

## Section IV - Connecting the Dreamcatcher to Your Local Router by WiFi as a Client

In order to use the Network App, you must use logon **Othernet**

**Step 1.** On the Applications Screen (Fig. 24), open the Network Icon to run the **Network App**.

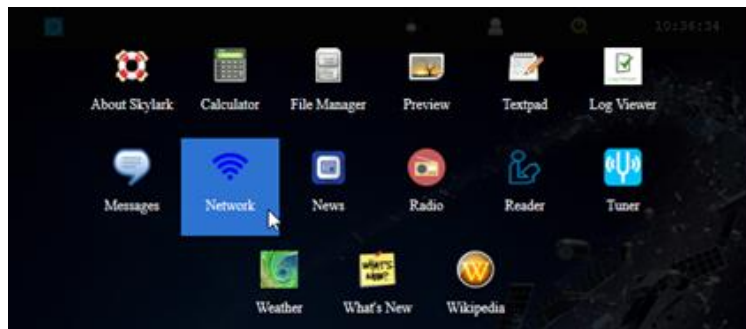


Fig. 24 Applications Icons showing **Network App**

**Step 2.** The default Network Screen (Fig. 25) is set to **Create a Hotspot** called **othernet** with no password.

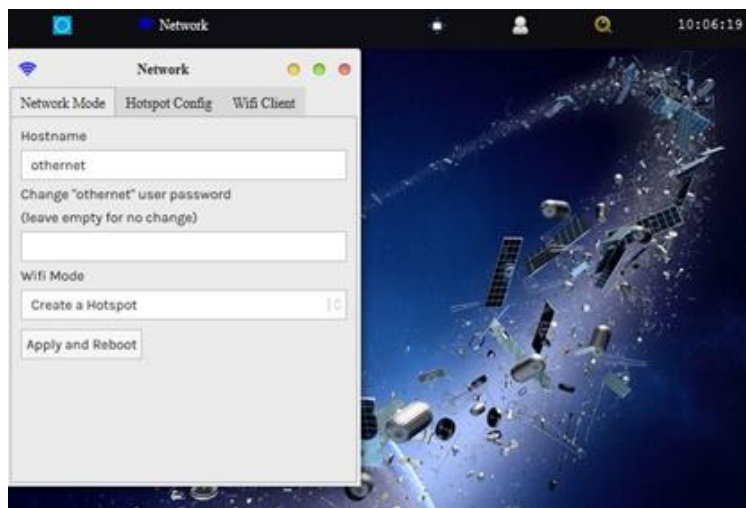


Fig. 25 Default Network Screen

**Step 3.** Open the **WiFi Client** TAB (Fig. 26), and fill in your Access Point Name and Password. You cannot connect to a WiFi Client network that does **not broadcast a SSID**, but you can connect to a WiFi Client network with complex (8 or more element passwords such as *Uwp!820@*). **Your network must be connected to the internet** to perform this step. **A word of caution** here because once your Dreamcatcher is connected to the internet, it reports back to Othernet's Chicago , Illinois , USA , headquarters its location. **If stealth is required** in your country, do not perform this step. If you still want to connect your Dreamcatcher to you local network, block the outgoing signal in your router. Different routers have methods of doing that.

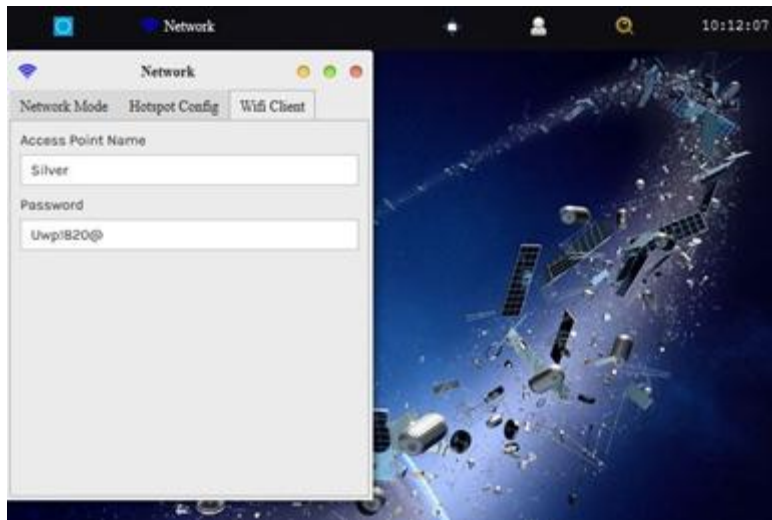


Fig. 26 WiFi Client Screen

After entering your Access Point Name and Password, go back to the Network Mode TAB (Fig. 27) and select **Connect to a WiFi router**. Then **Click Apply and Reboot**. At this time you will lose the WiFi connection between your computer and Othernet's WiFi Hotspot as the Dreamcatcher connects to your local WiFi as a client, and gets assigned an IP address by your router. Sometimes it could take up to 2 or 3 minutes for the changes to load, so be patient. If you **mistype** your Access Point Name or Password, the Dreamcatcher will connect, but you won't see it when you try to access it as in Step 4 below. To regain access to the Dreamcatcher, proceed as in Step 6 below to go back to the Hotspot mode, then redo this step.

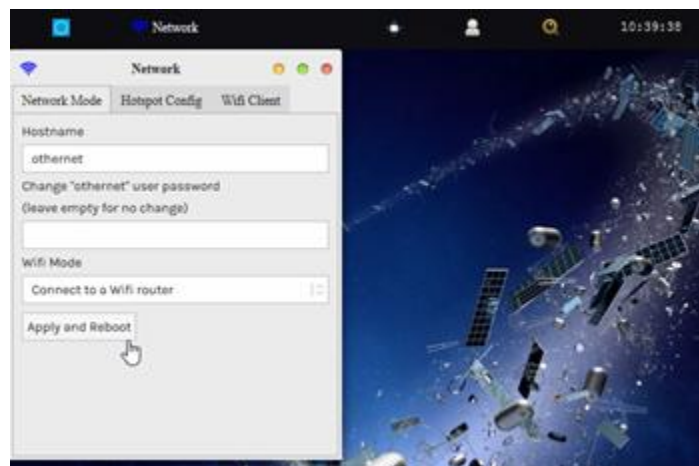


Fig. 27 Network Mode TAB ready to Connect to a WiFi router instead of Create a hotspot  
**Click Apply and Reboot**

Keep in mind that when connected to a WiFi router, reconnecting to it after a **power failure** presents a unique problem - - the reason is most Routers take longer to boot up than the Dreamcatcher. As a result, the Dreamcatcher is trying to reconnect to the Router before the Router is ready to accept a connection and assign a Client IP address. The Dreamcatcher **must be the last device** to power up after a power failure.

**Step 4.** You will be connected to Dreamcatcher's Skylark Program through your local WiFi from your router. You can go to any computer on your router's network, and use any Web Browser to access Skylark through its newly assigned IP address, or by typing [my.othernet.is](http://my.othernet.is) (which requires

an internet connection to work). **If you cannot find the Dreamcatcher's IP address using your router or [my.othernet.is](http://my.othernet.is)**, suggest you use a shareware program such as Angry IP Scanner (<https://angryip.org>) (Fig. 27a) for Windows, MAC, and Linux; or Advanced IP Scanner <https://advanced-ip-scanner.com> **Look at Annex D for v3.03 differences #5**

If for some reason, your Dreamcatcher did not get assigned an IP address on your Client Network, the application of the Connect to a WiFi router command **may have failed**. Power Cycle the Dreamcatcher 3 or 4 times. If you still don't get an IP address assigned, return to the AP Hotspot mode as in Step 6 below, and start over with Section IV Step 1.

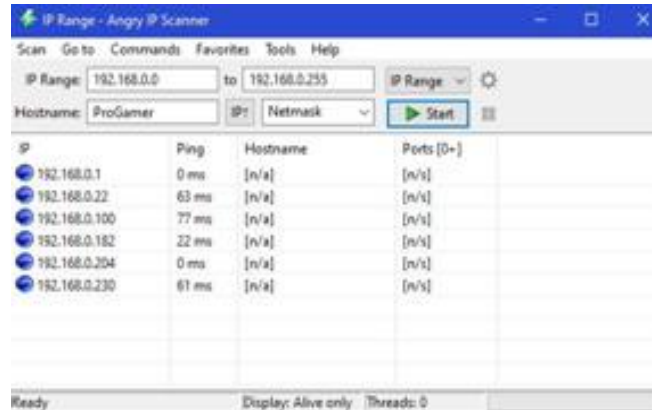


Fig. 27a Angry IP Scanner Results  
Showing the New IP Address for  
Dreamcatcher as 192.168.0.230

Another update implemented in Skylark 5.5 was that of receiver IP lookup. For those on Linux, Android, MacOS or iOS, you should also be able to access the receiver on you LAN by going to <http://othernet.local> For Windows users, this may work if you already have Bonjour Services installed; if not, Bonjour Services can be installed using this installer from Apple at: [https://support.apple.com/kb/DL999?viewlocale=en\\_US&locale=en\\_US](https://support.apple.com/kb/DL999?viewlocale=en_US&locale=en_US)

**Step 5. Changing the administrator user password and the othernet WiFi HotSpot password** is sometimes required if you are sharing your Client connection, and don't want anyone to gain administrative access to your Skylark program or connect to your Dreamcatcher.

**Administrator Password Change** Go back to the Network Mode TAB and enter a new password as shown in Fig. 29. Once the password is changed, everywhere where you had entered "othernet" as a password, you will use the newly established password **a\*3Bx54** Once changed and **Applied and Rebooted**, the new password will not show up in that block but it has been changed. If you want to change it again, redo this step.



Fig. 29 Network Mode TAB Showing Method for Changing Othernet Admin Logon Password  
**Click Apply and Reboot when Finished**

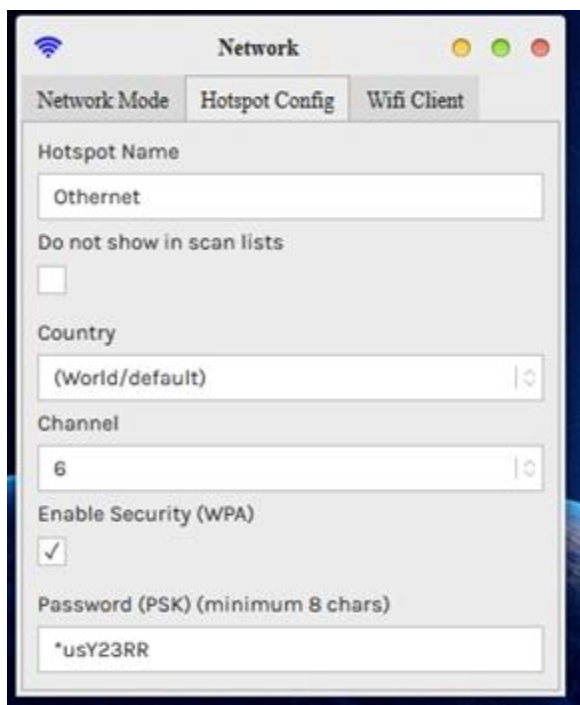


Fig. 29a Network Mode TAB Showing Method for Changing Othernet Hotspot Password  
**Click Apply and Reboot when Finished**

**Othernet WiFi HotSpot Password Change** If you want to protect your WiFi HotSpot of the Dreamcatcher, add a password **\*usY23RR** to protect it by going to the *Hotspot Config TAB (Fig. 29a)*. Don't forget to go back to the Network Mode TAB to click APPLY.

**Step 6.** The Dreamcatcher v3.05 has an **important new process using the PB1 Button** to return to the Hotspot mode after you leave a network. Looking at the Dreamcatcher board pictured on the next page - - to enable a return to the AP Mode, press PB1 once. LED 1 will light solid green. After about 7 seconds, all the LEDs will glow solid and the **Dreamcatcher will reboot into the AP Mode.**

**This function is important** if you leave a network and have to reenter a new network name and password, or if you incorrectly entered your own network information. After you initiate this option, you must completely restart **Section IV** from the **Othernet WiFi Hotspot**, and reconnect to your local router by WiFi as a Client. Make sure your satellite and LNB selections did not change - - they should remain the same. **Look at Annex D for v3.03 differences #6**

**What Else Does The PB1 Button Do?** You **do not push** the Power On/Off Button **at all** when using the PB1 Button. The PB1 Button cycles thru three Functions (which used to be selectable on the Touch Screen on the Dreamcatcher v3.02Q and V3.03) selecting the one of your choice **rebooting the Dreamcatcher into the AP mode each time.**

*Function 1:* Switches the Dreamcatcher to the AP mode and Reboots into the AP mode.

*Function 2:* Resets the configuration - - any WiFi configurations, AP/STA mode

settings, hostname changes, password changes, beam selection, custom beam settings, LNB selection - all of that. **BUT** it does **not** clear downloaded files from storage. Then it Reboots into the AP mode.

*Function 3:* Does everything Function 2 does, *plus* it clears all downloaded files as well. This is a **FACTORY RESET**. Then it Reboots into the AP mode.

- If you press PB1 exactly once, LED1 turns on and flashes a "1" pattern: Long green, long green, then repeating. This action selects *Function 1* rebooting the Dreamcatcher into the AP mode. com

- If you press PB1 again (for a second time within about 7 seconds of the first press), LED1 now flashes a "2" pattern: Long green, short green, long green then repeating. This action selects *Function 2* resetting and rebooting the Dreamcatcher into the AP mode.

- If you press PB1 again (for a third time within about 7 seconds of the second press), LED1 now flashes a "3" pattern: Long green, short green, short green, long green, then repeating. This action selects *Function 3* resetting and clearing all the downloaded files; and rebooting the AP mode. This is a **FACTORY RESET**.

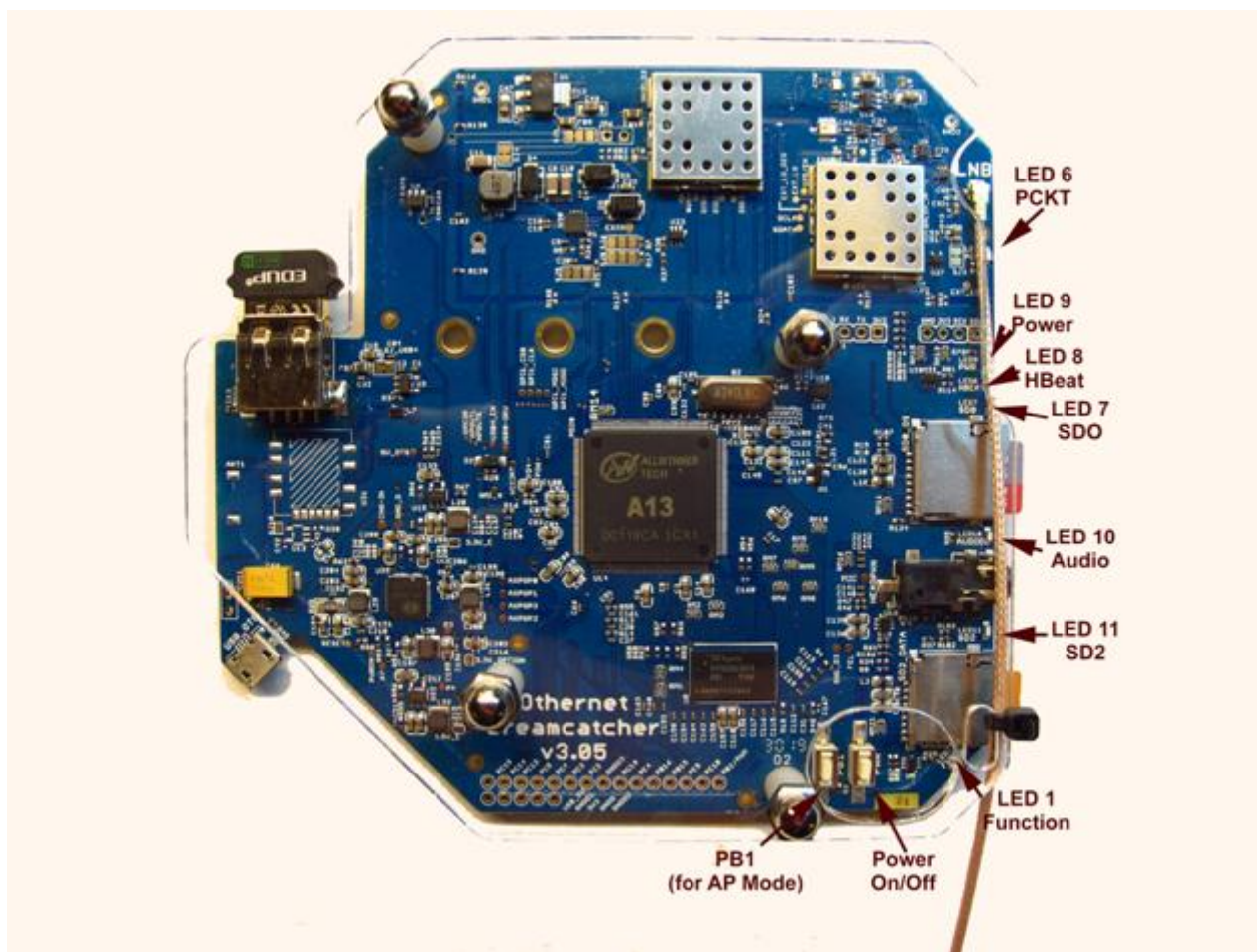
- If you press PB1 again (for a fourth within about 7 seconds of the third press), the LED1 turns off and **selects NO FUNCTIONS**. This gives you a way to cancel out of selecting one of the functions.

- When LED1 is flashing functions 1, 2 or 3, and you do not press PB1 within 7 seconds, that specific function takes effect. **Only 4 quick pushes in the 7 second window** cancels out a Function.

**Properly connected and operating, the Dreamcatcher v3.05 with an external micro SD card installed, will display the following LEDs**

***Look at Annex D for v3.03 differences #4***





Design	Color	Name	Function	Normal Operation	Receiving Packet
LED 1	Green	Function	PB1 Presses	Off	
LED 6	Green	PCKT	Receiving packets	On fast blinking dim green	
LED 7	Green	SDO	Shows read/write activity on either SD Card	On blinking green	
LED 8	Green	HBeat	Reports status to Chicago	On blinking green	
LED 9	Blue	Power	OFF/ON indicator	On solid blue	
LED 10	Green	Audio	Blinks if audio is present	On blinking green	
LED 11	Green	SD2	Blinks if SD card is active	On blinking green	
EDUP	Green	WiFi	Green if WiFi is on	On blinking green	

LED Table

**Step 7.** In some installations, a **WiFi repeater** is desirable. Most Dreamcatcher installations can reliably connect with your existing WiFi device to your router, however, low WiFi signal levels do cause unexpected disconnects requiring you to manually reboot the Dreamcatcher. Many users install their Oothernet gear outside their residence in open area such as gazebos, decks, sheds, garages, etc. In these situation a WiFi repeater assures reliability of Oothernet reception. Install the repeater as **far as possible from your WiFi**, and **as close as possible to your Dreamcatcher**.

**Step 8.** Alternate Connectivity Approach is to use a **USB to Ethernet Network Adapter** instead of going through the Oothernet WiFi Hotspot or Network Client approach. Be careful, **NOT ALL** USB to Ethernet Network Adapters work both natively under Skylark and Armbian. Specifically a TP-Link

TL-UE300 works properly.

This Ethernet Dongle is natively supported, so works out of the box. Just replace the EDUP WiFi Dongle (Fig. 1) with the Ethernet Dongle. **Make sure you set Skylark to run in the default WiFi Hotspot mode.** The downside of this approach is you need to determine the actual IP address as in Section IV Step 4 using your router or another program.

**Step 9. Calls** The apps, when they make a “call” to the Skylark server over WiFi, show a rotating “progress bar” indicator of sorts. They vanish when the call successfully complete. Tuner app, for example, makes this call about once every second. The Wikipedia app makes it only once, when you open the app. The Log Viewer app makes it every time you click on a label in the left column.

Sometimes while this call is being made, we may experience a temporary connection loss over WiFi. That causes the call to fail, and the “rotating plus” associated with that call just hangs around. Meanwhile, an app like the Tuner app might give up on the failed call, and initiate another one. Every time this failure happens you accumulate another “rotating plus”.

These are really just showing failed calls. If too many of them are accumulating, you should check you WiFi signal. If you only see them accumulate every once in a while, the easiest way to clean them up is logout and log back in. They serve as a kind of record of WiFi connectivity loss.

**Optional Step 10.** Forum Members also use **Port Forwarding** options on their network routers to be able to see the Dreamcatcher remotely. *To be able to grant full access to all of Skylark's functions, you will need to Port Forward two different ports illustrated by an Asus RT-AC68U router. Port 80 gives access to the Skylark screen, and port 8090 gives access to Skylark's Radio.* This is how I am able to view my Dreamcatcher from remote computers away from home. Not all internet providers allow Port Forwarding, Virtual Private Networks (VPN) don't always Port Forward, and older routers do not always have a Port Forwarding option. I use an Asus RT-AC68U connected to my internet provider and port forward my Othernet terminal. I feed a second Asus RT-AC68U (daisy chained) to provide VPN protection for the rest of my network.

Port Forwarding List (Max Limit : 64)							
Service Name	External Port	Internal Port	Internal IP Address	Protocol	Source IP	Edit	Delete
HTTP Server	80		192.168.0.22	BOTH			
HTTP Server	8090		192.168.0.22	BOTH			

**Step 11. Dreamcatcher Reporting Status to Headquarters** The Skylark program has a function that reports your Dreamcatcher's data back to Othernet. Once your Dreamcatcher is running and connected to your local area network, Skylark reports the program's “heartbeat” via the internet (if you have an internet connection) to Othernet's Chicago, Illinois, USA, headquarters on a world map with colored balloons (Green being SNRs above -16 dB). The status screen can be viewed at <https://status.othernet.is> which renews every 30 seconds and is shown here in Fig. 25c. You can scroll in and out with your mouse wheel and move the map around by clicking on it and moving your mouse. Sometimes your mouse might not work correctly in Firefox without disabling the Logitech setpoint plugin. This reporting amounts to about 1.6 MB/day of data with your Dreamcatcher reporting in every 5 minutes. **It cannot be disabled in Skylark.** If you want to block it with your router or Pi-hole, look for [telemetry.othernet.is](https://telemetry.othernet.is), and block it. You can also block your Dreamcatcher's IP entirely by firewalling it within your router, or use a Virtual Private Network (VPN) to completely block your location being detected. This may be a **Stealth Issue** in your

country.

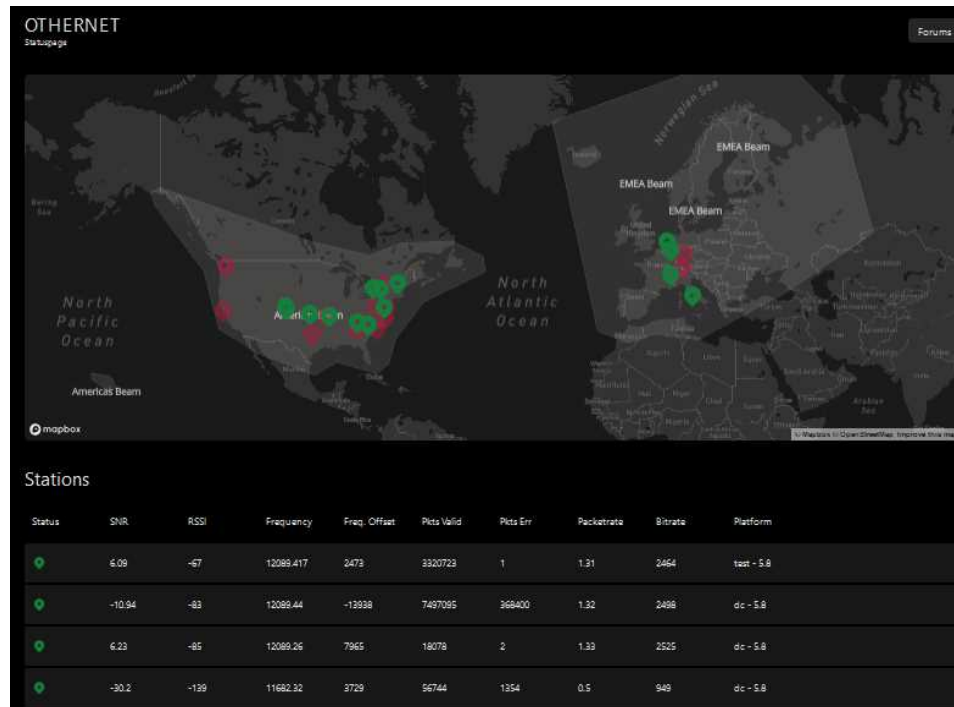


Fig. 25c Status Report  
(Satellite footprint in Europe is for Eutelsat and must be changed to ASTRA 3B)

#### Features:

- Interactive Map, zoom in and out or drag the Map as you like
- Fast Update of 30s, instead of the 5min interval before
- Markers in Red or Green (SNR > -16db)
- Click on a Map Marker to view a few infos of the Client
- Table with more Information about the Stations
- The Table row of the selected Marker will be marked so you can find it
- Clicking a Table row will toggle the marker Popup in the Map
- Satellite Beam coverage marked on the Map
- Rewritten Telemetry backend, status page also on HTTPS now