

**MyMobiler – Free remote display for Trimble TSC2**

This Technical Tip provides information on installing, configuring, and using a free remote-display utility named MyMobiler that works with Windows Mobile devices. These instructions were prepared specifically for the Trimble TSC2 but the same general procedures will work for other Windows Mobile devices.

Remote display is particularly useful when a number of people need to see what is happening on a data-collector screen, such as in a training session or demonstration. MyMobiler is also a handy tool for creating and managing screen captures and video files from your Windows Mobile devices.

**Install MyMobiler on computer -**

Go to [www.mymobiler.com](http://www.mymobiler.com) (At the time of this writing there was a date error on the home page – MyMobiler Ver 1.25 was released in February 2010, not February 2008 as shown.)

Download the setup program (at the time of this writing it was named MyMobiler125\_02072010.exe and was 676 kB in size) putting the file in an appropriate location on your computer.

Double-click the icon of the setup program to start the MyMobiler setup process. This installation does not appear to write anything to registry and seems to accomplish what it needs to do from a User account.

Click the **Next** button and the *License Agreement* dialog appears.

Click the **I Agree** button.

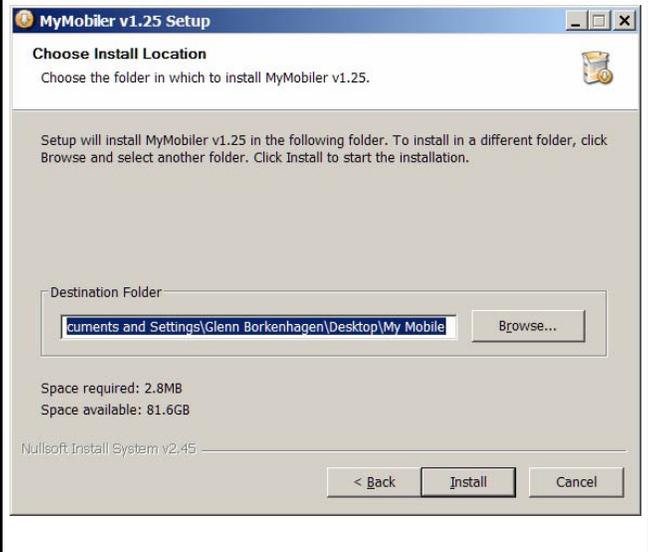


This dialog allows you to choose the installation location for MyMobiler.

The default location is a folder named “My Mobile” that will be created on your Desktop. For simplicity these instructions will be based on the defaults.

If you desire to install MyMobiler elsewhere it is presumed you can compensate for the differences between these instructions and your chosen installation location.

When you have the Destination Folder set as desired, click the **Install** button.



That completes the setup on the computer.

You will find an uninstaller and a shortcut in the installation location from the previous step.

Generally following the instructions on the dialog shown at right –

1. Connect your TSC2 to the computer with ActiveSync through the USB cable.
2. Click the **Finish** button.
3. A dialog asking Do you want to launch MyMobiler now? will appear. Click the **Yes** button.
4. The installer will transfer a file named remote.exe to the \Windows folder on your TSC2 and will make a shortcut named MyMobiler in the \Windows\Start Menu\Programs folder on your TSC2.



The default configuration enables the Auto Connect option, so very likely a MyMobiler window of your TSC2 screen will automatically appear on your computer, as shown at right.

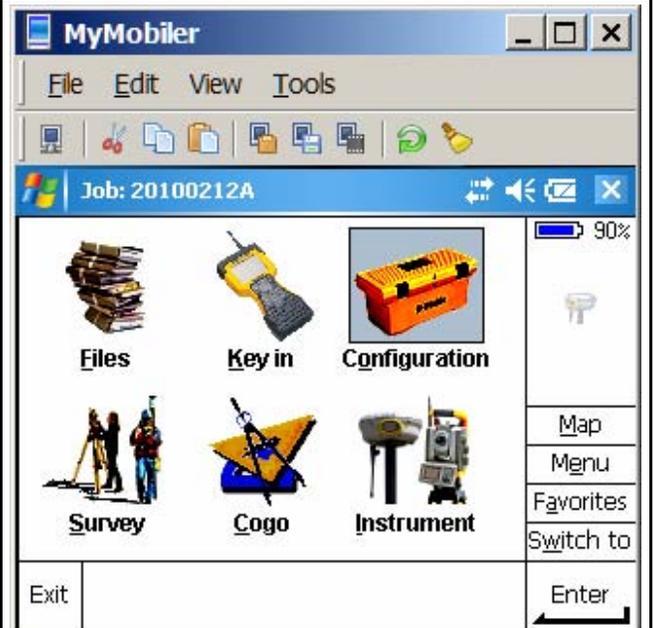
If that did not happen, open the “My Mobile” folder on your Desktop and doubleclick the “MyMobiler” shortcut.

You will also notice a MyMobiler icon in the computer’s System Tray.

That is really about all you would need to do to use MyMobiler through ActiveSync. Note that you can either control things from the computer by clicking on icons, etc. on the MyMobiler screen or continue operating from the TSC2 touchscreen and keypad.

But the ActiveSync connection ties the TSC2 to computer by the USB cable.

The next thing to do is establish a Wi-Fi connection that will allow unrestrained movement of the TSC2 within the Wi-Fi coverage area.



**Tip 1** – The Wi-Fi wireless adapter in the TSC2 consumes a considerable amount of power (about six times as much as Bluetooth) and will noticeably decrease the battery run time, perhaps as much as 50%. Therefore it is recommended to keep Wi-Fi turned off in the TSC2 when it is not actually needed.

**Tip 2** – To prevent the loss of Wi-Fi and MyMobiler connections at an inconvenient moment during your presentation, you may want to disable the setting that automatically turns off the TSC2 after a specified period of inactivity. Go to <Windows key> | Settings | System | Power | Advanced to access those settings. Remember to re-enable the automatic shutoff after you are done using MyMobiler to prevent wasting your battery during normal use of the TSC2.

There are several computer-specific variables when making the Wi-Fi connections. For instance, the wireless adapters in some computers will use the Windows Wireless Zero Configuration service to manage wireless connections. Other wireless adapters install with and use proprietary utilities you may need to use to configure

those adapters. The information provided below will be based on Wireless Zero Configuration and therefore may vary from what you will encounter with your own equipment.

### Wi-Fi connection through an access point -

This is usually the easiest Wi-Fi connection to set up IF you are able to connect both the computer and the TSC2 to the local-area network (LAN). If you are going to be at a government office or on the premises of a security-conscious organization, do not assume you will be able to connect through their LAN, either through a hardwired connection or a Wi-Fi access point. Even if you can connect through someone's LAN for basic internet access such as web browsing, it is possible that the remote display will require use of other IP ports that may be blocked. Never assume a LAN will work for remote display – always test all the functions you plan to use.

The following instructions assume your computer is already connected to the LAN, either by Ethernet cable or by its own Wi-Fi connection. It is further assumed that the Wi-Fi access point has DHCP enabled so it will issue IP addresses to devices that request connections to the LAN. The default settings in the TSC2 are usually such that you will not need to do any tweaking there.

1. On the TSC2, click the Connectivity icon (the arrows icon to the left of the loudspeaker icon), which will bring up the Connectivity dialog.

2. Click on **Wireless Manager**, which brings up the *Wireless Manager* dialog from which you can turn on Wi-Fi, do so by clicking the Wi-Fi bar.



The TSC2 may detect the presence of a Wi-Fi network without any operator intervention.

If it does, you can click **Connect** at the bottom of the screen.



In this example, the Wi-Fi access point requires a network key. Key in the network key and click **Connect**.

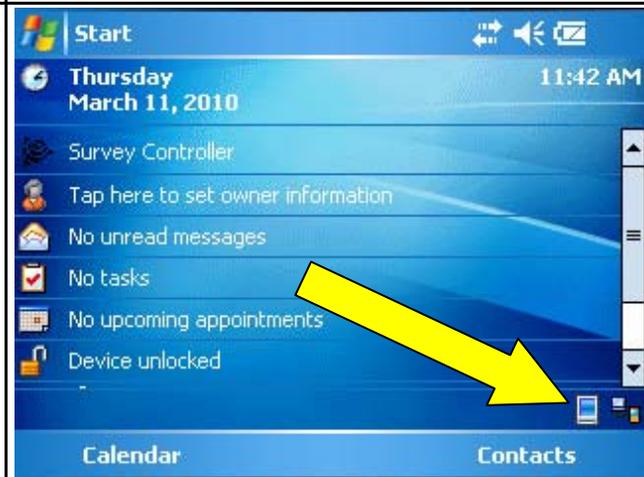
You may notice that the Wi-Fi bar sometimes disappears from the *Wireless Manager* dialog. This writer believes that happens only when the TSC2 is connected to the computer via ActiveSync through the USB cable. Please advise if your experience indicates otherwise.



Now that both devices are connected to the LAN that includes the wireless access point, we need to get the two devices talking to each other.

By default, My Mobiler installs a system-tray icon on the TSC2, as indicated by the yellow arrow in the figure at right.

(The far-right system-tray icon in the figure at right indicates the mobile device is connected to a computer by ActiveSync.)



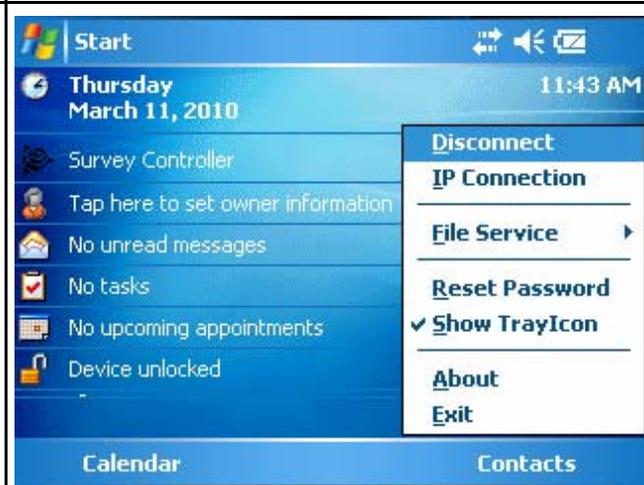
To get the details on the mobile devices IP connection, either –

click the MyMobiler system-tray icon

or

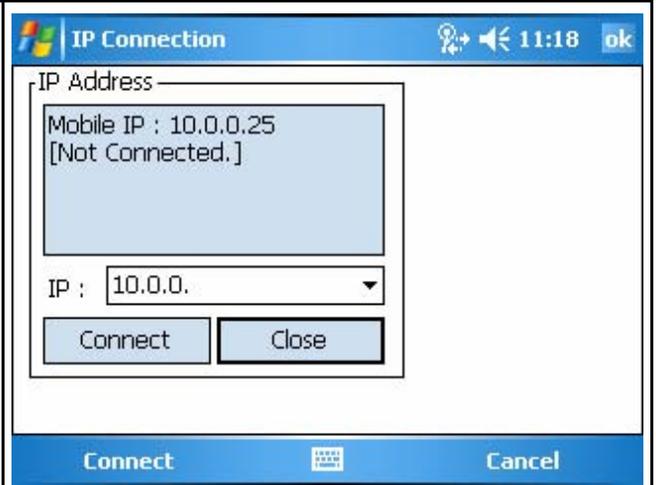
go to <Windows key> / *Programs*, then doubleclick the MyMobiler icon

to bring up the context menu shown at right



Click the *IP Connection* menu item to see the TSC2's IP address.

This window shows that this TSC2's IP address (assigned by the DHCP server in the wireless access point) is 10.0.0.25.



Now, back on the PC, click the MyMobiler icon in the system tray and click the *Connect IP* menu item. The dialog shown at right will appear.

Key in the TSC2's IP address into the Mobile IP: field.

Click the upper **Connect** in the *IP Connection* dialog on the TSC2.

Click **Connect** in the *IP Connection* dialog on the computer.

You should then see a notification on the computer that the connection between the computer and the TSC2 is active.

Note that we have not done anything with a password, you may want to experiment with that on your own later.



Click the MyMobiler icon in the computer's system tray to open the context menu, then click the *Open Mobiler* menu item.

You should now be in business.

Under *View*, you can set the zoom factor as appropriate.



## Wi-Fi connection through a peer-to-peer (ad hoc) Wi-Fi connection -

This is a bit more effort than connecting through a Wi-Fi access point, but it will often be the method you must use if working in a location where you are not authorized to connect through the local Wi-Fi network.

You will need to change some of the settings in the TSC2 from their default values, but this is no big deal.

To configure the computer for a peer-to-peer connection you will need to change some settings for the wireless adapter. It is believed you will need to have Administrator privileges to accomplish these changes.

It will be best to use non-routable IP addresses (IP addresses that do not exist on the Internet) for the peer-to-peer Wi-Fi connection. The RFC1918-defined ranges for non-routable IP addresses are –

10.0.0.0 to 10.255.255.255  
172.16.0.0 to 172.31.255.255  
192.168.0.0 to 192.168.255.255

Some of those non-routable IP addresses are used for configuring routers and other purposes, so it may be wise to do a web search on any address you want to use to avoid conflicts. If you use something like 168.192.X.X or 10.0.X.X you are likely to conflict with standard LAN addresses, so keep that in mind.

It is not practical to provide detailed instructions for all the proprietary configuration utilities provided for the wireless adapters from various manufacturers, so these instructions will show what things look like when using the Windows Wireless Zero Configuration service.

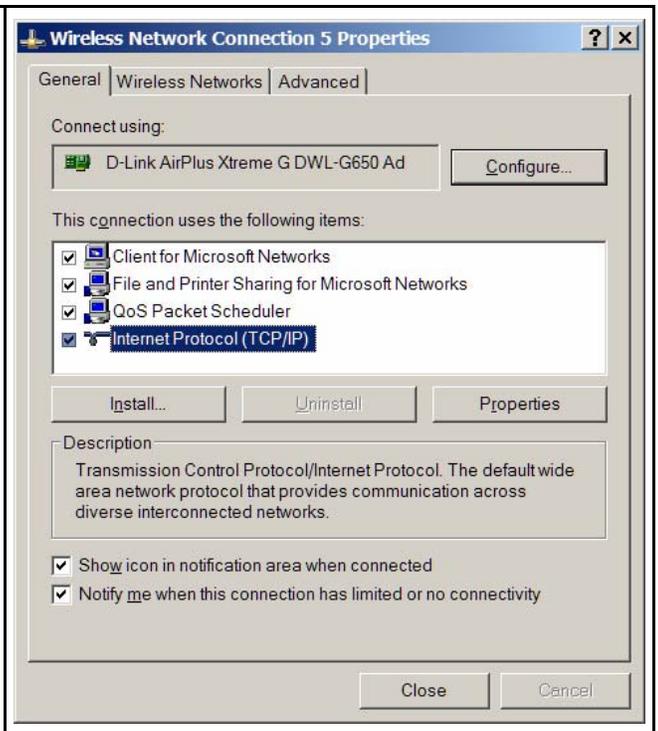
To set up the computer for a wireless peer-to-peer connection, begin by opening the Network Connections folder. One way to do this is through Control Panel.

In the right pane of the *Network Connections* screen, find the icon associated with the wireless adapter you desire to use for your peer-to-peer Wi-Fi connection.

Right click on that icon, then click **Properties**. You should then see the *Wireless Network Connection X Properties* window that appears to the right.

Select the *General* tab.

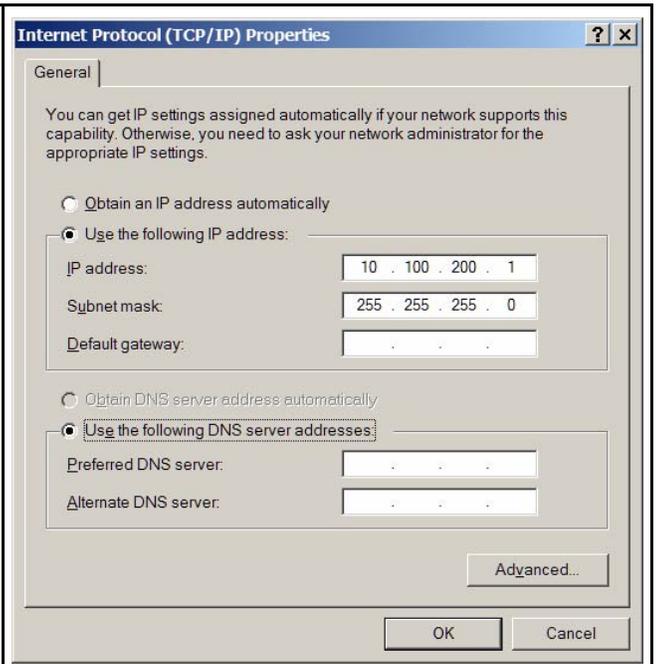
To set the IP address, highlight the *Internet Protocol (TCP/IP)* item and click **Properties**.



Here we set the IP address to **10.100.200.1** and the subnet mask to **255.255.255.0**.

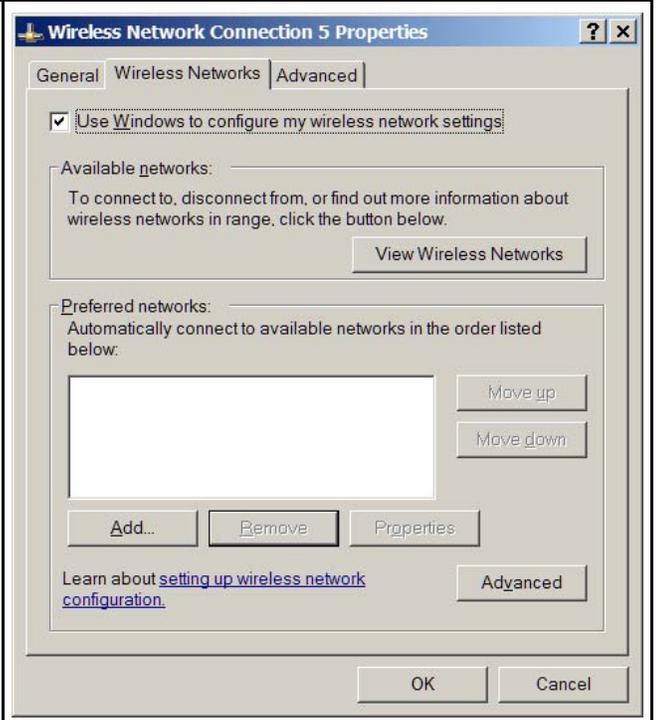
There is nothing magic about that IP address, so you can use any non-routable IP address that does not cause conflicts.

Click **OK** to save those settings and you will be back to the *Wireless Network Connection X Properties* window



Now select the *Wireless Networks* tab, you will then see the window at right.

The check box labeled "Use Windows to configure my wireless network settings" will be checked, we're using Wireless Zero Configuration so that is expected.



We will now add our peer-to-peer connection in the Preferred Networks part of the window.

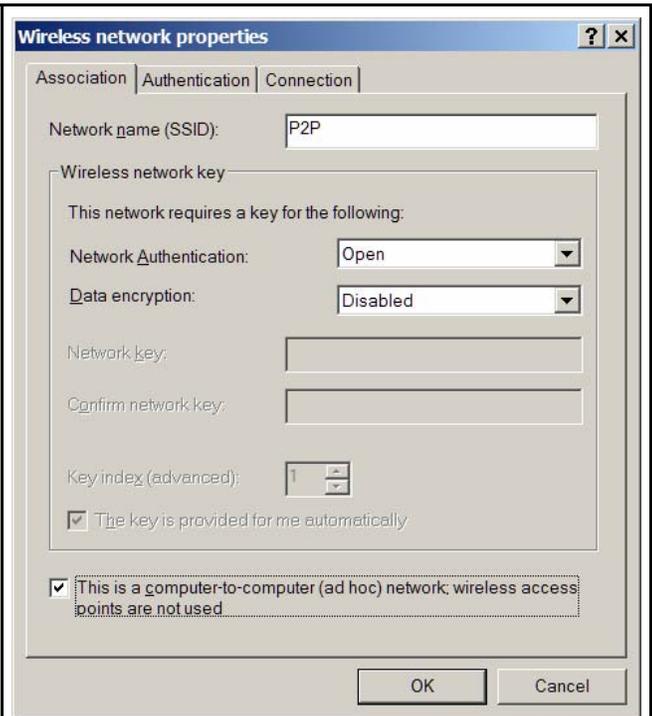
Click **Add**, and you will see the window at right.

We'll call this network "P2P", so key that into the *Network name (SSID)* field.

This example is as simple as possible, so we will use an open network with encryption disabled. This is not necessarily good practice, nor is the automatic connection controlled under the *Connection* tab. It is recommended that you go back after getting things to work and add the appropriate security.

Check the box labeled "This is a computer-to-computer (ad hoc) network, wireless access points are not used."

Click **OK** and you will be back at the *Wireless Networks* tab of the *Wireless Network Connection X Properties* dialog like above, but now you should see the "P2P" network you just created in the *Preferred networks* box.

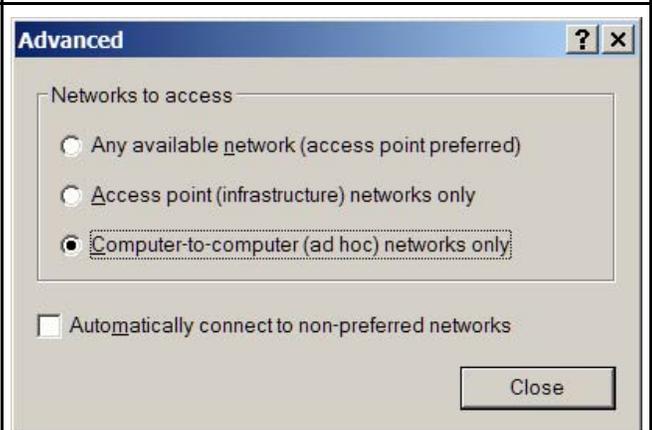


Highlight your new network and click **Advanced** toward the lower right of the *Wireless Network Connection X Properties* dialog. You should then see the window shown at right.

Select the "Computer-to-computer (ad hoc) networks only" radio button, then click **Close**.

Click **OK** to save this configuration.

Now the computer should be ready for the peer-to-peer connection and the wireless adapter you just configured will be broadcasting its existence to other Wi-Fi devices within range.



Now to configure the TSC2 –

On the TSC2, either –

click the Connectivity icon (the arrows icon to the left of the loudspeaker icon), which will bring up the Connectivity dialog, then click **Settings**

or

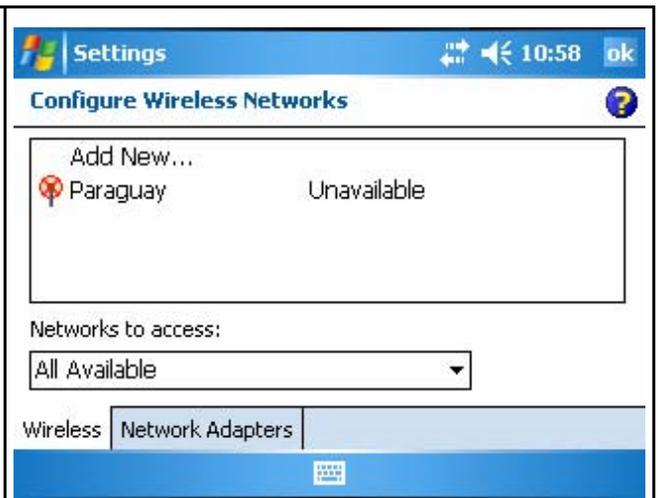
<Windows key> / *Settings* / *Connections*

to get to the *Settings* window shown at right



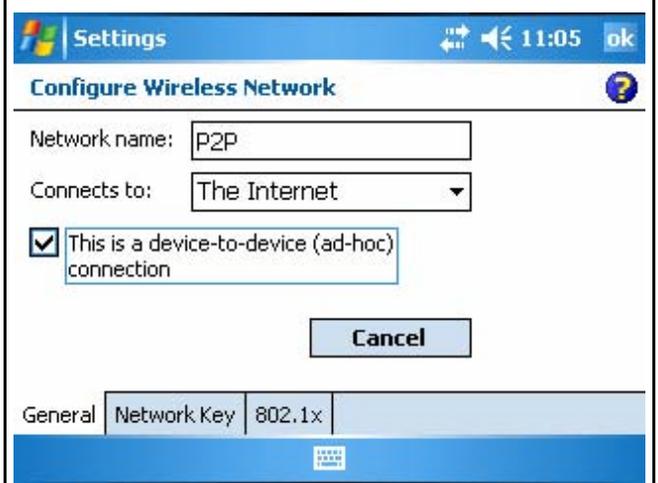
Click the “Network Cards” icon and you will see a screen like the figure at right –

In the *Networks to access*: field, select *Only computer-to-computer*.



Click the “Add New...” item in the larger field and you will see the screen at right.

Enter the network name and check the box labeled “This is a device-to-device (ad hoc) connection”.



Now click the *Network Key* tab toward the bottom of the window to access the network-authentication screen at right –

For the time being we will set for open authentication and disabled data encryption, like we did on the computer.

As mentioned above, we are keeping this very simple for the first run, so remember to come back and add appropriate authentication and data encryption after you are comfortable everything is working.

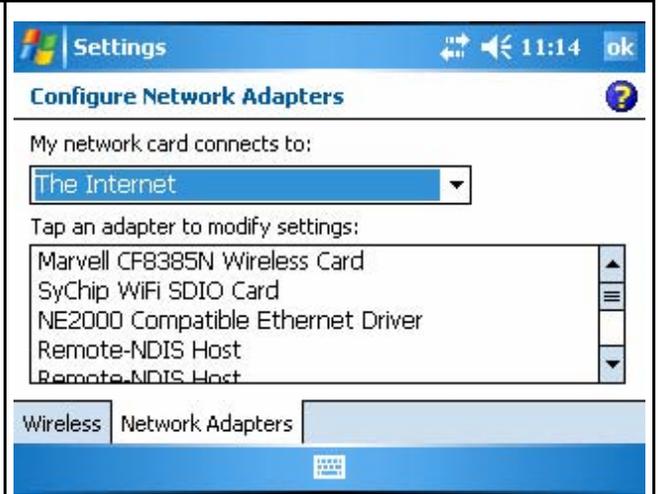
Click the **OK** button in the upper-right corner to save these settings.

You will return to the *Configure Wireless Networks* window and will see your new network in the list of known networks.



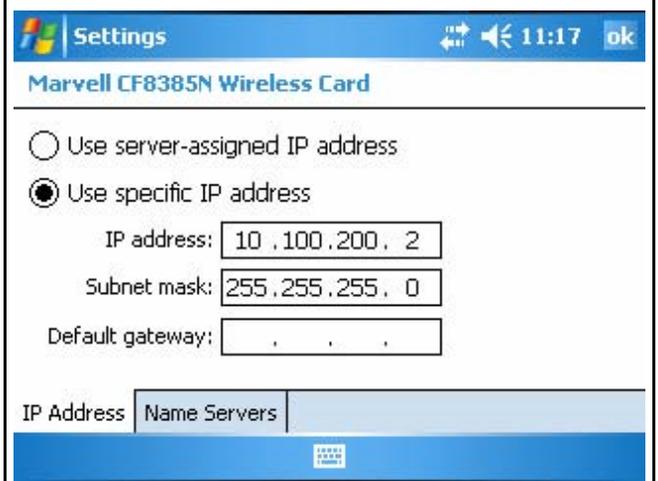
Click the *Network Adapters* tab toward the bottom of the window and you will see a list of adapters.

This writer has no clue as to what all of those things are, but has found (mainly by examining the settings for the various selections) that the *Marvell CF83885N Wireless Card* is the adapter we need to work with.



Click the *Marvell CF83885N Wireless Card* selection to get to the screen at right –

Select the *Use specific IP address* radio button and enter the appropriate IP address and subnet mask.



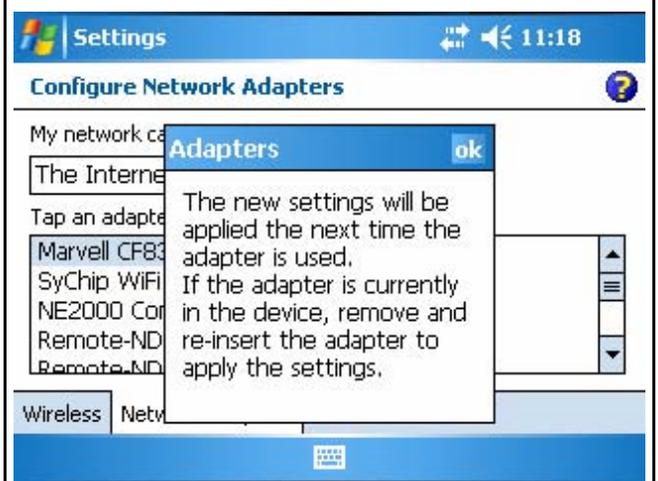
Click the **OK** button in the upper-right corner, and you will see the screen at right –

Click the **OK** in the *Adapters* notification to dismiss that item.

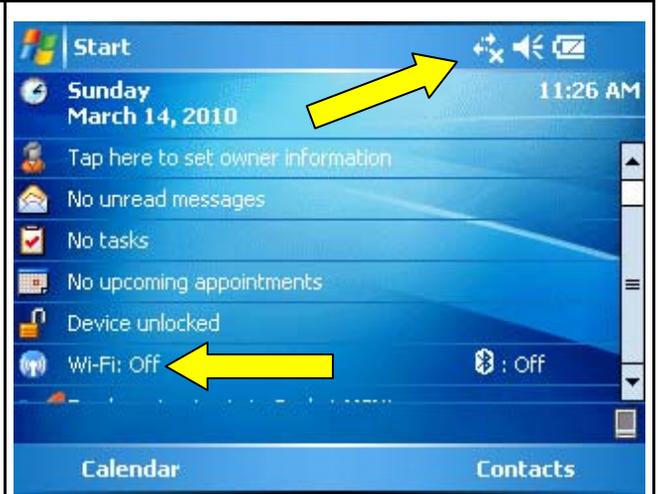
This writer's experience indicates that it is necessary to reset the TSC2 to apply the wireless adapter's new settings.

To reset the TSC2, press and hold the <Green power button> until the TSC2 begins a countdown from 5 seconds, then release the <Green power button>. Then click **Reset** and let the TSC2 go through its reset process.

Please advise if you determine that this reset is not necessary.



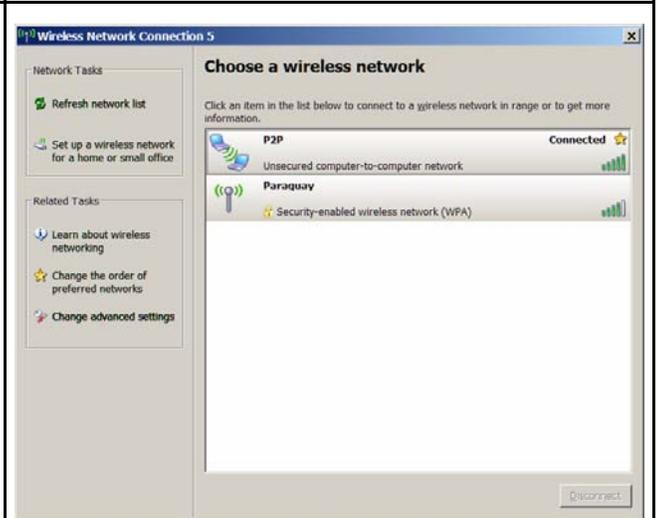
After the TSC2 has reset, Wi-Fi will be off as indicated by the X in the Connectivity icon and on the Wi-Fi / Bluetooth line on the Start menu, as pointed out by the yellow arrows on the window at right -



Turn on Wi-Fi on the TSC2, and if everything is working as expected the TSC2 should make a connection to our new network named P2P, as shown at right -



The Windows Wireless Zero Configuration service on the computer should also indicate connection to the P2P network, as shown at right –



Now you can establish the MyMobiler connection following the procedure beginning at the [second row on Page 4](#) above.

MyMobiler should notify that it has connected to the mobile device, then either –

Bring up the context menu on the computer by either

clicking the MyMobiler system-tray icon and clicking the *Open Mobiler* selection

or

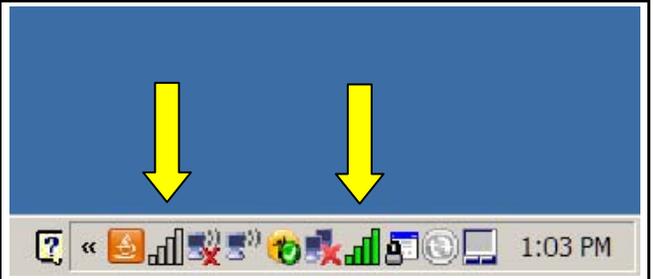
doubleclicking the MyMobiler system-tray icon.

The MyMobiler window will then appear on your computer monitor, ready for projecting to a screen or whatever.

The following will record some of the screens from the configuration utility that is believed to be the one used with Linksys wireless adapters. Here the title bar calls it “Dell Wireless WLAN Card Utility.”

This utility displays a system-tray icon with four vertical bars as shown at right. The gray bars indicate there is no connection and the green bars indicate a connection.

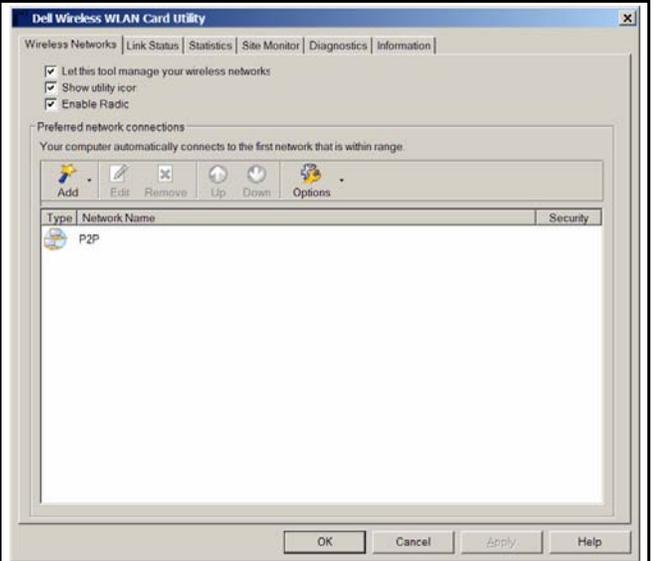
This computer had two wireless network adapters installed – one was being used for Internet connection (green bars) and the other was being used for the peer-to-peer connection (gray bars).



Doubleclick the vertical-bars wireless-connection icon for the wireless adapter you will use for the peer-to-peer connection to open the configuration utility.

The dialogs in the configuration utility will be similar enough to the Windows Zero Configuration service that it is probably not necessary to go through all the steps again.

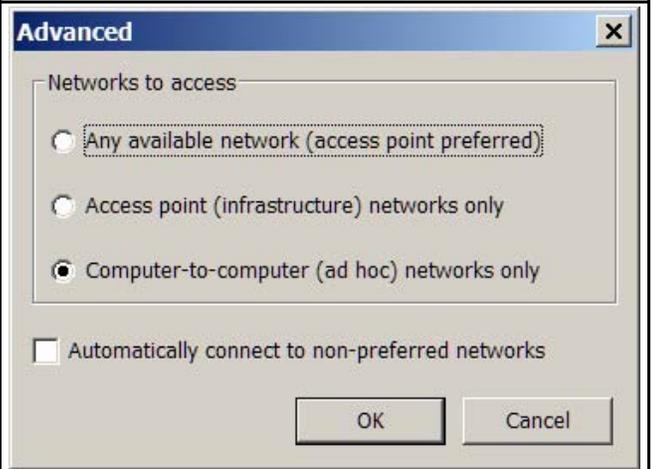
Under the *Wireless Networks* tab shown at right -



- click the *Options* pulldown, then *Advanced* to get to the *Advanced* dialog that lets you specify which networks to access.

Here we will limit connections to computer-to-computer networks to simplify the process.

Click **OK**.



## To learn more –

There is some information on using MyMobiler at the site from which you download the utility, [www.mymobiler.com](http://www.mymobiler.com). Instructions for uninstalling MyMobiler from the TSC2 are there as well.

There is a mini-tutorial on MyMobiler (as well as a review of an older version of MyMobiler) at [http://www.smartphonemag.com/cms/blogs/3/review\\_mymobiler\\_a\\_brand\\_new\\_pretty\\_good](http://www.smartphonemag.com/cms/blogs/3/review_mymobiler_a_brand_new_pretty_good)

SOTi Pocket Controller and VirtualCE are a couple of highly recommended remote-display programs that are available at moderate cost if you are so inclined. You can read a detailed combined review on these two programs (as well as MyMobiler Version 1.20) at <http://www.smartphonemag.com/cms/blogs/3/2434>