



## Case Study

### **FabulaTech Serial Port Redirector Software (Interfacing to the NexusISR Hawk®)**

#### **Project Goal:**

Direct the GPS data flow from the Nexus iSR Hawk®, to a laptop computer running mapping programs from Delorme.

#### **Project Overview:**

The Nexus Hawk is a state-of-the-art internetworking device. The Hawks purpose is to facilitate access for multiple users by sharing Cellular, Wi-Fi, Bluetooth and future networks such as WiMAX and UWB. The Hawk acts as an 802.11x hot spot. Once configured, the Hawk can be used as a stand-alone device without being attached to a computer. As an option, the Nexus Hawk can be supplied with a built in GPS receiver. The Nexus Hawk can either be used in a stationary permanent location or it can be deployed in mobile units. For units that are deployed mobile, it is important to be able to locate the unit via its GPS receiver. Anyone with a computer that is in range of the Hawk can gain access to the information available if the correct credentials are provided to the administrator.

#### **Project Problem:**

The Hawks GPS data stream is sent to TCP-port 2947. The Delorme map programs accept GPS data only from COM3 or a USB port.

#### **Project Question:**

How do we get the GPS data stream from the TCP-port to COM3 or a USB port of the computer?

#### **Project Solution Research:**

Not having had this type of problem come up before, I decided that the fastest way to find a solution was by searching the internet for an answer. Within a short time, I was able to locate information from a few sources regarding my problem. After looking at a few solutions from different vendors, I decided to try a couple of test programs to see how they worked. Not being an expert on this, I was looking for something that I could configure easily without having to enlist the aid of an engineer.

I tried a couple of programs and found them to be too complicated for what I wanted. When I finally down loaded a trial version of **Serial-Port-Redirector** and installed it I was impressed with how easy the interface was to use.

#### **Solution Implementation:**

After receiving the required configuration information from Nexus regarding IP addressing, TCP-Ports and extra strings that I would need, it was very easy for me to create the virtual port needed. By using **Serial-Port-Redirector** to create the virtual port, I was able to configure and interface all of the needed hardware. All users were able to obtain the GPS data being transmitted by the Hawk.



**Here is the configuration solution that worked for this project:**

Delorme wants to use COM3 or the USB. When you start the **Serial-Port-Redirector** program, you begin by "Add a Virtual Serial Port". On this screen, enter the initial information.

Select: **COM3**  
Remote IP address or computer name: **192.168.1.1** (Hawk IP Address)  
TCP-port: **2947**  
Press the "Advanced" button and proceed through the tabs that follow.

**General Tab:**

Check the box that says "Enable Bitrate emulation"  
Verify Remote IP address: 192.168.1.1  
Verify TCP-port: 2947

**Protocol Tab:**

Check the box that says "Raw data"  
Check the boxes for "CTS, DSR, DCD"

**Connection Settings Tab:**

Check "Auto-Reconnect when connection is broken"  
Set time to number of Seconds that you want. I did 10 seconds  
Check "Cache data when connection is broken"

**Extra Sting Tab:**

Check the box "Send string on port opening"  
enter quote r quote in the box i.e.: "r" (Note the quote symbol must be used with the r)  
Note: This command starts the GPS data flow from the Hawk  
leave the other check mark box empty

**Settings Tab:**

Check "Use fixed baud rate"  
Bits per Second: 4800  
Check "Use fixed line control"  
Data Bits: 8 bits  
Parity: No Parity  
Stop Bits: 1 bit  
Check "Use fixed flow control"  
Flow control: Xon/Xoff



**Summary:**

As a reseller of the Nexus Hawk, I feel that it is important for me to be able to give the end users a complete solution. For this reason, I recommend that our customers obtain **Serial-Port-Redirector**. I have used the program with great success. The ease of use for any product is important to me. It must be user friendly or I just will not use it. Should the need arise in the future for other products of this type; I will be contacting **FabulaTech** for the answers.

Thank you for having the solution to my problem!

Best regards,

A handwritten signature in black ink, appearing to read "Randy Craig".

*RandyCraig*

**Account Manager**

**Innovation - Reliability - Modern Technology**