

# Iron (v 2.1)

## User Manual

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Last Revised: 11/14/10 11:07:54 PM

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## 1. Requirements

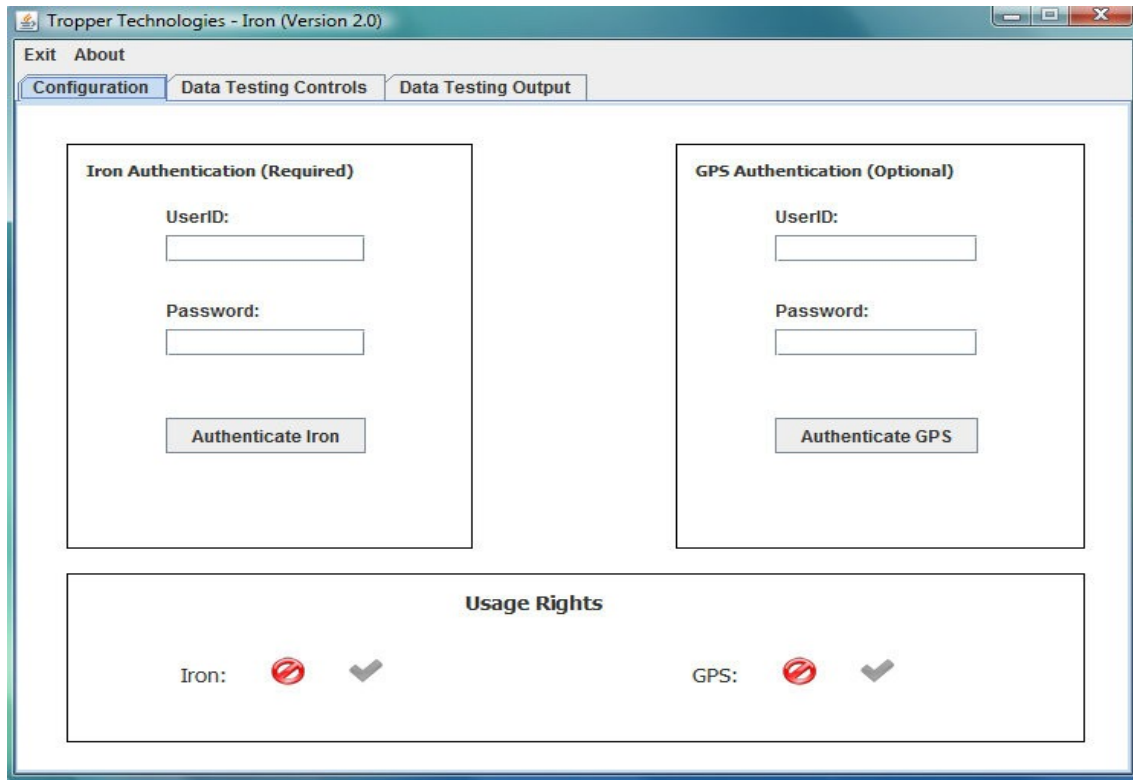
- Windows Operating System (Vista or Windows 7)
- Java (6 or higher)
- Broadband Internet connection for the computer

## 2. Installation

- Double-click the “setup-IronGUI\_v2.0.exe” program that was downloaded from [www.troppertech.com](http://www.troppertech.com) and follow the on-screen prompts.
- **Java and Windows File Associations**
  - Iron is a Java “.jar” application. If your Windows file associations are set to associate “.jar” files with the Java VM, then you can run Iron simply by clicking the Iron icon in the Windows Start Menu or by double-clicking the Iron desktop shortcut (if installed during the setup process).
  - If your Windows file associations are **not** already set to associate “.jar” files with the Java VM, you can run Iron as follows:
    - **Right-click** the Iron icon in the Windows Start Menu or the the Iron desktop shortcut (if installed during the setup process).
    - Select **Open With → Choose Default Program...**
    - Select the **Java Platform** (this should be listed under “Recommended Programs”; if not, look under “Other Programs”).

### 3. Overview

- The Iron GUI comprises three tabbed screens (**Configuration**, **Data Testing Controls** and **Data Testing Output**) as follows:

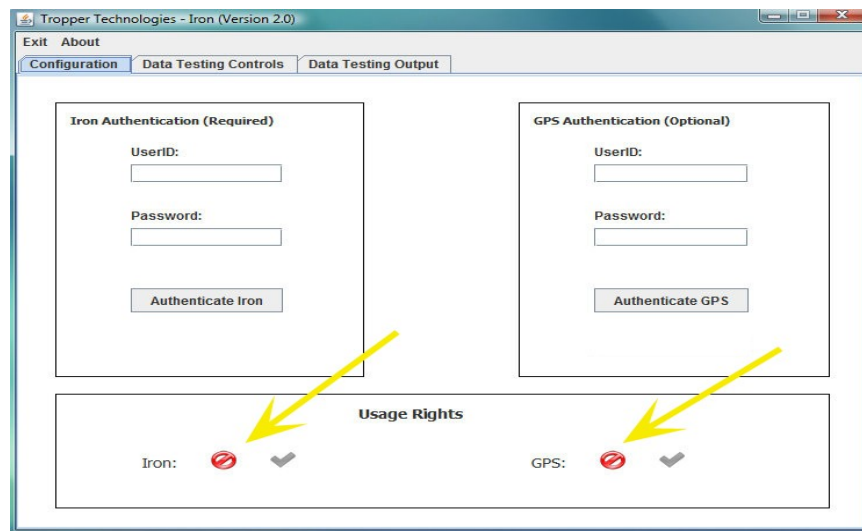


- As explained in more detail below, the general work-flow proceeds first to **Configuration**, then to **Data Testing Controls** and then to **Data Testing Output**.

## 4. Configuration

The Iron **Configuration** is carried out in two steps: (1) Iron Authentication (*Required*) and (2) GPS Authentication (*Optional*).

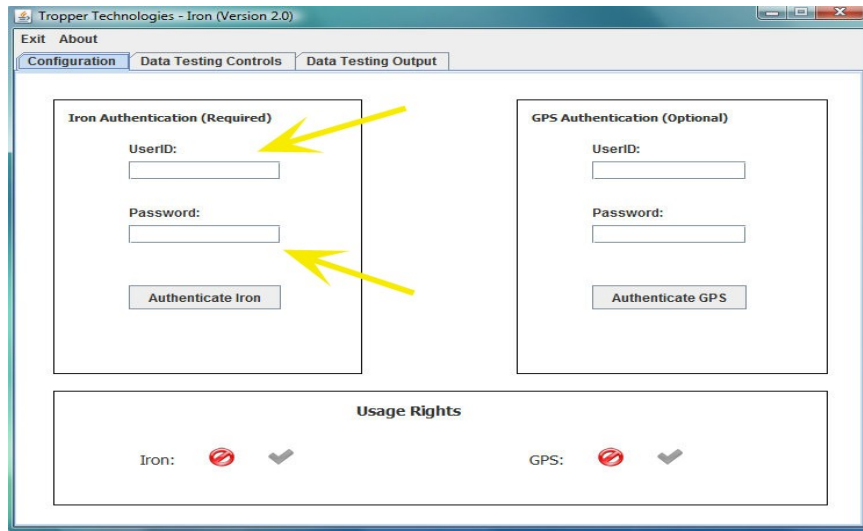
When the **Configuration** tab is clicked for the first time, the GUI will appear as follows (note the red warning indicators adjacent the Iron Usage Right Text and the GPS Usage Right text – indicating that those usage rights have not yet been authenticated):



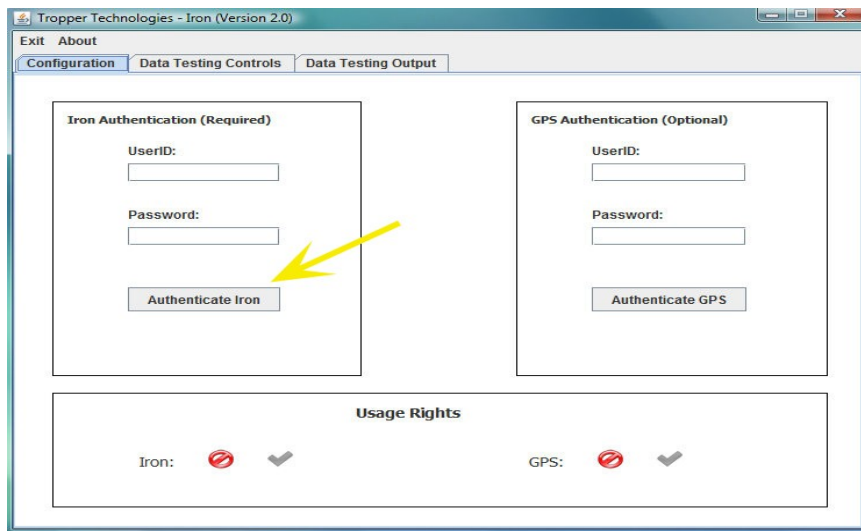
To begin the process, enter the Iron UserID into the UserID text box and enter the Password\* associated with the UserID into the Password text box:

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**\*Note: To operate Iron, please contact us. We will send back an Iron UserID and Password to use.**



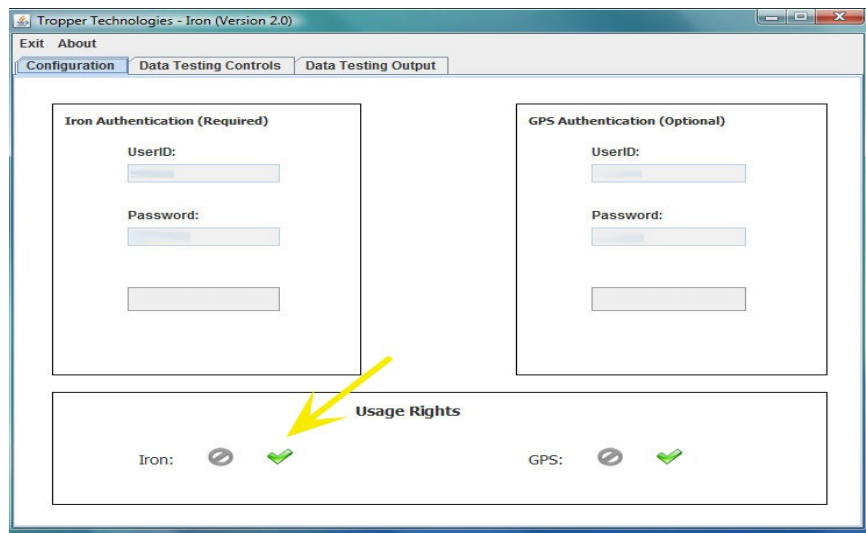
Next, after entering the UserID and the Password, simply click the the Authenticate Iron button\* :



**\*Note that if one of the Iron UserID and/or Password does not appear valid as entered, then a prompt will be displayed requesting correction.**

The cursor will turn to a “Wait” cursor during the Iron Authentication process (this may take up to 30 seconds)\*.

Upon completion of the Iron Authentication process, a green check mark will replace the red warning indicating that this step has been completed:

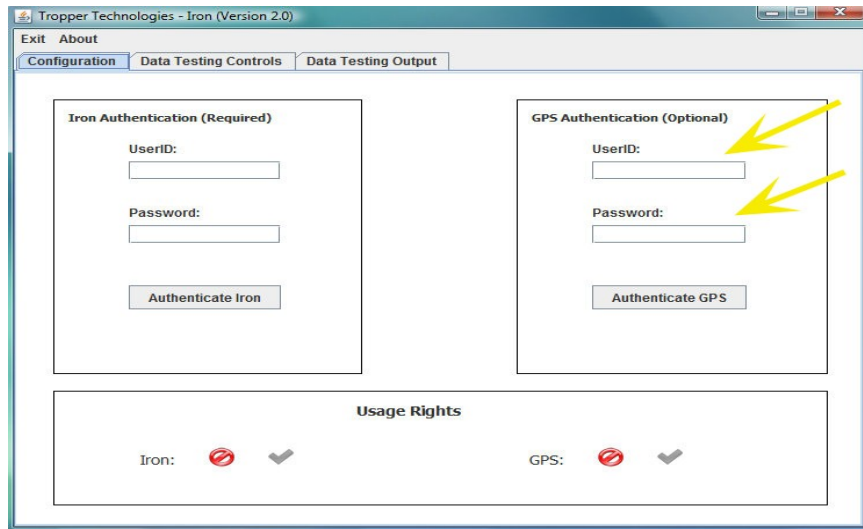


Next, if desired (*this is optional*) enter the GPS UserID into the UserID text box and enter the Password\*\* associated with the GPS UserID into the Password text box:

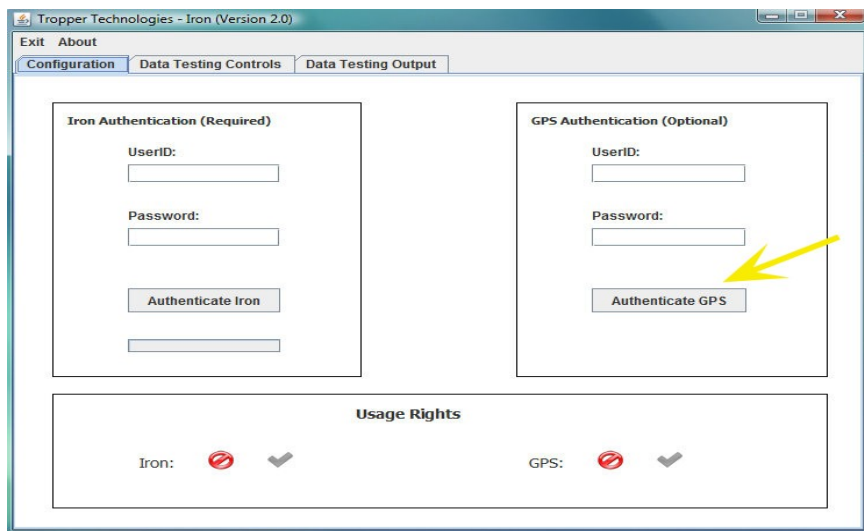
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**\*Note that if Iron Authentication fails, then a prompt will be displayed indicating a potential cause.**

**\*\*Note: The required GPS UserID and Password are the same as those used to configure our mobile terminal “GPS Push” tool. For more information please, see our “GPS Push” tool User Manual.**



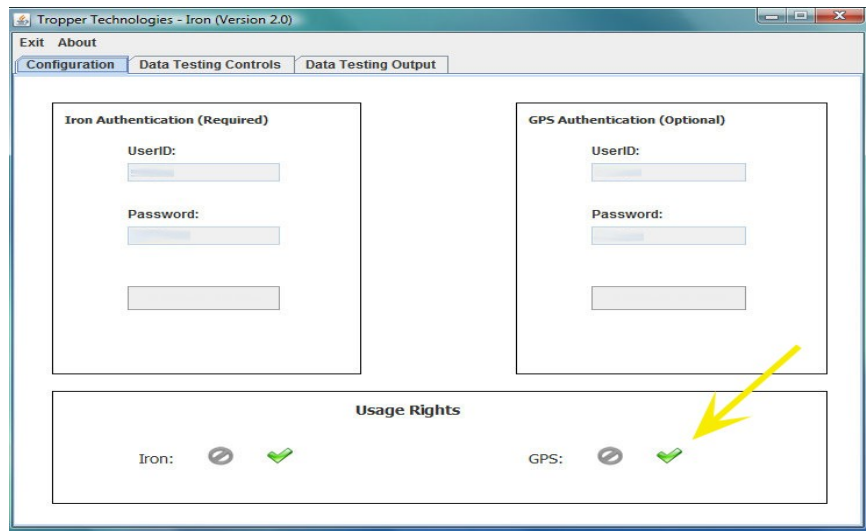
Next, after entering the GPS UserID and the Password, simply click the the Authenticate GPS button\* .



**\*Note that if one of the GPS UserID and/or Password does not appear valid as entered, then a prompt will be displayed requesting correction.**

The cursor will turn to a “Wait” cursor during the GPS Authentication process (this may take up to 30 seconds)\*:

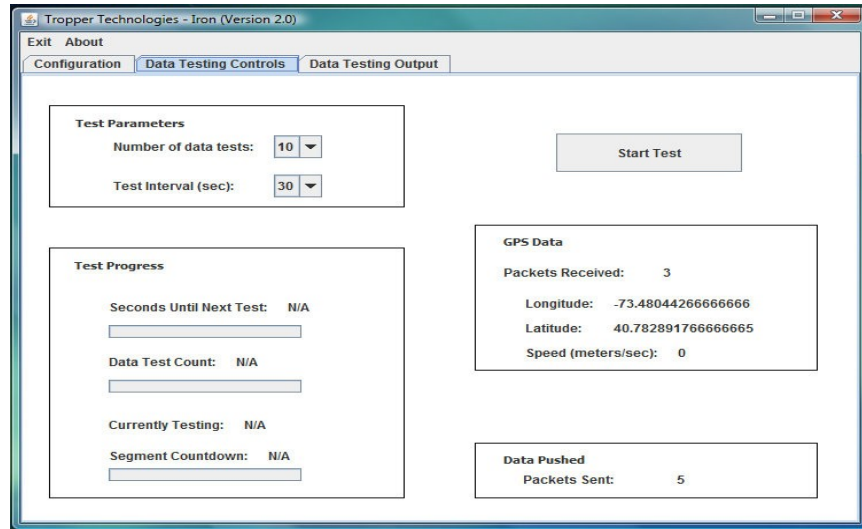
Upon completion of the GPS Authentication process, a green check mark will replace the red warning indicating that this step has been completed:



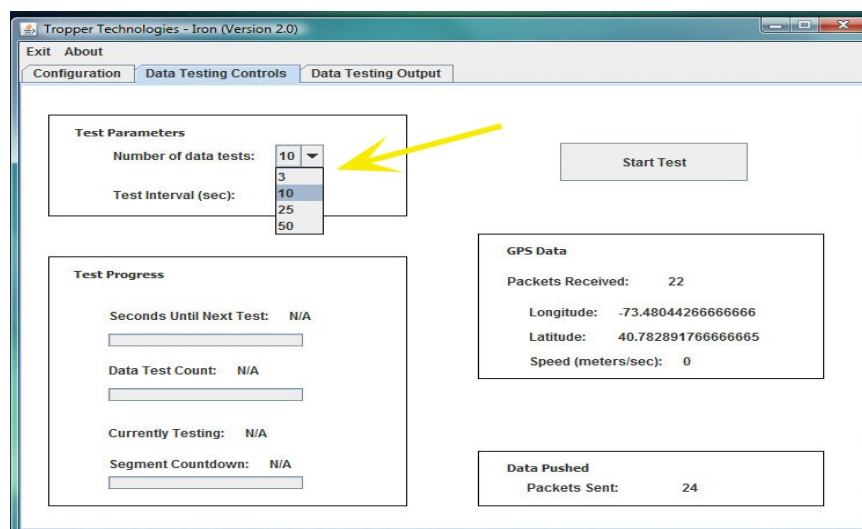
**\*Note that if GPS Authentication fails, then a prompt will be displayed indicating a potential cause.**

## 5. Data Testing

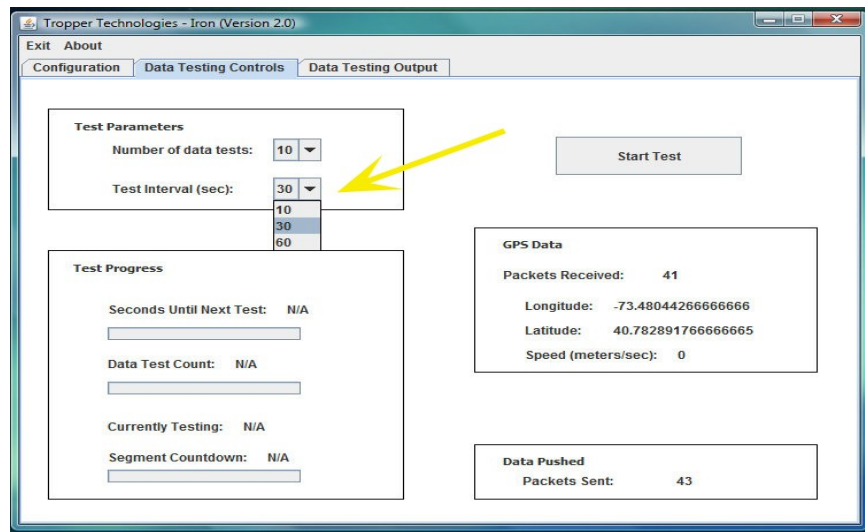
After the **Configuration** is complete, **Data Testing** can begin. The initial **Data Testing** screen GUI is as follows:



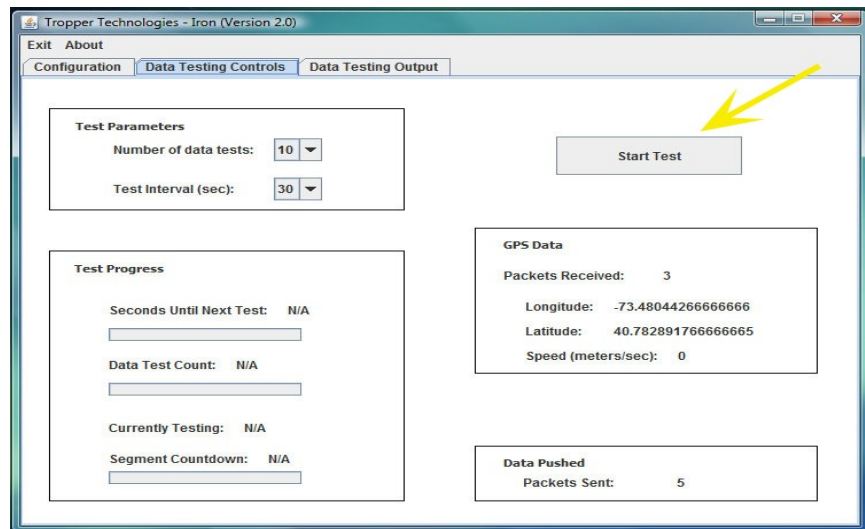
Before a data test starts, various parameters may be set. As seen, a dropdown control is provided for selecting Number of Data Tests (the default Number of Data Tests is “10”):



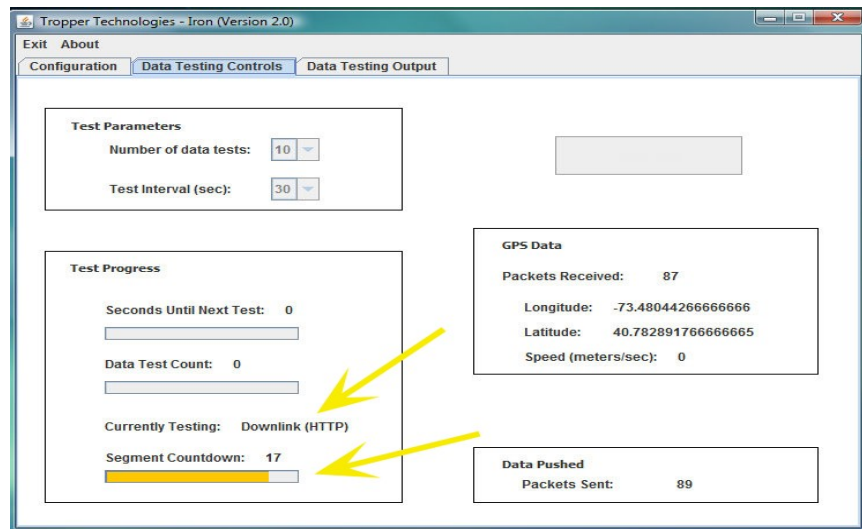
Also, a dropdown control is provided for selecting Test Interval (the default Test Interval is “30 seconds”):



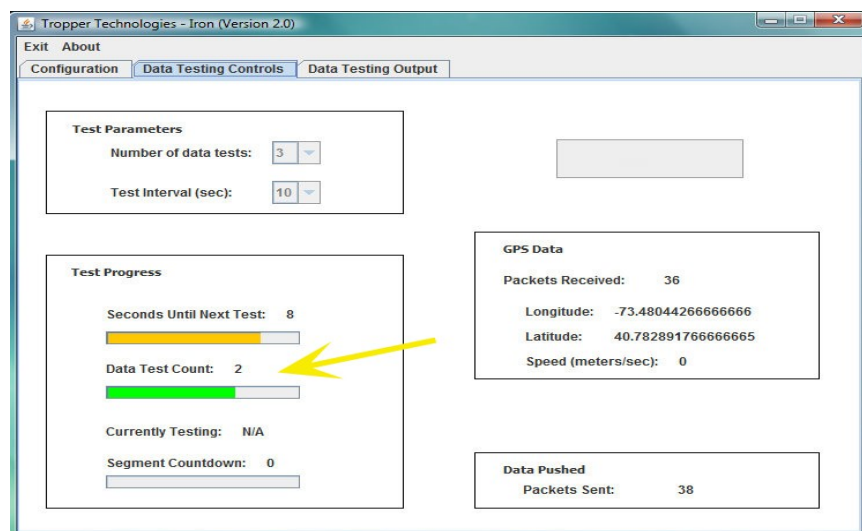
After selection of any desired parameters from the dropdown controls described above, the **Data Testing** may be started by clicking the Start Test button:



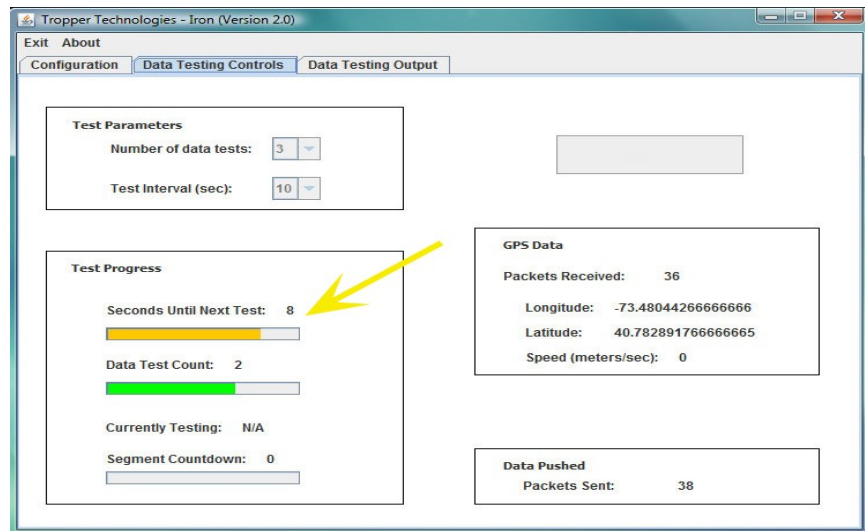
Data testing will then begin. As seen, during data testing the “Currently Testing” label will reflect the test segment type (Downlink (HTTP), Uplink (FTP), Latency (HTTP) or Latency (PING)) and the “Segment Countdown” progress bar will display a countdown (from 20 to 0) of the number of seconds remaining in a particular test segment:



Further, during data testing the “Data Test Count” label will reflect the number of data tests run (as will the “Data Test Count” progress bar):



In addition, during data testing the “Seconds Until Next Test” label will reflect the number of seconds until the next test sequence (as will the “Data Test Count” progress bar):



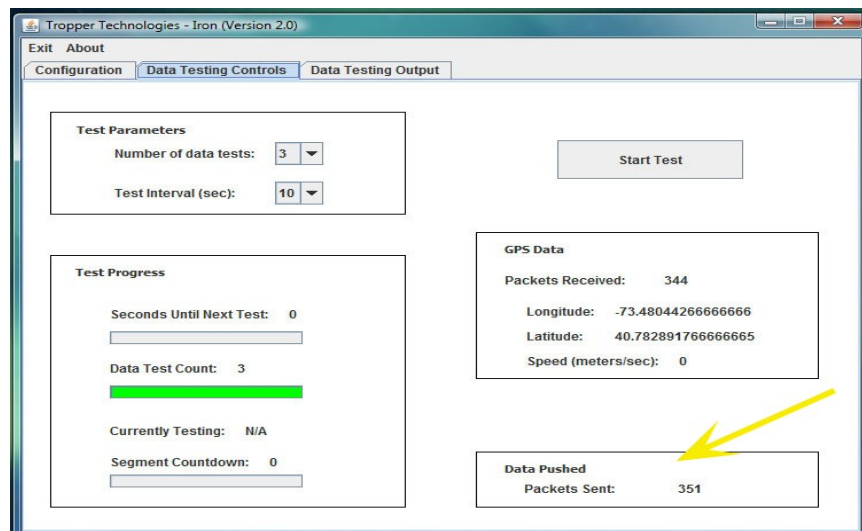
## 6. Pushing Data

When Iron is running, the software pushes data up to our servers for real-time viewing, data warehousing and reporting.

The data is pushed to our servers (via the computer's Internet connectivity path). Iron pushes the data at approximately 5 second intervals (data pushing is paused during a test sequence).

The data includes latitude, longitude and speed (when available) as well as Downlink Data Rate (HTTP), Uplink Data Rate (FTP), Latency (HTTP) and Latency (PING).

A running total of the number of data packets pushed is shown in the **Data Testing Controls** tab:



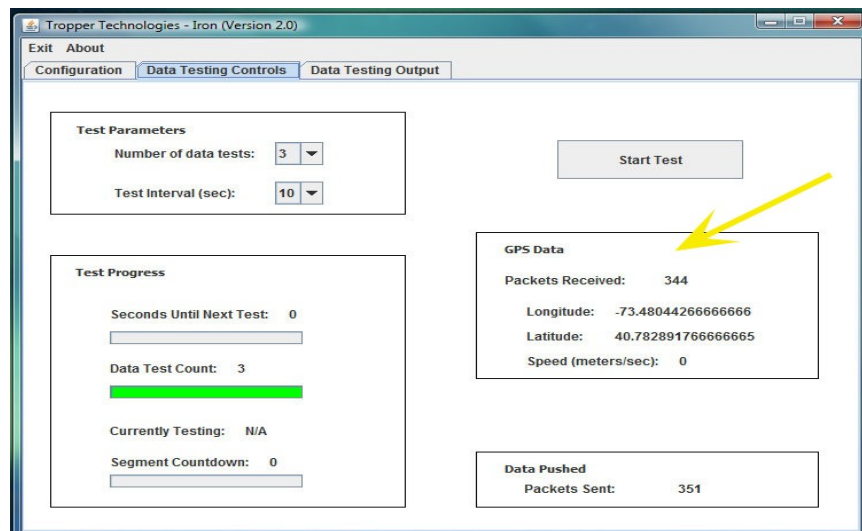
## 7. GPS

When Iron is running and GPS use has been selected (see above in Chapter 4 at **Configuration**) the software polls our servers for real-time GPS data.

The GPS data is pulled from our servers (via the computer's Internet connectivity path). Iron pulls the GPS data at approximately 5 second intervals (data pulling is paused during a test sequence).

The GPS data includes latitude, longitude and speed. The GPS data is added to other data and pushed back on a packet by packet basis to our servers as described above in Chapter 6 – **Pushing Data**

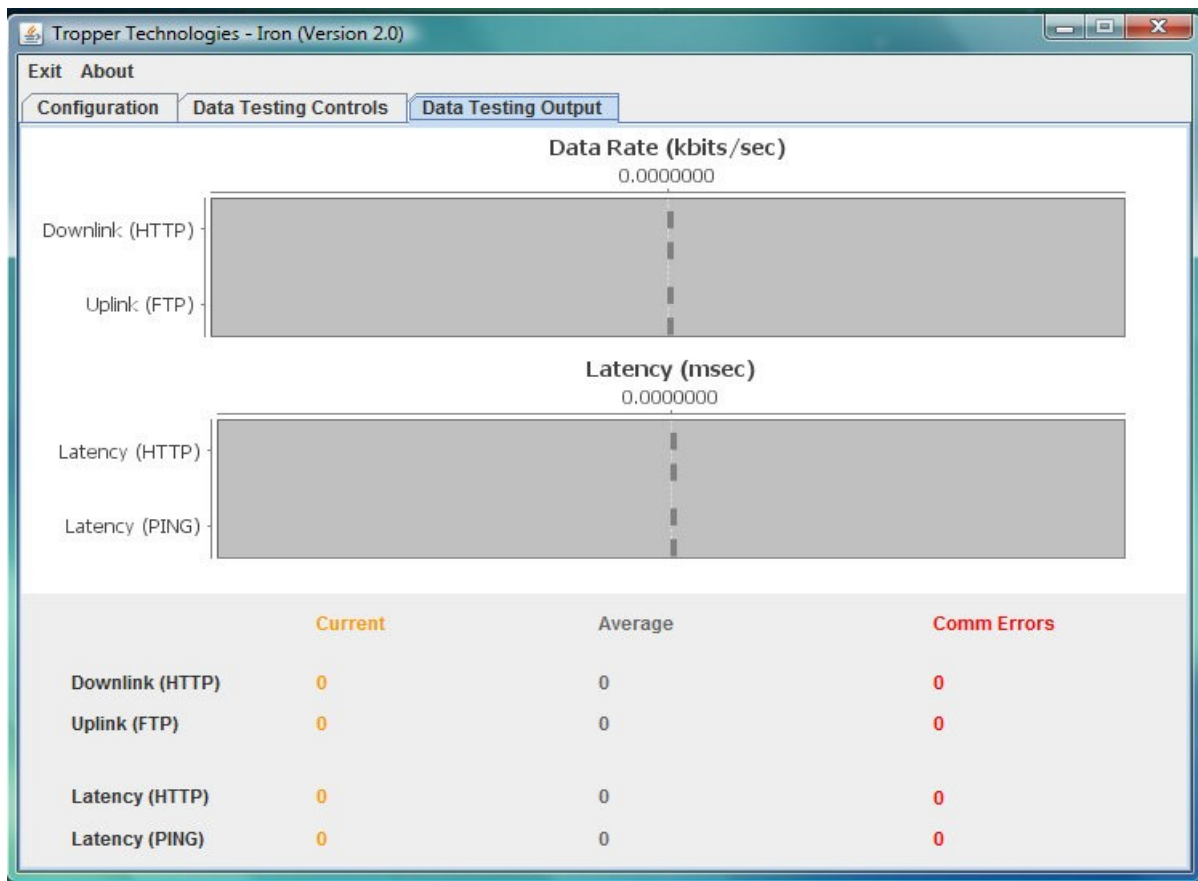
A running total of the number of data packets pulled (and associated latitude, longitude and speed) is shown in the **Data Testing Controls** tab:



## 8. Data Testing Output

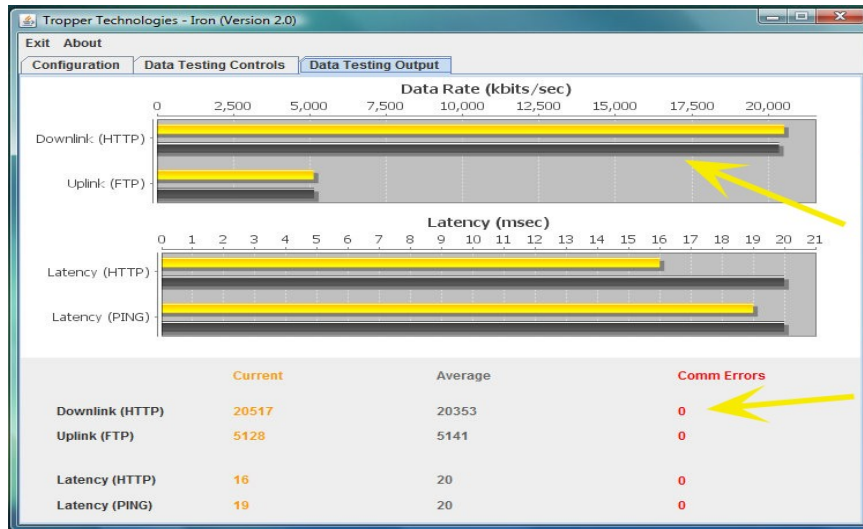
When Iron is running, the measured metrics are provided for visualization in graph and table form in the **Data Testing Output** tab.

Initially, before any data has been generated, the **Data Testing Output** tab GUI will appear as follows:

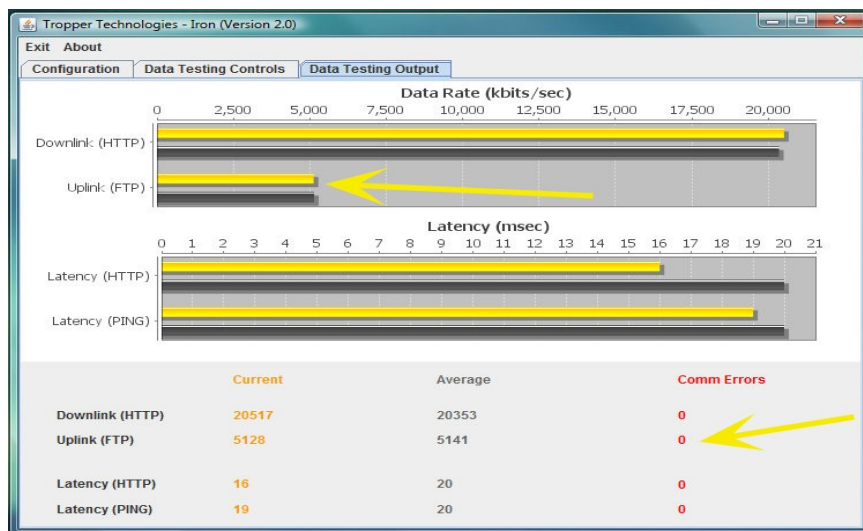


As data is generated, the **Data Testing Output** tab will be populated.

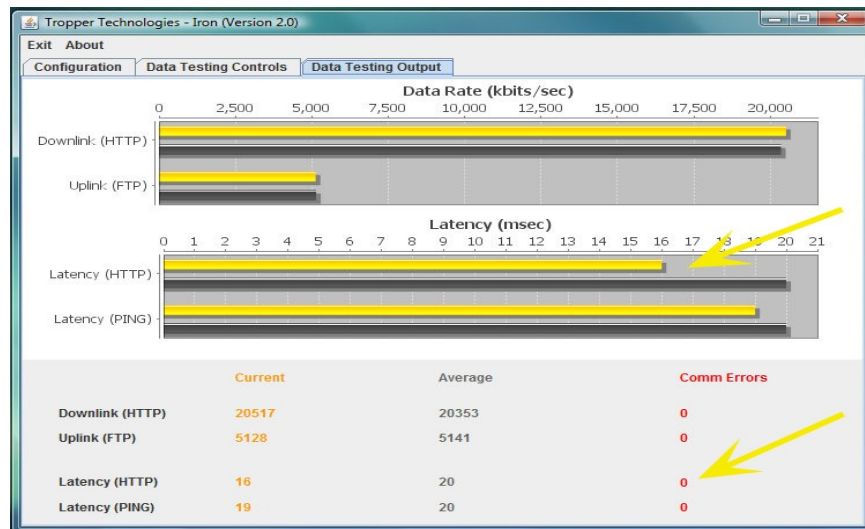
As seen, the data includes Downlink Data Rate (HTTP), shown as current and average values (orange and gray, respectively) in graph form as well as in table form (along with a count of associated Communication Errors (if any) in the table):



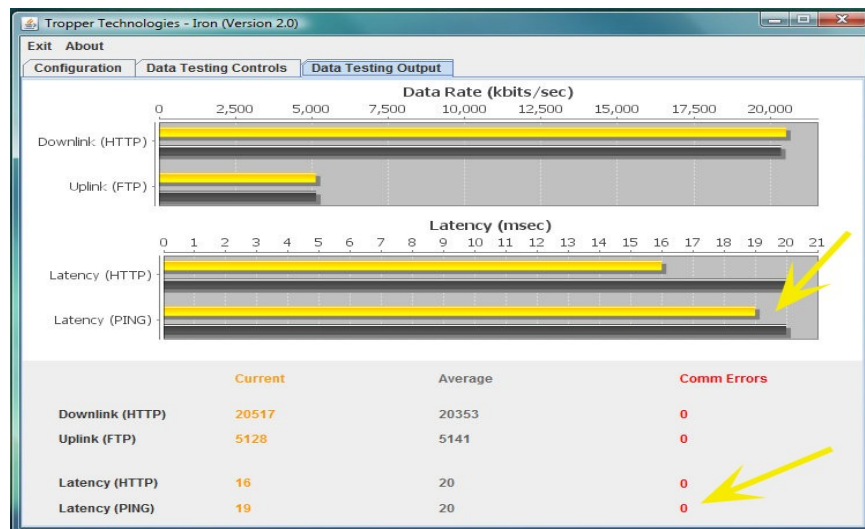
Also, the data includes Uplink Data Rate (FTP), shown as current and average values (orange and gray, respectively) in graph form as well as in table form (along with a count of associated Communication Errors (if any) in the table):



Also, the data includes Latency (HTTP), shown as current and average values (orange and gray, respectively) in graph form as well as in table form (along with a count of associated Communication Errors (if any) in the table):

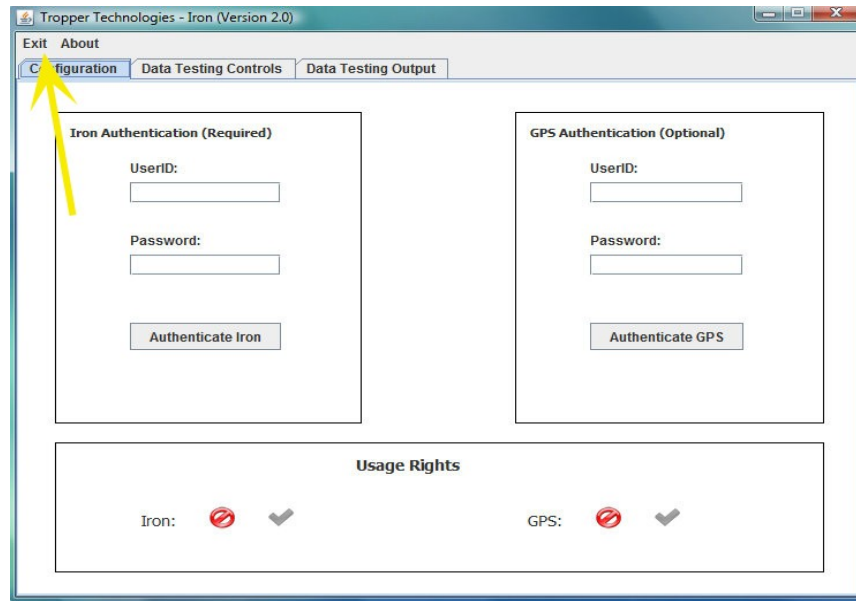


Also, the data includes Latency (PING), shown as current and average values (orange and gray, respectively) in graph form as well as in table form (along with a count of associated Communication Errors (if any) in the table):



## 9. Exiting the Program

To exit the program, simply click the “Exit” button at the top-left corner of the window:



Before exiting, the software will prompt for confirmation:

