshooting

We have accumulated a number of tips through experience with older operating systems (particularly Windows XP), technical resources, and testing and evaluation. This section displays tips that have been implemented to successfully establish a client's communication with FAU's wireless network.

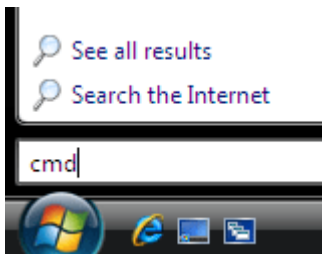


FIGURE 4.1

1. Open a Command Prompt window. This can be accomplished by clicking on the Command Prompt icon in the Start Menu. Or, you can type CMD in the Start Search box within the Start Menu (Figure 4.1). Hit the Enter key when done.

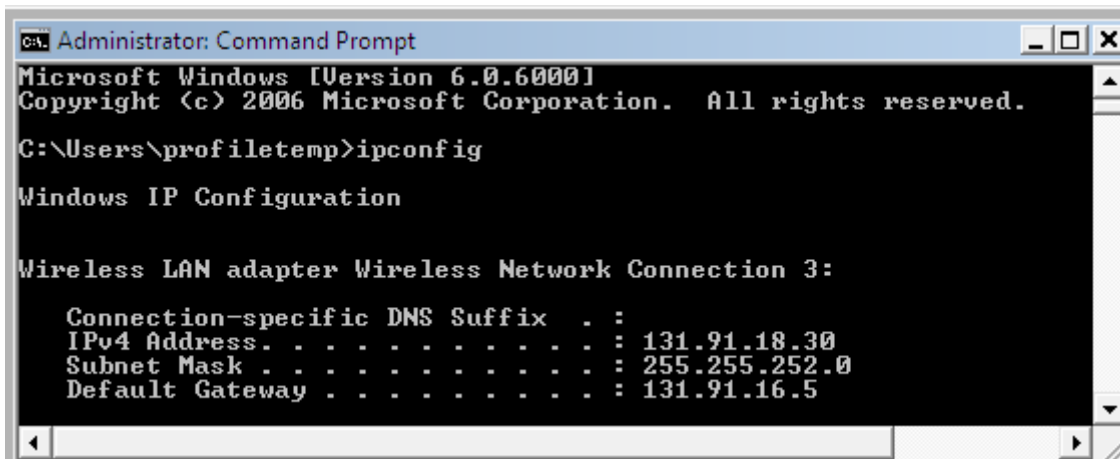
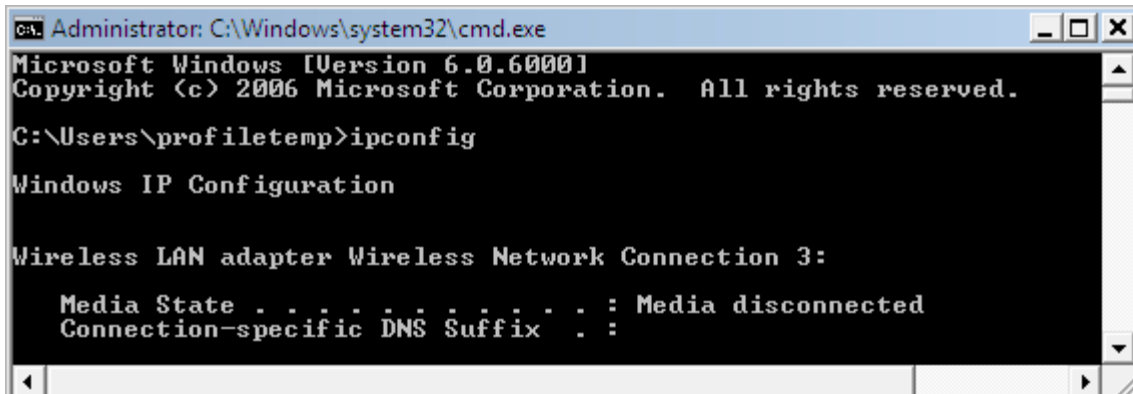


FIGURE 4.2



```
Administrator: C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.0.60001
Copyright (c) 2006 Microsoft Corporation. All rights reserved.

C:\Users\profiletemp>ipconfig

Windows IP Configuration

Wireless LAN adapter Wireless Network Connection 3:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . :

```

FIGURE 4.3

2. At the Command Prompt, type IPCONFIG and press the Enter key. If you successfully obtain an IP Address (beginning with 131.91.xxx.xxx) (Figure 4.2), then you are connected to the FAU network. If not, you will see an IP Address beginning with 169 (169.xxx.xxx.xxx), 0 (0.0.0.0), or your system will indicate that there is no network connection (Figure 4.3).

3. Windows Vista has proven to be somewhat clunky with its built-in wireless application. Here are some things you can try to try to obtain an IP Address.

- **Restart the computer.** Restarting the computer will restart the networking services and applications. Windows Vista has sometimes required multiple restarts to successfully communicate wirelessly to the FAU network.
- **IPCONFIG /RENEW.** At the Command Prompt, type IPCONFIG /RENEW. This does not typically produce positive results in Windows Vista as it has in past Windows operating systems. If it does work, you should see an IP Address (beginning with 131.91.xxx.xxx) almost immediately. If you see a delay, you can safely assume that your IP will not be renewed.
- **Enable/Disable, Part 1.** You can disable and re-enable wireless communication. Often, this will “trigger” the computer’s networking services to get a valid IP Address. Most laptops manufactured around/after 2005 almost always have a built-in wireless chipset that allows the laptop to communicate wirelessly without the need of a wireless adaptor or card. The laptop will usually be built with an on/off wireless switch or button. The laptop’s keyboard could also display

wireless functions (such as FUNC-F5) to toggle the laptop's radio on and off.

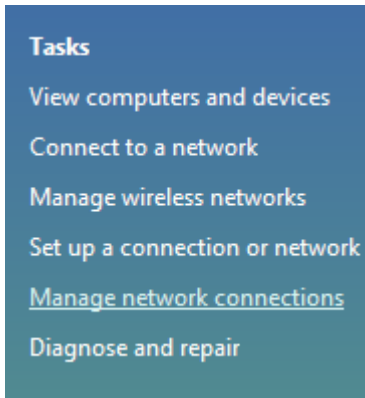


FIGURE 4.4

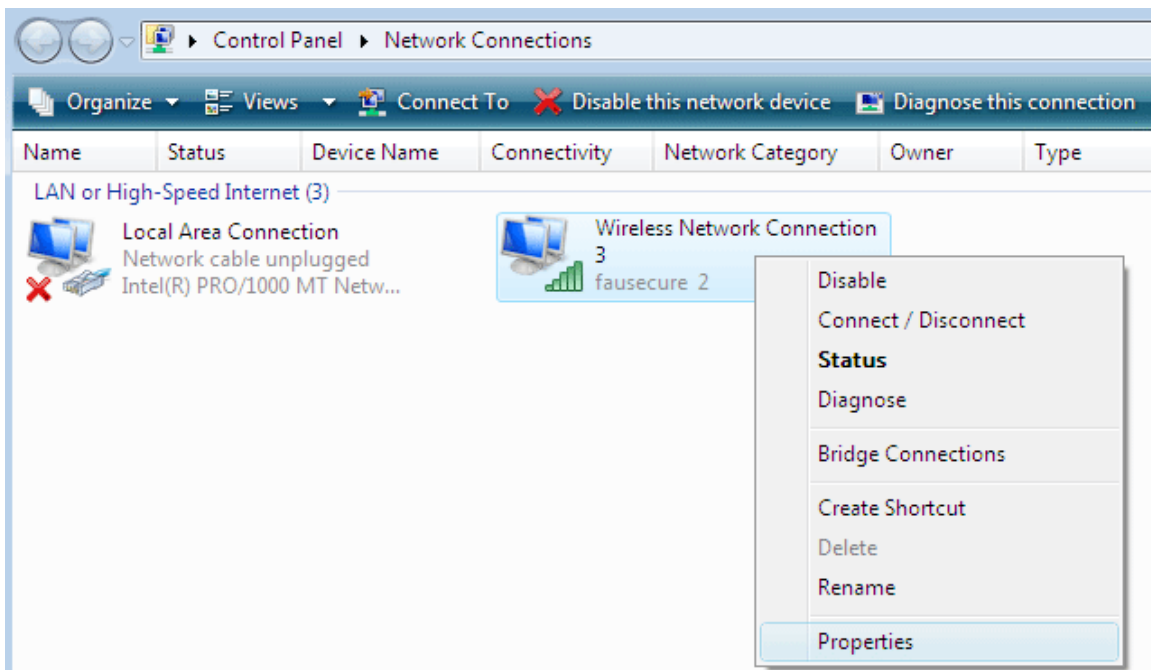


FIGURE 4.5

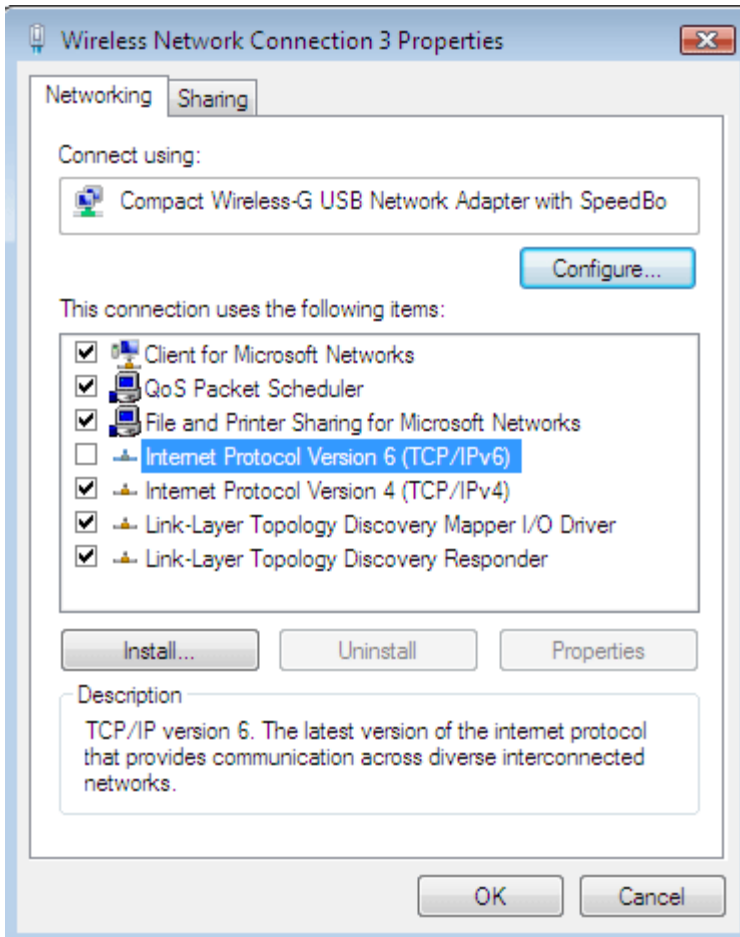


FIGURE 4.6

- **Enable/Disable, Part 2.** All wireless-capable computers (PC or laptops) will allow you to enable/disable wireless services through Windows Network Connections. To achieve this, right-click on the Network Connections icon in the System Tray (lower-right corner; next to the computer clock). Click on Network and Sharing Center. Click on Manage Network Connections (Figure 4.4). That will bring up your Network Connection Properties window (Figure 4.5). Click on Disable. Wait a few seconds, return to this menu, and click on Enable.
- **TCP/IPv6.** FAU is not currently utilizing TCP/IPv6. By default, this is enabled. We have found that deselecting this may improve your connectivity chances. Right-click on the Network Connections icon in the System Tray (lower-right corner; next to the computer clock). Click on Network and Sharing Center. Click on Manage Network Connections (Figure 4.4). In the dropdown menu, click on Properties (Figure 4.5). Uncheck Internet Protocol Version 6 (TCP/IPv6) (Figure 4.6). We

recommend that you restart the computer after making this change, though it is not required.

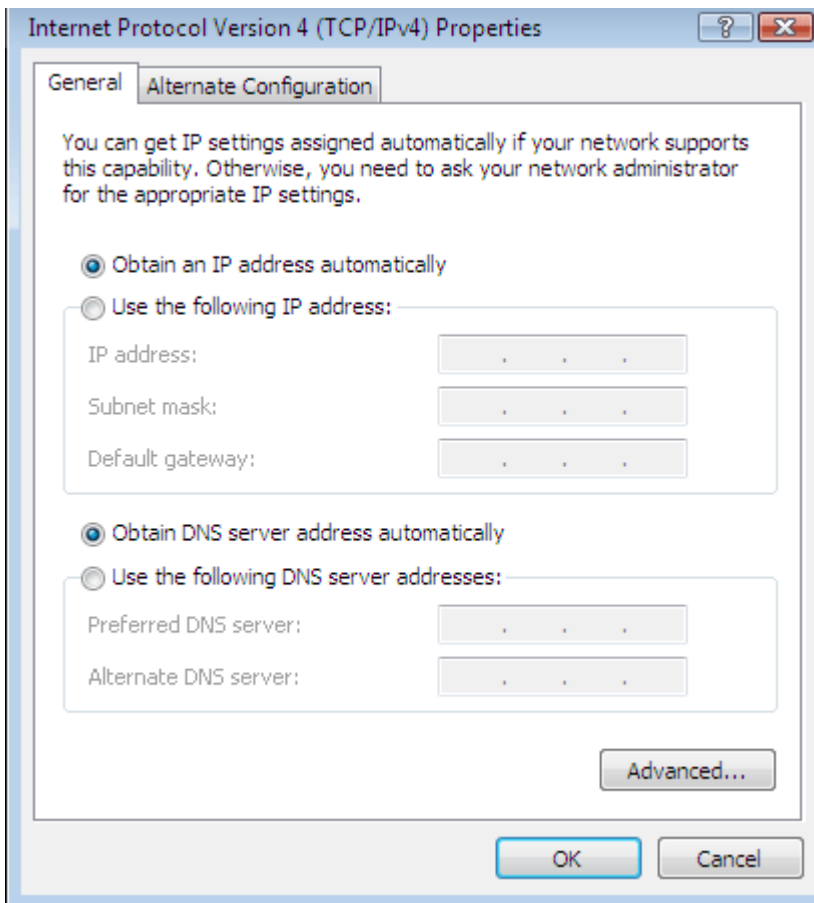
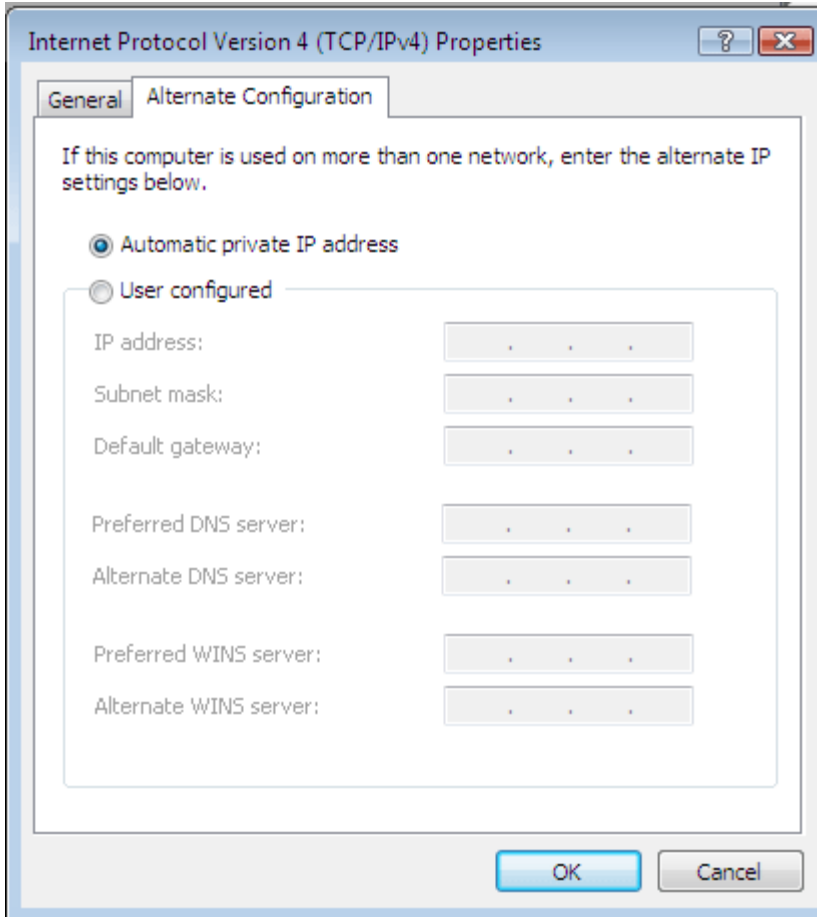


FIGURE 4.7

- **DHCP.** Your computer, especially laptops, must be configured for DHCP to operate on FAU's wireless network. DHCP allows FAU to assign (or lease out) a temporary IP Address. Some people will set up a wireless network at their homes and configure their computers with a Static IP Address.

To set up your computer for DHCP, right-click on the Network Connections icon in the System Tray (lower-right corner; next to the computer clock). Click on Network and Sharing Center. Click on Manage Network Connections (Figure 4.4). In the dropdown menu, click on Properties (Figure 4.5). Double-click on Internet Protocol Version 4 (TCP/IPv4). This will bring up the Internet Protocol Version 4 window (Figure 4.7). If your window looks like the one above, your computer is configured for DHCP.



**FIGURE 4.8**

If you have IP Address listed, then you should copy your settings onto a piece of paper, reconfigure for DHCP (Figure 4.7), click on the Alternate Configuration tab, and apply your configuration settings into Alternate Configuration (Figure 4.8).

- **Firewalls.** Almost all new systems have some security suite installed such as McAfee Security or Norton Internet Security. Try temporarily disabling the firewall to see if your results improve. Please consult with your software's Help files, documentation, or vendor's web site for assistance.
- **Google Desktop and Toolbars.** We have encountered a couple of cases where, after uninstalling Google Desktop and Google Toolbar, there was a clean wireless connection. By removing these utilities, your web browser reacts faster and tends not to time out when attempting to communicate with a wireless network. In fact, toolbars, in general, will slow down the overall performance of any web browser. Unless you utilize these

miniature applications, it is best to uninstall them. This can be done by going to your Start Menu, Control Panel, and Programs and Features. To uninstall, click once to highlight the application, and click REMOVE.

- **Other Network Service Hogs.** In the System Tray (lower-right corner; next to the computer clock), you will see icons to actively running services. We have encountered instances where shutting down those extracurricular services can improve (and sometimes correct) your wireless connectivity communications. These notorious services almost always relate to music services, which always look to communicate with external servers. Right-click on these System Tray icons, and choose Close or Exit in the dropdown menu. It is recommended that these services be disabled at start-up.
  
- **Wireless Drivers.** Drivers are software applications that allow the operating system and hardware to communicate. A number of software manufacturers have already created updates to their wireless drivers for Vista. Even Microsoft has released a number of software updates to improve communication with various popular wireless hardware components. We recommend that you check for updates through Microsoft and the vendor for your wireless software/hardware.
  
- **Network Access account.** This account allows you to access the FAU network and Internet. To determine your faunetid/password pair, please visit <http://accounts.fau.edu>. If you are still unsure, submit a ticket through the Online Computing Support Center at <http://www.fau.edu/helpdesk>.
  
- **Wireless Zones.** FAU's wireless zones continue to grow and expand. However, hardware and software is not the same from one computer to the next. This can sometimes occur when you are in an area where some computer users can access the wireless network and others cannot. Some computers (especially laptops) will have wireless chipsets built into the motherboards. This means that the wireless radio (including antenna) is inside your laptop case. This, by default, will reduce the transmit/receive signal strength. Others have cards (which have built-in antennas) or external antennas that improve the overall signal strength. If your signal strength is poor to nil, try moving to another wireless zone on campus. Also, try restarting your computer in an effort to restart your networking services.

# 5

## Personal Assistance

Information Resource Management (IRM) is committed to helping its students, staff, and faculty members with wireless network connectivity.

### **IRM COMPUTER HELP DESK**

Boca Raton Campus

Computer Center (Bldg 22), Room 163

Monday to Friday, 8:00 a.m. to 5:00 p.m.

### **FAU OPEN LABS**

The technician at the lab can assist you in configuring your laptop, especially outside the hours or location listed above.

For Open Lab locations and hours of operation, please visit

<http://www.fau.edu/irm/labs/>.

### **24/7 HELPDESK**

You may submit a ticket requesting assistance through our Online Computing Support Center at <http://www.fau.edu/helpdesk>.