

# CS257: Applied Robotics & Embedded Programming

## Lesson 5

### Ebox Activity #1: Making an Initial Connection AT SCHOOL

#### Creating a Connection IN the Classroom

In this activity, we will establish a connection to the Ebox so we can deploy our application. In order for this to work, both your Ebox and development machine must be on the same TCP network. In order to make this as simple as possible, we are going to let your desktop computer handle this for us. So, here is what I want you to do.

1. Power up and log into your desktop computer. Unplug the network cable (CAT-5).
2. Use the CAT-5 cross-over cable that came with the Ebox and plug it into the desktop machine.
3. Plug the other end to the Ebox and turn it on also. Wait about 45 sec for the Ebox to boot. If all goes well, your desktop computer will use what is called *Automatic IP Addressing*. When a Windows machine cannot obtain an IP from the DHCP device/server, it assigns a private number so we can still communicate with the computers on our LAN. The IP address will start with 169.254. When the Ebox is connected via a cross-over cable, it too will assign a 169.254 address. In this way, both computers will be able to “talk”.
4. We need to find out what the whole IP address is for our Ebox before Visual Studio can deploy our apps. So that is what we will discover next.

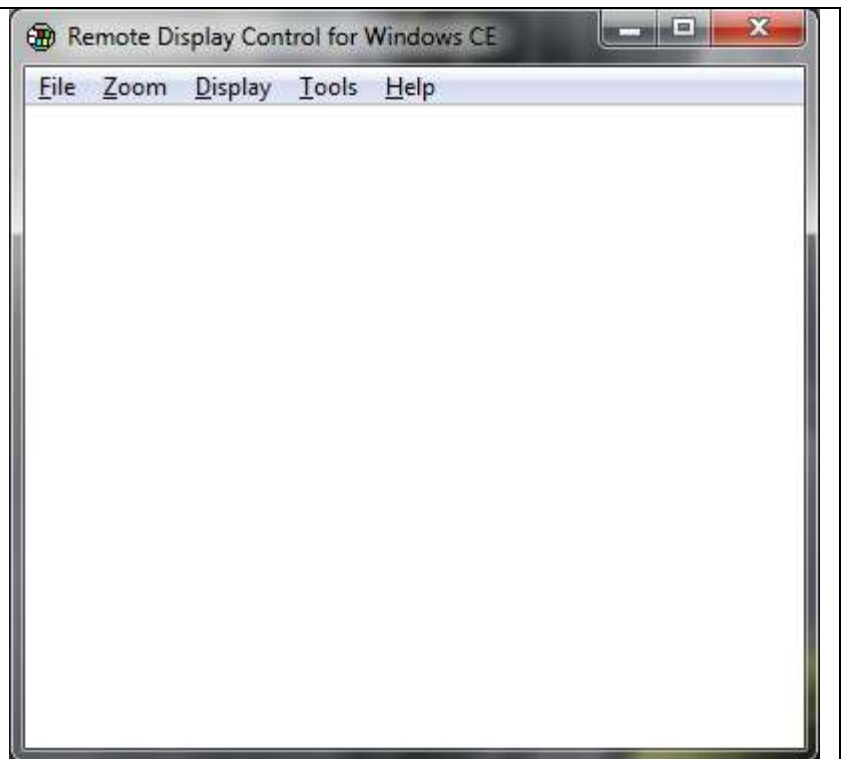
#### Creating A Connection Outside the Classroom

If you are using an Ebox at home or on a network other than our classroom, just plug the Ebox into your router/switch/hub with a regular patch cable. However, I do not want the Ebox connected to our school network. Consequently, I want you to use the cross-over cable that came with the ebox. It has a read tag on it. This is the cable to use in the classroom activity that follows.

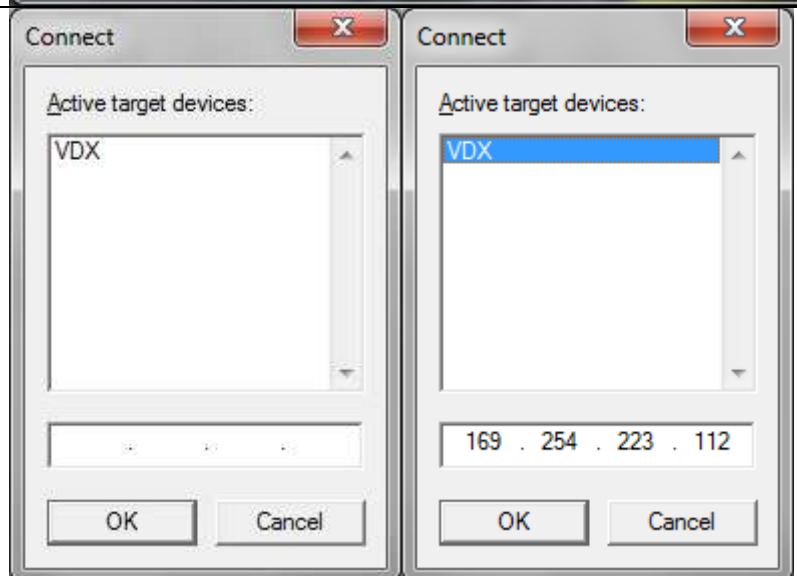
1. Open the remote display control tool (Cerhost.exe). It is either on your desktop or in the CS257 folder on your desktop.

This program can be found in the following folder:

C:\WINCE600\PUBLIC\COMMON\OAK\BIN\I386\CerHost.EXE



2. Choose File | Connect
3. You will see VDX as the name of your device. Click on it and you should see an IP address similar to the one shown.

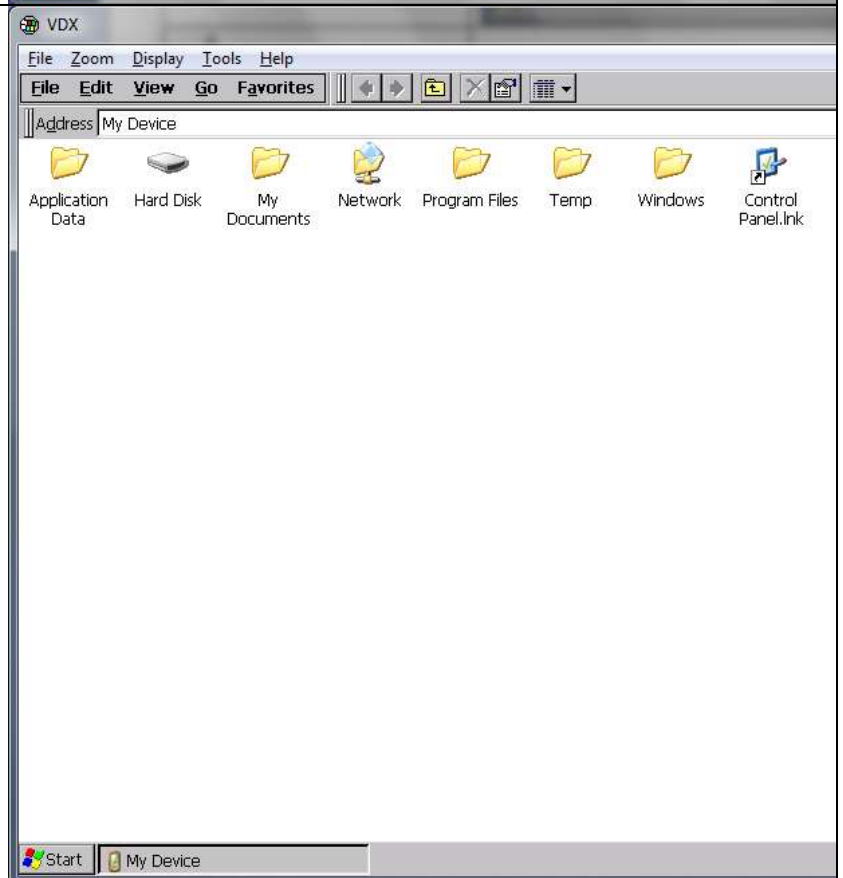


4. Write this IP address down! And click OK

5. In a moment, you should see the Ebox desktop. Now you can control it remotely from your own computer....too cool. If you need/want to see the IP address of the Ebox, simply double-click the icon in the system tray. See the white arrow.



6. Now double-click "My Device" on the Ebox desktop. This will show you the folders.
7. Open the Program files folder



8. Right now, we do not have a VB application on the Ebox. But this is where our apps will be. As long as the Ebox is powered on, you can launch your apps from this folder.

NOTE: Every time the Ebox boots, your apps are deleted! So you would have to deploy them each time you start up the Ebox.

Please be sure to practice this exercise several times so you get the hang of it and understand what it is you are doing.

In the next

