

Cheerlights – Part 2

Using Python to Retrieve Current
Cheerlights Color

What is Cheerlights?

- “CheerLights is an “Internet of Things” project created by Hans Scharler that allows people’s lights all across the world to synchronize to one color set by Twitter.”

<http://www.cheerlights.com/>

- The current cheerlights color can be accessed (as a text file) at

<http://api.thingspeak.com/channels/1417/field/1/last.txt>

Share your Internet Connection

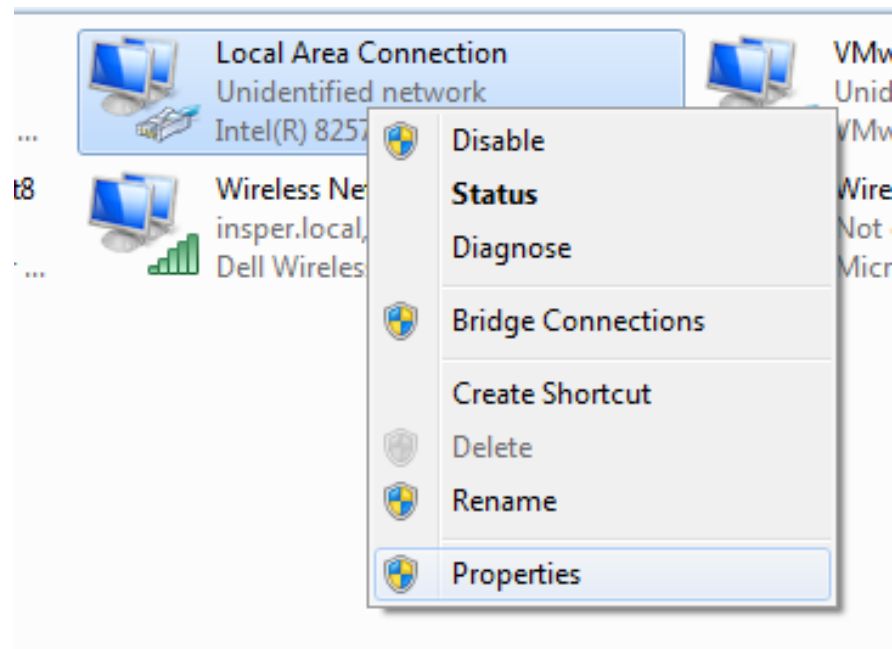
- Connect the Galileo to your laptop via ethernet
- Open Network Connections by clicking the **Start** button , and then clicking **Control Panel**. In the search box, type **adapter**, and then, under Network and Sharing Center, click **View network connections**.

Share your Internet Connection

- Right-click the connection that you want to share, and then click **Properties**. If you're prompted for an administrator password or confirmation, type the password or provide confirmation.
- Click the **Sharing** tab, and then select the "*Allow other network users to connect through this computer's Internet connection*" check box.
- In the dropdown menu for "*Select a private network connection*", select **Local Area Connection**

Find the Ethernet IP address

- In the Network Connections window, right-click your ethernet (Local Area Connection) and click **Properties**



Find the Ethernet IP address

- In the **Properties** window, scroll down to **Internet Protocol Version 4 (TCP/IPv4)** and double-click it
- Note the IP address listed

Configure the Galileo Internet

- In your Linux shell, type **ifconfig** and look for the hostname. It will likely start with an "e" for ethernet, like "eth0" or "enp0s20f6"
- Type **ifconfig [hostname] down**, ie:
ifconfig eth0 down
- Choose a new IP address for your Galileo that is the same as the one you saw on Windows but with the last number changed
 - If my Windows ethernet IP was 192.168.137.1, I would pick 192.168.137.2

Configure the Galileo Internet

- Type **ifconfig [hostname] [new IP address]**, ie:
ifconfig eth0 192.168.137.2
- Test the connection by typing
ping www.google.com
- If it responds, you're done! If you get an error that looks like *Name or service not known error*, try replacing the words **www.google.com** with its IP address: **186.215.155.55**
- If that works, follow the next slide instructions

Resolve the Namespace

- Find the file *resolv.conf* in the Setup folder and transfer it to Linux in Windows Command:
`pscp -scp ./resolv.conf root@[IP HERE]:/home/root`
- In the Linux shell, make sure you're in the */home/root* directory then type
`mv resolv.conf /etc`
- This should fix your namespace problems, now try pinging www.google.com

Transfer the File to Linux

- Open a Windows Command Prompt and use **cd** to navigate to the directory containing the *cheerlights.py* file
- Find the Galileo's IP address by typing **ifconfig** in the command line window.
- Transfer your file to the Galileo by typing **pscp -scp ./cheerlights.py root@[IP HERE]:/home/root**

Run the Python file

- Run the file from the Linux shell with the command:
python cheerlights.py
- It should start printing the current cheerlights color to command line
- If you have a twitter, you can tweet @cheerlights with a new color to see the output change
- Allowed colors: red, green, blue, cyan, white, warmwhite, purple, magenta, yellow, orange, pink, oldlace